



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

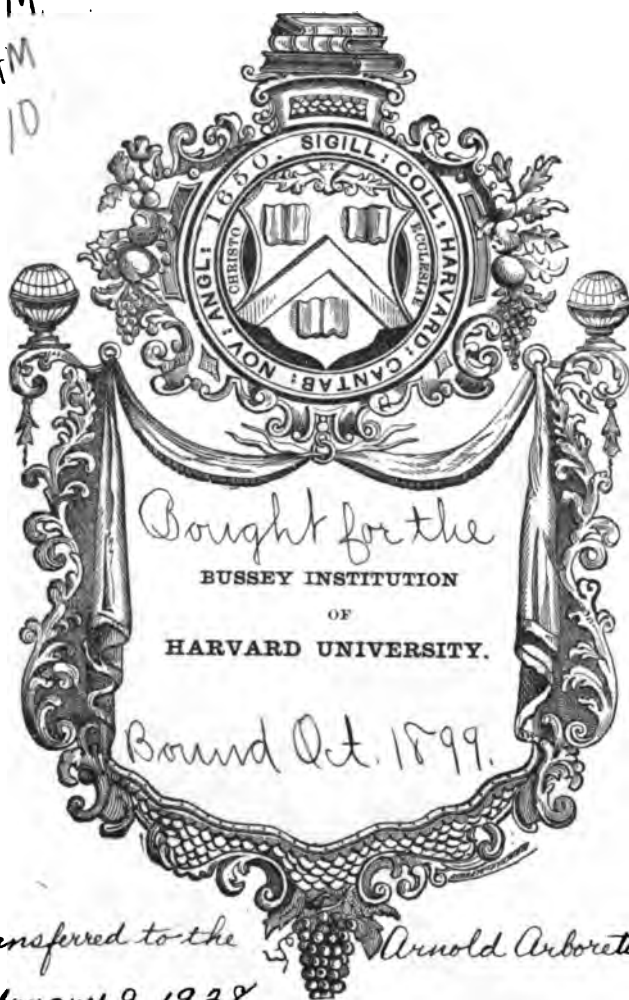
We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

AM.
AM
10



Transferred to the Arnold Arboretum
February 9, 1928

AMERICAN GARDENING

A WEEKLY ILLUSTRATED

Journal of Horticulture

VOL. XVIII

(COMBINED SERIES LI)

NEW YORK:
A. T. DE LA MARE PRINTING AND PUBLISHING CO., LTD.
RHINELANDER BLDG., ROSE AND DUANE STS.
1897.

Page	Page	Page	Page	Page	
J	Novelties, Continental, 860; difficulty of raising, 278	Pear culture and diseases, 129	Red cedar rustic work, 20	Pa., 813; Millbrook, N. Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	Pa., 813; Millbrook, N. Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315
Jacobs, P. H., sketch of, 387	Nursery business, extent of, 537	Pears for Fall and Winter, 111; for market, 82; season of, 695	Rhubarb, forcing in cellars, 841	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Jadon, 421, 601, 619, 883	Nursery stock, act for inspection of, 440	Peas and Sparrows, 299	Ringing, 523	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Jasminum gracillimum, 792	Nuts in Peninsula, 82	Peninsula, fruit growing on the, 879; horticulturists, 82	Ripening, early, 522	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Judges, 123	Nutgrass, getting rid of, 668	Pepper-cream, 316	Roosters, a simple, 878	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
K	Nymphalaea, tropical grown for their flowers, 284	Peppermint as a crop, 792	Root galls, 614	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Kerria japonica, 423	Obituary—Alley, H. H., 331; Berckmans, Mrs. P. J. A., 331; Burr, F., 715; Bushnell, E. M., 621; Corning, Erastus, 621, 651; Dana, C. A., 742; Douglas, Robert, 434; Elliott, Chas., 240; Elliott, W., 60; Fay, Hon. J. S., 466; Fowler, W., 642; Gane, H. A., 621; Goddard, Calvin S., 621; Goellet, Ogden, 621; Grey, William, 829; Hauser, John N., 850; Hogg, Dr. R., 240; Lawrence, J. W., 558; Lawson, G. W., 342; McAllister, F. E., 650; McCrowe, H., 211; McGill, Wm., 240; McKinstry, R., 621; Murdoch, W., 621; Nixon, E. S., 381; Oimstead, B. S., 342; Owen, Robert, 418; Saul, John, 381; Sharpless, J. K., 650; Sutes, W. A., 698, 712; Sutton, Alfred, 621; Ville, G., 240; Ward, W. R., 27; Wickens, P., 255; Willis, N. F. H., 621; Wilson, Samuel, 418; Wilson, W. C., 715; Youngs, Wm. C., 621	Pine seed, saving, 361	Rose, American Beauty, history of, 206; Carmine Pillar, 124; Crimson Rambler, 425; Jubilee, 86; R. setigera, 681; R. multiflora, 681; R. rugosa as a hedge, 824; R. Wichuriana hybrids, 121	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Kitchen garden planting, 239	Old-fashioned border, 83	Pipe area, rules for calculating, 694	Rose-buds, to destroy, 491	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
L	Old-fashioned border, 83	Plan for Corner Lot, 315; for Grounds of a florist and gardener, 68; for heating Lily Pond, 549; for Home Grounds, 175; for small lot, using adjoining ground, 599; for Village Lawn, 727; for Village Square, 678	Rose-garden, a, 498	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Labeling, 822	Orchard, insects and diseases of, 360, 379	Plant-box, new, cheap, 173	Rose-scale on blackberry, 26	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Label-stake, improved, 397	Orchid, beetle, the, 575; Bouquet, a royal, 542; collections, 474; collecting, 55	Plant-food question, 123	Rosehouses, shading, 402	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Land, inventory of, 128	Orchid notes, 429	Plants, market proposed for, 813; to use for effect, 315	Roses, on the clothes post, 566; club root in, 127; decorative, 631; garden plea for, 443, 472; grafting, 179; manure for, 207; of doors, 361; The Ramblers (yellow, pink, white), 125; of the Victorian Era, 510; weak stem in, 863	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Law Notes—Cranberry bog, draining, 731; Plants destroyed by gas, 731; Roots passing boundary line, 410; Transportation companies liable for detention, 622; Trees not true to name, 508	Orchids, manuring, 522; popularity of, 81; scarcity of, threatened, 55	Plants under glass, 138, 241	Rosettes, to destroy, 491	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Lawn and Flower Garden, 27, 53, 83, 141, 171, 238, 391	Ornamentals, some newer, 89	Plants, market proposed for, 813; to use for effect, 315	Rose-scales on blackberry, 26	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Lawn mixtures, 496; sprinklers, 326	Ornamentals, some newer, 89	Plants, market proposed for, 813; to use for effect, 315	Rose-scales on blackberry, 26	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Lawn-truck, a new, 809	Ornamentals, some newer, 89	Plants, market proposed for, 813; to use for effect, 315	Rose-scales on blackberry, 26	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount Kisco, N. Y., 45, 164, 510, 814; Newark, N. J., 655; New Bedford, Mass., 814; Northampton, Mass., 302, 341, 718, 799; Newport, R. I., 322, 341, 795, 798, 829; New York, 23, 44, 132, 164, 184, 211, 282, 341, 364, 446, 460, 654, 718, 797, 813, 849, 872; N. Y. City Gardeners', 364; Oceanic, N. J., 44, 61, 133, 149, 227, 264, 284, 462, 526, 606, 654; Orange, N. C., 97, 164, 264, 429, 558, 849; Philadelphia, Pa., 148, 365, 462, 799, 813; Port Chester, N. Y., 476, 574, 623, 783; Poughkeepsie, N. Y., 11, 44, 61, 116, 184, 364, 784, 849; Providence, R. I., 814; Redbank, N. J., 654; St. John, N. B., 816; Salt Lake City, 322; Springfield, Mass., 227, 590, 830; Syracuse, N. Y., 332, 815; Taunton, Mass., 684; Toronto, 333, 526, 542, 655, 814; White Plains, N. Y., 700; Wilmington, N. C., 830; Worcester, Mass., 315	
Lawn-shrubbery, a native, 314	Ornamentals, some newer, 89	Plants, market proposed for, 813; to use for effect, 315	Rose-scales on blackberry, 26	Y., 659, 798; Mineola, N. Y., 684; Morgan town, N. C., 829; Morristown, N. J., 783; Mount K	

Page	Page	Page	Page	Page
Sugar bounties .....337	olson's Hybrid, 619;	Turnips, bitter .....841	Viburnum opulus .....241	Water lilies, 470; in
Sulphur for mildew	Sutton's varieties .....664	Types in plants.....338	Victorian medal in hor-	pots, 635; from seed.
and rot .....357	Tomato blight, 679; cul-		ticulture, 490; list of	26 .....266
Superlatives .....158	ture, successful .....679	V	recipients .....542	Waterproofing, 356.....396
Sweet pea, cupid,	Tomatoes, forcing, 244,	Varieties, adaptation	Village lot, plan for.....681	Wairoos, C. L. ....698
502, 572, 650, 680	823; varieties for, 299, 600	of .....665	Village square, the,	Weeder and trowel,
Sweet peas, 144, 150;	Tomato plants, profits	Vatican, gardens of	618; plan for.....678	home made .....415
history of, 517; novel-	in .....240	the .....700	Vines for piazza, 824, 842	Weevil, the stem.....545
ties of '97, 537; selec-	Tomatoes for New	Vegetable garden, cul-	Violet, Mrs. J. J. As-	Weevils in seed beans.....339
tions, 606; success	Hampshire, 263; Eng-	ture notes in the, 7,	tor, 126; Princess of	Western New York
with .....523	lish and American,	21, 37, 52, 68, 84, 107,	Wales, 28.....86	fruit growers, 89,
Substitution by nur-	793; fertilizing .....880	123, 139, 155, 172, 208,	Violet, aphid on, 758;	11 .....128
serymen .....558	Tools, deterioration of,	218, 238, 256, 274, 297,	diseases of .....847	West Virginia Horti-
Sycamore blight.....506, 638	110; in the year 1702.....893	315, 335, 355, 374, 390,	Violets, how to grow,	culturists, 154, 744.....307
Salads .....316	Tradescantia discolor	408, 423, 439, 454, 471,	354; planting out, 439,	Willow cultivation .....457
Salpiglossis, new type.860	as a bedder .....774	486, 503, 523, 537, 550,	505; runners, cutting	Window garden, the,
	Trees, moving, 630;	566, 583, 598, 615, 630,	off, 843; from seed.....842	781, 790, 812, 831, 852,
	planting, 61; staking,	649, 663, 679, 696, 729,	Violet leaves, injured	870, 889. (See also
	18, 55	747, 761, 775, 791, 806.....825	by sawfly .....585	Home Plot.)
Tariff, 23, 39, 222, 223;	Trees for avenues, 822;	Vegetable garden, how		Window plants, 92; fer-
Canadian .....5	for lawns .....747	to lay out.....775		tilizer for, 7.....92
Tariff, changes in.....459	Trees and shrubs, de-	Vegetables as food, 242,		Wisteria, when to
Taxation on the Farm-	sirable, 422; for drain-	243		prune .....843
er .....844	age, 823; hardy flow-	Vegetables, forced, 860,		Woman Head Garden-
Terracing a bank.....777	ering .....423	25; diseases of.....218		er .....765
Toad, the American.....777	Truck farming .....174	Veitch memorial med-		Woolen waste as fer-
Tomato, Eclipse, 827,	Tuberose out of doors,	als .....110		tilizer .....727
861; Eclipse and Nich-	257; and Winter.....881			

ILLUSTRATIONS

Page	Page	Page	Page	Page
Akebia quinata .....489	Cercis canadensis .....425	Grape, Gros Colmar... 49	Nymphaea gigantea .471	Rudbeckia Golden
Apple blossoms .....439	Cherry, Jerusalem,	Grape vines in Okla-	Oklahoma Home-	Glow .....108
Apple rust, cedar apple	branch of the .....5	homa five years old.....535	stead, an .....537	Salpiglossis variabilis
stage of the .....537	Christmas mantel dec-	Grapery, early, con-	Oleander cuttings, de-	superbissima .....860
Apple tree, badly	oration .....825	struction of .....745	vice for .....21	Runner cutter, 354; the
pruned .....339	Chrysanthemum,	Greenhouse, a cheap.....695	Orchard fruits, pot cul-	Hawkeye, 409; home-
Apples, hauling from	Midge .....773	Greenhouses, calculat-	ture of .....629	made .....298
cellar .....69	Chrysanthemum, fun-	ing capacity of .....729	Paeonies, group of gar-	Scale, San Jose, the.....317
Apple, Wismer's Des-	gous diseases of	Grey, the late W., por-	den .....457	Shrubs, popular flow-
sert .....143	the .....709, 711	trait of .....850	Parks of Hartford,	ering, 358; ornament-
Aquatic Pond, Boston.....343	Clothes post, an im-	Gymnogramma grown	Conn. ....505	al, 453; protecting .....59
Asparagus, badly mar-	proved .....566	in Jadoo Fibre .....421	Paulownia imperialis,	Spiraea prunifolia .....425
keted .....259	Cornus florida rubra.....441	Halesia tetraptera .....438	vigorous growth of.....485	Sprayer, New Emul-
Asparagus stems, rust-	Cosmos Dawn, New	Hartford, Conn., Bush-	Peach, Foster's seed-	sion .....327
ed .....583	dwarf early flowering, 87	nell Park, 501; Capitol,	ling, 629; grown under	Spraying apparatus for
Asparagus Sprengeri .. 86	Cowslip, the Ameri-	tol, 505; Memorial	glass .....821	large trees .....809
Asparagus-pea .....139	can .....373	Arch .....501	Peach borer, the .....275	Staphylea coccinea .....423
Aster, Semple's chrys-	Crab apple, three orna-	Hazel, the beaked.....666	Peach trees five years	Stiles, A. W., portrait
anthemum flowered.....333	mental .....437	Hedge, to make quick-	old in Oklahoma .....535	of the late .....712
Azalea amoena, bed of.....569	Crozy, M. Antoine, por-	ly .....208	Pear, Louise Bonne de	Strawberry plant set-
Bean, Cream Valen-	trait of .....391	Heliathus, New .....107	Jersey, 629; in a pot.....631	ter, 296; runner, cut-
tine .....155	Cucumber Beetle, and	Henshaw, Samuel, por-	Pear, Manning's Eliza-	ter (see Runner).
Bean, Rogers' Lima	larva .....487	trait of .....133	beth, 67; Souvenir de	Strawberry, Carrie, 219;
Wax .....697	Cucumbers, English,	Hollyhocks, new hardy 87	Congress .....629	Hall's Favorite, 223;
Bed, sub-tropical.....137, 353	fine showing of .....741	Hotbed making, 51; a	Pears dwarf, hedge of.....552	a large Sharpless .....407
Beech, copper, in Bos-	Curculio catching ap-	successful .....857, 859	Pear Trees, Cordon .....169	Strawberries, under
ton Public Gardens.....837	pliance .....241	Hydrangea paniculata	Petunia Snowball .....861	glass, group of .....405
Beehive in tomato	Currant, branch of cor-	grandiflora, speci-	Physalis Franchetti,	Sycamore trees, an
house .....793	dons trained .....549	men .....313	fruiting branch of.....81	thrachnose of.....533
Begonia, crested, 861;	Currant girdler's work-	Hydrocyanic acid, fum-	Plan, a convenient, 727;	Sweet pea patch.....523
B. Vulcan .....109	the .....390	igating by .....729	for Gardener's place,	Sweet Pea, Blanche
Berberis Hakodati, 453;	Cycas revoluta in flow-	Ice House, an .....17	69; for Home Grounds,	Burpee, 517; Pink Cup-
B. Nepalensis, 355; B.	er at Cornell Univer-	Kerria japonica .....425	simple, 175; for small	id, single, flower of
Thunbergi .....357	sity .....1	Label, a serviceable.....397	garden, 315; for small	847; Pink Cupid, bed
Berckmans, Prosper J.,	Cyclamen double, 109;	Lathyrus distioplathy-	lot, 599; for Town	of, in Jefferson Coun-
Portrait of .....633	Crested, new type of,	phyllus, 518; L. pe-	Square (Supplement	ty, N. Y., 646; purple,
Berry canes, laying	663; Double, new type	dunculis bifloris.....513, 520	Oct. 2); for village	the .....521
down .....727	of, 663; Fringed, new	Lawn mower, Cumner	lot .....681	Terracing, styles of.....777
Berry house, plan of	type of .....661	Steam .....839	Plant box, new .....173	Tomato culture, suc-
Brown's .....377	Dahlia, types of new	Lawn-truck .....809	Plants, three popular	cessful .....679
Berry Picker's Checks,	Cactus .....757, 759	Lettuce Mignonette.....157	flowering .....425	Tree, how to stake.....13
Brown & Son's, 377;	Daisy, new Giant Cali-	Lewis, John C., por-	Plum, Belgian Purple,	Tree Stake, easily ad-
Ridgeways, 377;	forlian .....108	trait of .....11	629; Pond's seedling	justed, an .....55
Thayer's, 392; Woos-	Dana, C. A., portrait	Lilium Harriell Easter	tree of .....615	Tree-scraper .....761
ter's, 376; Ward's.....473	of the late. (Supple-	Lily .....297	Plum Curculio, the .....174	Trowel, home-made, a.415
Biota aurea nana.....108	ment Oct. 80.)	Lily, Giant Golden	Poison Ivy, the.....358	Viburnum lantanoides,
Blackberry, root cut-	Dish for exhibiting	Day .....179	Poppy, double white	453; V. plicatum.....357
tings .....791	fruit .....19	Lilly pond, plan of	fringed .....108	Victoria pond in Shaw
Boiler, Hitchings' new	Dracaena fragrans .....389	heating, 551; section	Potato, Bovee, 141;	Botanical Garden, St.
sectional tubular-in-	Drain Tile, cheaply	of .....550	Vigorous .....140	Louis, Mo. ....613
terior, 648; Hitchings'	made .....27	Livistona, specimen at	Potato digger, Cale-	Victoria Regia var
new sectional tubu-	Drill and Cultivator, a	Newport, R. I. ....597	donian, 839; Ransome.839	Randil .....469
lar, 649; Lord and	combination .....176	Louse, Stem-mother.....455	Potato Sets, variously	Violet, Princess of
Burnham's Standard	Elliott, the late Wm.,	McCrowe, Henry, the	treated .....293	Wales .....92
vertical section of,	portrait of .....60	late, portrait of .....211	Primula stellata .....201	Violet leaves injured by
616; new sectional,	Fences, portable .....751	Manuring, a lesson in. 83	Peteris Smithiana and	saw-fly .....585
broken view of, 617;	Float for leveling .....255	Maple, Japanese .....357	varieties .....273	Wagon-crate .....681
Standard longitudinal	Floods, the Missis-	Marguerite, New Giant.105	Pyrus Malus coro-	Wagon, low handy,492;
section of .....617	sippi .....337	Marker for strawberry	narium, 437; P. M.	for marketing, a .....335
Border, typical "old-	Flower box, dainty.....823	growers .....295	floribunda, 437; P. M.	Water-lily pond, in
fashioned," a .....33	Flower Show at Mor-	Mat for hotbed, Pal-	Parkman! .....437	Hon. Gardiner G.
Borers of apple tree,	ristown, N. J. ....789	mer's, 775; straw,	Radish, Leafless .....139	Hubbard's garden.....477
flat-headed, 375; round-	Fruit crates, improved.840	making .....53	Raspberry, King (red).217	Watrous, C. L., por-
headed .....375	Fruit bark beetle and	Morning Glories, New	Raspberry, Munger .....253	trait of .....693
Boston Ivy, fine growth	its work .....601	Japanese Imperial .....125	Rhododendrons, a bed	Wax plant, Hoya car-
of .....571	Fruit drying at home.584	Morton, Hon. J. Ster-	581	nosa .....34
Bracket, home-made.....807	Gage, Early Transpar-	ling, portrait of .....153	Roof, fireproof, a.....340	Willow, weeping, in
Bud, the two kinds of.203	ent, 629; fruiting in a	Moth, the Codlin .....37	Rosa multiflora as a	Boston Public Gar-
Canna, John White.....85	pot .....631	Motor car, Lancashire.840	hedge plant .....567, 677	dens .....806
Carnations, propagat-	Garden, the old-fash-	Newport, R. I.-Cliff	Rose stock suckering.775	Wilson, Hon. James.....153
ing from cuttings.....65	ioned .....35	Walk, 567; Residence	Roses, artistic growth	Window for plants,
Celery leaf blight,	Garden and Fruit	of John J. Van Allen	of .....565	862.....363
treating .....725	House, ornamental... 3	and sunken garden	Rose Carmine Pillar,	Xanthoceras sorbifo-
Celery, storing for	Gloxinias, house of.....553	at 573; Rosa rugosa	124; Hybrid Wichuri-	357
Winter .....171, 172	Gooseberry, the Pearl.237	henge at 567; Vine-	ana, 121; Yellow Ram-	Yucca filamentosa in a
Cellars, making frost-	Grape, Campbell Early.343	land, 569; Yuccas at.....569	blier Aglala .....125	Newport garden .....569

SUPPLEMENTS

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No 106.
SUNDAY SERIES VOL. LI.

NEW YORK, JANUARY 2, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Apiary.....	9	Frost Proof Cellars.....	3	Intensive Cultivation...	6	Pears.....	3	Vegetable Garden.....	7
Apples.....	3	Fruit Growing, Future of.....	12	Lewis, J. C.....	11	Poultry Notes.....	10	Window Plants, Fertilizer for.....	7
Bean Weevil, The.....	7	Fertilizer for Chrysanthemums.....	13	Market Reports.....	14	Private Gardeners.....	11		
Canada, Horticulture in.....	4	Garden and Fruit House.....	3	Market Gardens, Money in.....	2	Root-pruning.....	3	Illustrations.	
Carnations.....	4	Green Fly, Remedy for.....	7	Manure Heap, The.....	7	Rotation of Crops.....	7	Cycas in Flower.....	1
Cycas, The.....	1	Home Plot, The.....	10	Ornamental Gardening.....	8	Solanums as Pot Plants.....	5	Frost Proof Walls.....	3
Cyclamen, Double.....	13	Insects and Their Control.....	2	Package Question.....	6	Small Fruits for N. Ind.....	5	Fruit and Garden House.....	3
Epiphyllums Flowering.....	7			Plant Registration Bureau.....	12	Tariff, Canadian.....	5	Lewis, J. C., Portrait of.....	11
Fruit Garden.....	3					Valley for Forcing.....	13	Solanum.....	5
Freesias.....	10								

The Cycas.

Under their popular name some of the commoner species of this genus are undoubtedly familiar to all our readers. Popular names are usually most untrustworthy and misleading in their nature, and the name of "Sago Palm" is not in any way an exception to the rule, for the plants so-called are neither Palms, nor do they furnish any of the sago of commerce; it is, however, true that the trunks of both *C. circin-*

naked ovules. The accompanying illustration shows such a plant. The photograph from which the picture is reproduced was sent to us by Prof. Atkinson, of Cornell, and concerning the plant itself Mr. R. Shore, who has charge of the botanical collection there, writes:

"A plant of *Cycas revoluta* has been under my care for the past fourteen years in the botanical conservatories of Cornell University. I do not know its exact age, but it was a

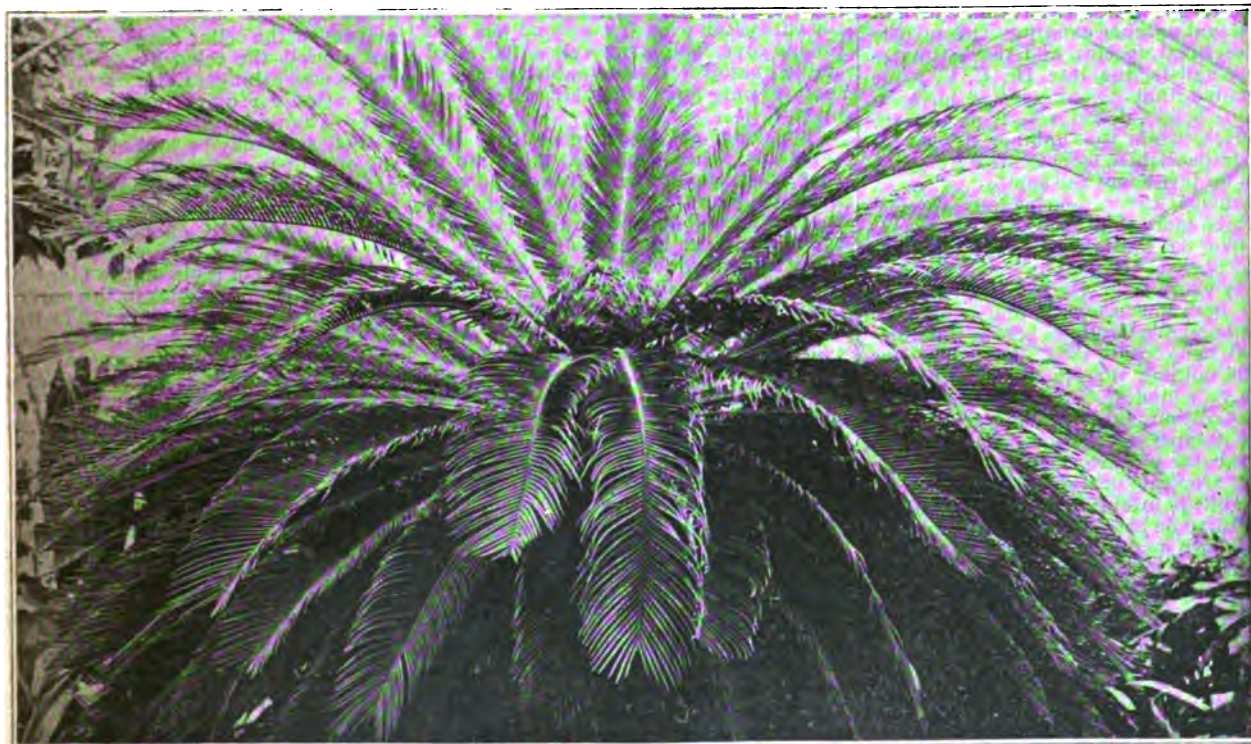


FIG. 1.—CYCAS REVOLUTA IN FLOWER, AT CORNELL UNIVERSITY.

alis and *C. revoluta* abound in starch, which in the countries to which they are respectively native is prepared into a food which is used somewhat as we employ sago.

Though many a collection of plants includes a *Cycas* still it cannot be said to be a common event for it to flower. The pollen bearing flowers grow in cones, and the female flowers, which are produced on a different plant, are formed into a crown of leaves surmounting the stem, a tuft of short woolly growths with indentures along each side where are borne the

small plant in a 10-inch pot when received from Professor Albert N. Prentiss, who had grown it in his laboratory for two years. It has made a rapid growth during the past fourteen years, and now has a spread of about 9 feet, each leaf measuring about 4 feet and 2 inches. There are 136 leaves on the plant. It has flowered three times; this year (the third time) setting new leaves before flowering, while formerly no new leaves were formed the year in which it flowered. The photograph was taken in July last."

Destructive Insects and Methods for Controlling Them.—I.

BY PROF. W. G. JOHNSON.

In this series of articles it is not only our purpose to treat the more common injurious pests of the fruit garden, lawn, greenhouse and nursery; but we hope to introduce from time to time an article devoted exclusively to answering queries from the readers of this journal. We will also endeavor to keep our patrons posted about the current literature, and whenever occasion demands we will present a paper on any special topic of general interest. So far as possible, we will eliminate all scientific terms and technicalities, and present our articles in a popular style, using illustrations whenever it is practicable.

Pests Considered.

During the year we will consider the following destructive insects: (1) In the fruit garden—the codlin moth, plum curculio, peach tree borer, apple tree borers and San Jose scale; (2) in the greenhouse, a general article on scale insects, mealy bug, plant lice, white ants and the so-called red spider; (3) in the lawn—leaf-hoppers, cut-worms and white grubs; (4) in the nursery—woolly apple louse, apple-leaf skeletonizer, leaf-roller and crumpler, leaf-hopper, slug and the pear-leaf mite.

Number of Species.

By way of introduction to this series of articles, some figures as to the total number of species of insects in the world will not be uninteresting. Indeed, very few people have any idea of the actual number existing. From lists of described species, and the estimates of specialists, the late Dr. C. V. Riley estimated that 30,000 species have already been described from North America, while the number described, or to be described, from Central America, foots up just about the same.

Linnaeus knew nearly 3000 species, of which more than 2000 were European, and over 800 foreign. In 1853 Dr. John Day placed the number at 250,000. Thirty years later Dr. Sharp's estimate was between 500,000 and 1,000,000. Sharp and Walsingham placed the number at 2,000,000 in 1889. Dr. Riley was of the opinion that these latter figures were very modest. It must be taken into consideration that the insects of the more temperate portions of the globe have been best worked up, but in the more tropical portions they have received little attention, and vast numbers remain to be characterized and named. There are many portions of the world where no entomological explorations have been made, and even in the best worked regions by far the larger part of our very minute insects remains absolutely undescribed in our collections, and have been very partially collected. There are now described annually nearly 7000 species.

After taking the above facts into consideration, Dr. Riley was of the opinion that not one-fifth of the species extant have been characterized or enumerated. In this view of the case the species in our collections do not represent more than one-fifth of the whole, and to say there are 10,000,000 species of insects in the world would be, in Riley's judgment, a moderate estimate.

Md. Agr. Col. and Exp. St'n.,
College Park.

Peninsula Horticultural Society will meet at Melford, Del., on January 6.

Money Methods in the Market Garden.—III.

Vegetables in the Old Strawberry Bed.—Rotation of Garden Crops, Etc.

In a former article I described my plan of raising cauliflower and cabbage in the new bed of strawberries, while growing plants set in the spring. I will now give in detail my plan of growing vegetables in the strawberry bed the following year.

All the strawberries that are marketable are picked the first week in July; and if the bed is to be picked from another year, the use of the land must be lost for three or four months. All this time the bed must be weeded, yielding no returns for the work the same year. I do not wish to hoe and weed a strawberry bed all fall without getting something for my work, so I am trying the plan of growing late vegetables between the rows of strawberries after the fruit has been picked. If I decide to run the bed two years, immediately after the berries are picked I mow the plants as close to the ground as possible, but before doing so, if the ground is wet, I pull all the large weeds. It is better to burn the bed over after mowing it, if it be dry enough. Sometimes it is necessary to cover the bed with straw or other litter, so that the work of burning over may be done thoroughly. With a light plow, I turn two narrow furrows together between the strawberry rows, leaving them from 12 to 16 inches wide; then I level down and pulverize the furrows with a cultivator. Before running the cultivator over the ground the last time, I cover the strip well with rotted stable manure, if obtainable; if not, I scatter some good commercial fertilizer upon it.

In order to get a good growth of late vegetables when planted at this time of year, the soil must be well supplied with available plant food. What to plant in these rows will depend on the market or the use that can be made of the land. If there is a demand for them, set Early Winningstadt cabbages up to July 20; later than this date, plant rutabaga, turnips, kale, spinach, or whatever vegetable is the most profitable and adapted to late planting. If you have live-stock to feed, cabbages and turnips will repay you for your work; and these vegetables usually also bring a good price if kept until spring.

The narrow rows of strawberry plants can be easily weeded at the same time as the vegetable plants are being cultivated. My strawberry bed is made very rich by the manure which is applied before the plants are set, and afterward in mulching them. The rich soil starts a good growth of new strawberry runners, which will set in the space next to the vegetable plants that have been kept clean by frequent hoeings. The outside leaves may be removed from the cabbages to make more room for the strawberries. In the rich soil all the plants will grow very rapidly.

After the bed has been picked the succeeding year I plow it, and set it to winter celery. I can usually get the transplanting all done by the middle of July. I have water pipes laid over the field, and take the water from them with a hose, so if the ground is dry at this time of year the transplanting is not delayed for want of water. The winter varieties of celery are set in rows about one foot apart, and irrigated when there is not sufficient rain to keep the ground wet. The strawberry bed on which the celery

is planted has received three heavy dressings of stable manure, one before setting the strawberries, and one for a mulch each winter afterwards. In this rich soil with irrigation I get a good growth of celery.

Celery when planted so close cannot be handled—i. e., the stocks cannot be made to grow upright by hoeing earth around the plants. To a certain extent I have practiced the method of winding the plants with twine. It is much cheaper than the old way of handling, but it takes considerable time to do the work. The twine is not tied or cut, but simply wound once or twice around the plant, and then carried to the next one, and so on. The celery has usually finished growing by the last of October, and then I begin to blanch it for the holiday trade. I have a plan for blanching the part of it that can be sold before January, which, I think, is going to work well, and by which I can use the boards that were employed in blanching the early celery. Between two rows I drive a row of stakes about 2 feet high; against these I place some boards; then I dig up enough celery and set it against the boards to make a row of plants about 1 foot wide, then another board is set up, and more celery dug for another row. The process is continued until 15 or 20 rows of celery are taken up on both sides of the first row of boards. The plants are taken up with a spading fork, and have some soil attached to the roots; and a little more soil is shod over and pressed around them when the plants are put in. In this way the celery is stored on the surface of the ground in much the same way as it is stored in cellars. Celery may be stored in this way very rapidly, as no trenches have to be dug, and no carting to the cellar done. No earth is put around the celery to soil it, and it needs no washing. Celery stored in this way usually requires no covering until after Thanksgiving. Some boards or hotbed sash may be laid over the top if the crop be in danger of freezing; and if not all sold before winter a covering of straw is furnished.

There is usually enough moisture in the ground at this time of year to start a new growth of roots on the plants, and the celery soon blanches in the darkened spaces between the boards. The leaves should be exposed as long as the weather will permit, to keep them green.

The celery is very easily taken out and prepared for market; all that has to be done is to take down the boards, trim and bunch it.

When it is desired to keep the celery longer than Christmas, I would advise storing it in trenches. The trenches should not be more than 18 inches wide, and the earth should be drawn around the celery as high as the tops, leaving them exposed as long as the weather will permit. Before the ground freezes, and when there is a little frost in it, lay a board over the trench and cover it about one foot deep with earth or manure. The little frost that is in the celery will preserve it, so that it will keep until spring, when the best prices may be obtained.

My plan is to set one quarter of my truck farm to strawberries every year, and grow cauliflowers and cabbages between the rows the first year. The next year, after picking the berries, I grow a crop of late vegetables between the rows, as above described; then the following year, after the second crop of strawberries has been picked, I plow the bed and grow a crop of late celery the same year; the next year I grow a crop of early celery on the same land, according to the method given in my first article on the "new celery culture,"

and the subsequent year I reset the land again to strawberries, and continue the rotation as before. This plan gives me six crops in four years—two of strawberries, two of celery, one of cauliflowers, and one of cabbages, or other late vegetables.

The income from an acre with this rotation should be in four years as follows: Two crops of celery, \$4000; two crops of strawberries, \$1000; one crop of cauliflowers, \$1000; one crop of cabbages, \$500; total, \$6500, or an average of about \$1600 per year, making the income from four acres \$6500 per year. From this amount must be deducted the cost of fertilizers, labor, horse-keeping, seeds and tools, and other incidental expenses, which will probably take one-third of the amount named. These results can be obtained only by using large quantities of fertilizers and water for irrigation, by having a good market for the produce, and most important of all, by skill in gardening operations.

A Garden and Fruit House.

A small house near the garden will be found of decided advantage, for in it can be placed all the tools needed in the garden, the seeds and fertilizers, and here can be stored for a longer or shorter time the crops as they are gathered in the fall. Here, too, can be done the dirty work of preparing each day in summer the corn and vegetables for the kitchen, where such work makes an inconvenient litter. Most farmers and gardeners, however, might think that, although convenient, such a house could hardly be afforded, but a different aspect is given the matter when one reflects that such a garden house may be made a fruit house as well, where the produce of the orchard can be gathered, barreled and stored away, for such a house may have a cellar to which frost will not gain access. The accompanying illustration suggests the form and construction of such a house, where common field stones

fully as cheap to build up to the roof with the stone as to use framing, boarding, shingling, and the usual finish. Besides, such walls give a very picturesque building, especially when surrounded by shrubbery, and adjacent to a garden or orchard. The rounded field stones



FIG. 2.—MAKING CELLARS FROST PROOF.

give the best effect, and these can be laid rapidly, as none of them need be split or cut in any way. The cellar of such a building should be well drained and have double windows, with a chance to ventilate when desirable.

WEBB DONNELL.

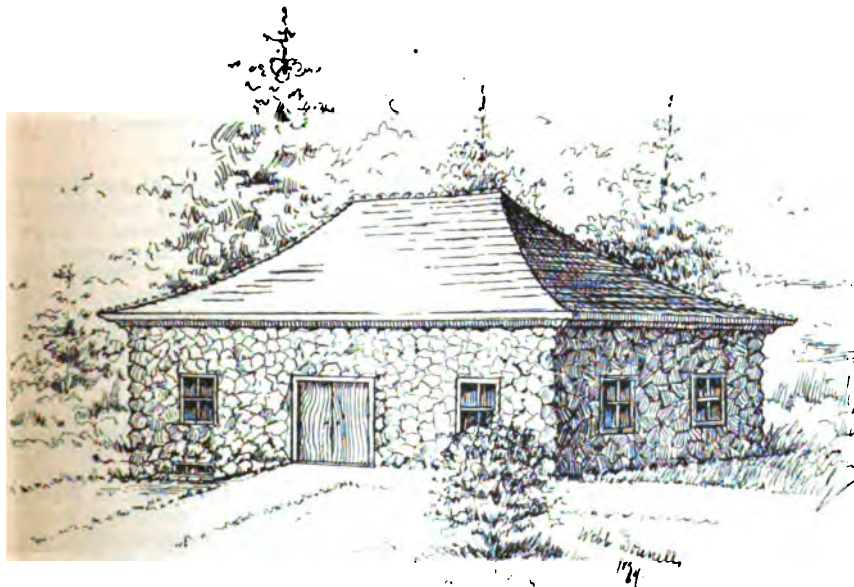


FIG. 3.—ORNAMENTAL GARDEN AND FRUIT HOUSE.

are abundant—and the localities are exceptional where field stones are not common. Where one puts in a cellar wall of rough stones it will be found fully as cheap to carry the wall right up to the roof with the same kind of stones, using a mixture of cement, lime, and sand for mortar, the cement being somewhat in excess of the lime.

I have recently been having quite an extended amount of rubble stone wall erected, and I found it would be

Illinois Fruit-growers.—The fruit-growers of this section have been making arrangements with E. G. Mendenhall, of Kinmundy, General Manager in Illinois, for the American Fruit Growers' Union, to establish local branches of that organization. It is probable that the fruit-growers of Southern Illinois will also ask Governor-elect Tanner to appoint a well-known and reliable horticulturist to the Board of Railroad and Warehouse Commissioners.

Making Fruit Cellars Frost-proof.

Many old cellars are not so proof against frost as to make the storing of fruit in them an entirely safe matter. A low temperature is certainly needed to keep fruit in the best condition, but the possibility of the mercury falling below the safety point during a cold snap is a factor to be guarded against. A cellar can be made frost-proof by laying a single wall of brick inside the underpinning, leaving an air space between the bricks and the outer wall, but this is somewhat expensive. An easier and cheaper way is to put up some short studs just inside the underpinning, and to nail upon these thin matched boards, down to a point a little below the ground on the outside of the cellar wall, leaving an air space as shown in the illustration. Fruit will then be out of danger from low temperature outside. W. D.

The Fruit Garden.

Apples.—In favorable weather attend to the pruning, or rather thinning, of branches of the young trees. There will not be much to do if the foundation was started right, but few men are satisfied with three to five slim shoots as the base of the future up-courstree. When you see a vigorous, shapely tree carrying a crop of good marketable fruit, get under it, and study the layout of the main branches and carry it in your mind as you commence to form your tree; in fact, a tree two or three years after planting, should appear thin rather than symmetrical.

Root Pruning.—If trees planted six or eight years are making long, sappy shoots and showing very few flowers and less fruit, don't cut back the wood, but as soon as the frost is out of the ground, cut a narrow trench around the tree, about 2 feet inside the circumference of the branches, cutting off all roots and smoothing with a knife the ends of the large ones. On the younger trees encourage the main branches to extend; the nearer they come to the horizontal line the better. Do not shorten them in, for on the tips of them first samples are often obtained, and they make fine weights to keep the leaders down.

Pears.—The catalogues will begin to arrive soon, and doubtless many fruit growers will have a desire to try a few varieties other than they have. To-day, the number of varieties catalogued is confusing to the average man, and too often misleading. I think the best way is to keep track for one season of how the supply of pears holds out, noting the time when the fruit was gathered, when ready for the table, and when past its best. If the season can be covered without a break, and it is desired to improve on flavor it is advisable to seek intercourse with other growers, because fruits, especially pears, vary much in flavor even in adjacent localities. Again, more often the fault is with the picker than with the soil. All has not yet been learned of the proper time to pick different varieties of pears to get the flavor they should have when sent to the table.

Spraying apparatus should be in working trim, and insecticides and fungicides at hand ready for application when the few mild days in January come.

Keiffer Pear.—I would advise getting this, if not already being grown, to try it. Some people appreciate the peculiar quince-like flavor. To get it right, thin the fruit; let it hang on the tree until near freezing weather; pick and store in fruit-room, and towards the end of November bring a supply sufficient for a few days into a temperature of 60°, keep the fruits dark, when they will be fit to use in two or three days. The tree itself is worth growing for ornament, as the foliage is large and glossy, and, moreover, turns to a fine color in autumn.

J. HOLLOWAY.

Horticulture in Canada.

The meeting of the Horticulturists' Lazy Club, Cornell University, held on Monday evening, December 14, was devoted to the above subject. It was presented by Mr. P. B. Kennedy, a graduate of the Ontario Agricultural College, which, the speaker said, is the only institution in Canada where instruction in agriculture is given.

The subject was represented mainly in connection with the Government experiment farms, but in opening his discussion, Mr. Kennedy made reference to some of his experiences at the above-named college. Up to the time of his graduation in '94, horticulture at this college was in a very crude state. The professor of horticulture was also professor of geology, all the departments of botany were under his charge, besides several other duties of a more or less varied nature. The instruction in horticulture consisted mainly in going about the grounds and learning the names of a few shrubs.

Now, however, this condition of things is greatly changed. A professor of horticulture devotes his entire time to this line of work, and a good course of instruction is given, and experimental work carried on.

Referring to the experimental farms, the speaker said there were five of these. About 3000 acres of land are controlled by the experimenters.

The main farm, of which the others are branches or sub-stations, is situated at Ottawa, and the branches are located, one at Nappan, N. S.; one at Indian Head, N. W. Territory; a third at Brandon, Manitoba, and the fourth at Agassiz, B. C., near Vancouver.

At the main farm in Ottawa the climate is severe, and many fruits have to be discarded on this account. Many of the Russian sorts have been found to thrive here, and the native plums are being improved. In 1887 there were 881 varieties of fruits under experiment, while at the present time there are 1392 sorts.

About 65 acres are devoted to ornamental trees and shrubs, special attention being given to plants for hedges. The interest in floriculture is not large.

The branch farm in Nova Scotia, being situated in the Annapolis Valley, is in one of the most favorable locations for fruit growing. The farm is well sheltered and the soil congenial. Fruits of the best flavor and lightest color are here grown.

The Gravenstein, Baldwin, and Nonpareil are popular apples. The apple scab causes but very little damage. Pears, plums, and cherries are also grown.

There are now under cultivation at this farm about 200 varieties of large fruits and 75 of small.

The branch at Mandon, Manitoba, is in the wheat country. The climate is so severe that but little success has attended the efforts in the direction of fruit growing. A few of the Russian and Siberian sorts have proven hardy, and the native wild plums are of some value. Currants and gooseberries are grown with good success. A few, perhaps a hundred, ornamental trees have proven hardy.

The climate and conditions at Indian Head are not materially different from those in Manitoba.

At Agassiz the climate is very similar to that of England, and nearly all fruits can be grown more or less successfully. Plums bear immensely, and mulberries, filberts, chestnuts and others thrive here. A very large number of varieties is grown at this branch for experimental purposes.

In some parts of Canada, particularly about Lake Erie, grapes and peaches are successfully cultivated.

During the course of his remarks the speaker made reference to the way in which

England advertises her colonies, and in this connection spoke of the Imperial Institute situated near the Natural History Branch of the British Museum in London. In this building there are rooms representing each colony in which are stored samples of the agricultural products—grain, jars of fruit, bearing the grower's name, furs, etc. Each colony is also represented by an officer whose duty it is to give information concerning the colony which he represents.

Cornell University.

H. P. GOULD.

Roses and Carnations.

An evening session of the recent Michigan State Horticultural Society's meeting was devoted to these flowers. Henry Smith, a large and successful florist of Grand Rapids, read a paper on "Rose Culture, Outside and Under Glass." Mention was made of the references to Rose culture in early history, both sacred and profane, and to the large number of species from which our cultivated varieties of to-day have come, most of them being natives of China, India, and Persia.

On account of their hardiness many of the varieties of the Cabbage Rose are well adapted to outdoor culture, but with proper care the varieties of the hybrid perpetual class gives the best results. Among the best varieties of this class are Coquette des Alpes, Paul Neyron, Ulrich Brunner, General Jacqueminot, and Mrs. John Laing. The Tea Roses also do well if given proper protection during the winter, but in most cases the Hybrid Teas will be preferable. The Climbing and Moss Roses are also well adapted for growing out of doors. Among the best sorts of the latter class are the Baltimore Belle, Queen of the Prairies, and Crimson Rambler. As bedding Roses the Hermosa and Clothilde Souper also are quite desirable.

For growing in greenhouses the Teas and Hybrid Teas are most used. Among the best sorts are Perle des Jardins, Bride, Kaiserin Augusta Victoria, Bridesmaid, Caroline Testout, Meteor, and American Beauty. Cuttings should be struck in January, potted as soon as rooted, and kept continuously growing, by an occasional re-potting, until ready for planting out, which should be done during May and June. Roses need rich soil of manure and rotten sods with considerable clay, and plenty of water, but care should be taken not to give an excess. An even temperature should be maintained, but for the different varieties this will vary from 58° to 65° at night.

"The Carnation" was the subject of the paper of N. B. Stover, of Grand Rapids. On account of the great improvements that have been made in this flower during the past few years, the attention of the public has been directed to it until it is exceeded by the Rose alone in the number of the flowers grown, and it is probable that the height of perfection has not yet been reached. In Grand Rapids alone one hundred thousand plants are grown each year.

The Carnation does best in a comparatively low temperature, but requires an abundance of air and light. The cuttings are made at any time from December to February, and are rooted in a cutting bed containing 4 inches of sand. When the roots have formed they are planted in shallow flats, 3 inches apart each way. When spring opens they are planted in the open ground at about 20 by 12 inches, and are given thorough cultivation.

When flower stems start they are pinched back until the first of August. During this month they should be transplanted to the houses where they are to flower. Opinions vary as to the best method of taking them up, whether to keep on all the soil possible

or shake it off, but probably when grown upon sandy loam soil, in which they do best, it will be preferable to shake off the soil. Press the soil firmly about the roots, water thoroughly, and shade in some way for three or four days, during which time the plants should be syringed four or five times daily, taking care not to saturate the soil. The plants will be benefited by the application of weak liquid manure about December 1, and this should be repeated every two weeks, gradually increasing its strength. The Carnation rust is the worst disease to which the plants are subject, and it is much to be dreaded. The best remedy is Fowler's solution of arsenic, at the rate of 1 ounce to 8 gallons of water. The solution can be purchased at a drug store or can be made by heating together 616 grains of arsenious acid (white arsenic), 1323 grains of bi-carbonate of potash and 4 ounces of water. This should be diluted before using (1 ounce to 8 gallons of water) and sprayed over the plants at the first appearance of the rust, carefully covering the under as well as the upper side of the leaves.

Soon after they are planted some kind of a support should be provided. The kind preferred by Grand Rapids florists is known as the Creelman support, having been invented by a florist of that name, living in Grand Rapids. It consists of a wooden stake about 1/2 an inch square and 2 feet long, to which a spiral coil of galvanized wire 5 inches in diameter is fastened. The cost is about one-fourth cent each, aside from the labor.

Of the varieties grown by florists, Day-break easily stands at the head, and too much cannot be said in its favor. The flowers are of a delicate shade of pink, and readily sell for more than any other variety. Wm. Scott, in color rose pink, is also a popular variety. Silver Spray is the most profitable white, although Ivory, a new variety, is very promising. Of the red sorts, Portia, Pres. Garfield, and Emily Pierson are most grown. Murillo, a seedling grown by Hopp & Lempke, of Grand Rapids, is regarded by all who have seen it as the coming red variety. It will probably be disseminated in 1897. The plant is a good grower and free bloomer, and the flowers are large, full, and of a rich deep red, with a large stout stem, good calyx and deeply fimbriated petals. Goldfinch and Mayor Pingree are the best yellow sorts.

Manhattan (Kan.) Horticultural Society met December 17, at the horticultural hall of the State Agricultural College. The weather being bad there were not as many present as usual. The officers now serving were re-elected for the coming year. One good paper was read, "My Experience in Fruit Growing," by C. W. Kimball.

Makanda, Ill.—The members of the Fruit Growers' and Shippers' Association held their annual election last Friday. The following officers were elected: T. S. Welstead, president; Ben. L. Wiley, secretary; President Modglin, H. E. Ferrill, and John Crawshaw, directors, to serve three years. The Association joined the National Fruit Growers' Union.

Blackberries per Acre.—Sixty to one hundred bushels of blackberries per acre is a fair yield, but double that amount can be grown on loose rich loam, with a clayey subsoil, provided extra care be given.

Selection of Clons.—I am very careful in selecting clons to cut them from the tops of trees which are healthy and vigorous. I should prefer to not take a clon from a tree which has the least decayed spot in it.

Why Neglect the Solanums as Pot Plants?

In asking the above question I do so under the impression that at least one old time favorite of the genus is not now receiving the attention from our lovers of pot plants that it deserves. I refer to the Star Capsicum, or the Jerusalem cherry, which, if they are not one and the same thing, certainly are much alike. The botanists, I believe, observe a difference, calling the first one *Solanum capsicastrum*, the other *Solanum pseudo capsicum*. The growth of the latter appears to be stronger and somewhat coarser than the other, otherwise they are quite identical. In any event, here are plants of the easiest culture, suited to the greenhouse or the window, and which are covered with much bright scarlet fruit, the size of hazel nuts, during a long period of winter, beginning in the fall. They never look better than at the holiday season just when there is a remarkable dearth of bloom, unless one pays stiff prices for cut flowers at the florists.

I have no doubt that one thing which has tended to bring the Solanum here referred to into disfavor with many, has been the ill-shaped specimens thereof that have too often been paraded in the greenhouses and markets. Because this is one of the easiest of all plants to grow after some fashion, is no reason why it is not worth while to give it the best of attention, with a view to growing it in the best possible fashion.

rooted in March. To get a suitable supply the stock plants should be hastened in fruiting by giving them a warm, sunny place in the greenhouse and withholding water somewhat. Soon after New Years cut them back and increase the watering, giving them a moderately warm place, and soon there will be plenty of slips. From the cutting bed put into thumb pots, and from there make but a single shift, and that into three-inch pots, for a year. During the summer plunge into frames, and give next to starvation treatment. They possess strong vitality, and by treatment that would hurt many kinds these will be gaining a foundation that will tell well on after beauty. This is somewhat on the principle of retarding Ten-week Stocks for the finest bloom. During the following winter keep the plants in the coolest house, anywhere not actually penetrated by frost.

In March or April of the second year, head back the plants, shake out some of the ball of earth and repot into fours, using now some rich, loamy soil. With the coming of warm weather, plunge the pots in frames, give a last heading-back of the young growth, and the final shift into six or seven-inch pots in July. Keep the plants uncrowded, water them freely, remove to glass before frost, and by December you will have as fine a stock of dwarf, round-headed and free-fruited cherry bushes as you can wish to see. Side of such cutting-raised two-year-old Solanums the common run of plants raised from seed looks quite weed-like, and impresses customers accordingly.

such I hardly know of a prettier climbing plant than the Jasmine like Solanum of our greenhouses. It is of the easiest culture, and has many handsome bluish white flowers in axillary clusters, almost continually. The leaves are deep green and pointed. A few other tender species possess some value in the large and showy leaves, possessed for what is known as sub-tropical effect. ELIAS A. LONG.

[In a few sentences which we have not considered it necessary to publish, our correspondent refers to the popularity of Solanum capsicastrum in the London market, and commends that as a hint to florists generally in this country. We are fully aware of the popularity of the plants as grown for Covent Garden, and we have seen both bought and sold thousands in that mart at the average rate of nine shillings per dozen (sometimes a little more, sometimes less). Our florists hardly came to work upon such small margins of profit as that means; then again, if New York City be any guide to the state of the public pulse, the plants are in no way popular. Attempts are made each year to push them, and each season the same dismal failure results. Not that the plants are not well grown, for if possible they were better grown than those offered in London. This past fall hundreds of well berried plants have been sold at wholesale at such wretched prices as \$5, \$8, and \$11 per 100. One great drawback in this country to the plant's popularity is its susceptibility to suffer from dry heat; in the average American home, heated as it is by steam or from a furnace, the plants quickly dry out, and thus drop their leaves, and soon their berries also. If wet moss be kept on the top of the pot to counteract this, the leaves soon turn yellow.—Ed.]



FIG. 4.—BRANCH OF JERUSALEM CHERRY; FRUIT SCARLET.

How to grow the Jerusalem Cherry.

One of the commonest ways I have run across of growing the plant is to treat it as an annual. Seeds that are saved in the fall or winter are sown in the spring, and the young plants are bedded out in May, and are lifted and housed in September or October. This might be called the slip-shod, as it certainly is the easiest course imaginable. One of its prime faults is that even though the seeds are secured from the finest fruited specimens, yet the flowers of such were subjected to the pollen of the collection with the chance that the new crop will show plenty of inferior plants, owing to the indiscriminate fertilization of the flowers.

A much better way to raise the plants is to do so from cuttings. In that case one need not work in the dark, for you may know just what you are raising. As stock plants, choose the finest specimens at your command. In making the selection, look quite as much to the habit of growth as to the beauty and abundance of the fruit. In some plants the fruit is of better color than in others, ranging in this respect from a dull yellowish red to bright scarlet. The wise grower will, of course, choose the latter.

What I shall here recommend is the two years' course of culture with the plants continually in pots. The cuttings are

As a house plant the Jerusalem cherry is by no means to be despised. It is of easy growth, thriving well, even though it has not the lightest place in the room. The deep green lanceolate leaves are always pleasing, and the more so when brought into contrast with the scarlet fruit. The fact that the foliage possesses some odor can hardly be classed as an objection, when not more than one or two plants are grown in the window. Some persons enjoy the odor. There is a form of this species which has leaves that are variegated with yellowish white, but as the fruiting propensity is lessened thereby, it has never become a wide favorite.

It adds to the interest of the plant to know that it is a native of Brazil, and not of Jerusalem, as some, from its popular name have thought. A near relative, however, is a native of Palestine, and is there known as Apple of Sodom.

Altogether the Solanums are a most interesting and extensive family of plants; the botanists include in the genus about 700 distinct species. Those both useful and ornamental fruit bearers the tomatoes, peppers and egg plants are cousins. So is the even more valuable potato, the plants of which, it will be recalled, also bear fruit.

Quite a number of species besides the main subject of this sketch, are classed among purely ornamental plants. Among

The Canadian Tariff.—On December 18, James McKenna, on behalf of the market gardeners and florists, appeared before the Canadian Tariff Commission, and asked for protection against the green vegetable products of the south, which came in in large quantities, just at the time the Canadian product came on the market. While the present duty was protective, it would be more so if changed from ad valorem to specific, at so much per pound, as when the American goods were sent in at a low price the ad valorem duty was not much of a protection. He also wanted the duty on cut flowers and florists' plants rearranged. Roses, instead of paying 20 per cent., should pay a dollar per hundred, or 1c. a flower; Carnations, 50c. a hundred; cut Chrysanthemums, a dollar, and smilax, 10c. a string. Tomatoes now paid 10 per cent. ad valorem and 20c. a bushel; he suggested a change to 1c. a pound. This, he said, would mean protection to them for a couple of weeks in the spring, when the Americans flooded the market with their goods. On the other hand, the action of the Michigan State Horticultural Society in so promptly passing a resolution requesting Congress to place a tariff on Canadian fruits, nursery stock, florists' stock and garden truck, at least equal to that placed on like articles by them, gives eminent satisfaction to Port Huron gardeners, and now a movement is on foot to raise money to pay the expenses of a man to attend the meeting of the New York State Horticultural Society, which occurs early in January, and secure a like action by that Society. An effort will also be made to secure the co-operation of the gardeners and peach growers in Detroit and vicinity in the cause, as they are the greatest sufferers from the present unequal and oppressive tariff laws. Thos. Hoffman has charge of the matter in Port Huron. The present Canadian tariff on our small fruits going into Canada is 2c. per pound; on peaches 1c. per pound; on all florists' stock, garden truck, etc., 20 per cent., while all Canadian stock is admitted free.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Journal of Gardening and Fruit Growing, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1896.

PUBLISHED BY

A. T. DELAMARE PUBLISHING CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1697.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Growers and Specialists ARE heartily invited to co-operate with the editor in presenting to his readers facts of interest relating to the successful culture and marketing of fruits and vegetables. Both of these subjects are of vital importance, and advice from those who have had experience will be eagerly read.

How best to develop the home market so that sales may be made direct to consumer, or to transact them through intermediaries who will ensure to the grower satisfactory and full returns, is a question which is open for discussion, and we trust to see the financial end of the business very thoroughly argued in these columns during the year just commencing.

Intensive Cultivation the KEYNOTE to Success. A NEW line has been inscribed under the title of this paper which is intended to convey, as modestly and in as few words as is possible to give it the scope of action on which AMERICAN GARDENING takes its stand for the future.

Through the practice of intensive cultivation the operator secures the best crops, of the sorts most in demand, in their finest state of perfection, for which he receives the highest prices in the best markets. The soil which he so unremittingly cultivates never lies idle; it is

made fertile and kept productive; its yield is the result of systematic application bringing about full fruition.

Condensed to a definite conclusion, intensive cultivation is the confining of one's energy to the undertaking of those things only which can be carried through to successful termination. Thus, we argue that it ensures better returns to thoroughly cultivate and care for say five acres, than to attempt to control one hundred acres without the equipment, men, and money necessary to attain the full measure of success which could otherwise have been secured. It shall be our endeavor to keep our subscribers informed of every development in this line; to obtain for them the experience of skilled growers and specialists; to keep them posted as to new varieties and methods. But the work must not stop here. The grower occupies the same position as the manufacturer; his produce may be ever so superior but unless he knows how when and where to market it his labor is one-half lost. Hence, he must study the disposal of his crops to the fullest advantage just as closely as he does that of their growth. Here, too, AMERICAN GARDENING will come to his assistance with all the influence at its command.

While thus engaged on behalf of the commercial grower it is by no means our intention to drop those features of this paper, which have in the past made its columns so attractive to the advanced amateur. On the contrary, this section of our readers will find AMERICAN GARDENING in 1897 of more value to them than ever before in that it will jealously guard their interests, and strive to retain that pre-eminence in their opinion which it is satisfied it now possesses over all its contemporaries.

That a happy and prosperous New Year awaits all its friends is the sincere wish of AMERICAN GARDENING; may 1897 bring us all that measure of success which our efforts deserve.

The Package Question.

When crops are high the cost of the packages in which they are sent to market is very little noticed, though there is no reason why it should not be, if one is fruit growing, for instance, in a business-like way, and on a business basis. But when the crop brings a low price, the cost of the package becomes a serious matter, often reducing the receipts to the bare cost of production, if not below. This matter has been forcibly brought home this season to the county in which I live. Kennebec is the great apple county of the State of Maine, 19,000 barrels having been shipped in one season out of one little town in it for export alone, to say nothing of the thousands of barrels that were shipped to domestic markets from the same town. We had a large apple crop the past year, and the price has not ruled

above \$1.25 per barrel, delivered at the station, while "seconds" have ruled at 75 cents a barrel. The barrels cost 25 cents apiece. This gives 50 cents a barrel for growing, harvesting, packing and delivering seconds to the station, and \$1 net as the highest price.

Now I am not prepared to say that apples cannot be grown here on our Maine hillside—the natural home of the apple—for \$1 per barrel, and return a fair thing to the grower. That is not the question at all. The fruit grower ought to have all the profit possible, whether the ruling price be high or low, and as matters now stand he is kept from a considerable part of what ought to be profit by the cost of the package, and this is true not only in the case of apple grower, but of the peach grower and the grower of small fruits as well.

I am naturally interested most in the apple-package question, and am anxious to find a way to decrease the cost of these packages, for such a decrease would mean thousands of dollars saved yearly to the orchardists of my own county alone. A barrel, from its peculiar form, and its manner of being fastened together, is much more expensive to manufacture than a rectangular package holding a similar amount.

Take, for instance, the rectangular crate that brings our oranges from Florida. A two-bushel package of that sort could hardly cost above eight cents to manufacture, and it serves its purpose admirably. Such a rough, light, but strong crate, lined with heavy packing paper, could be filled as tightly, and carried as safely as the barrel, and the cost, allowing liberally, ought not to be more than half as much as the cost of the latter. Twelve and a half dollars saved on every hundred barrels of apples would well be worth looking after, especially where the grower has anywhere from one thousand to three thousand barrels of fruit to dispose of.

I am confident that the man who will spray his trees intelligently, prune and feed them, thin and carefully gather his apples, and as carefully pack the very finest in two bushel crates, will be able to establish a fancy trade that will bring him in very satisfactory results. It might be found profitable to buy an orange-wrapping machine, and wrap each apple in tissue paper, with the grower's name upon it, but I am doubtful of this.

Grown and packed as I have suggested the fruit would appeal to a class of buyers who would think of a barrel of apples as something common and like the general run of fruit. A crate of fancy apples appeals at once to a fastidious buyer (and such buyers are the ones willing to pay the highest prices) as something choicer than that sent in the usual way. Crates, moreover, could be made at home in leisure moments, and the cost still further reduced.

WEBB DONNELL.

[The suggestions conveyed in Mr. Donnell's article may contain germs of value, and we trust to see the "Package Question" taken up by others.—Ed.]

What Our Advertisers Say.

"The plant trade through my advertisement in your For Sale column was quite satisfactory. I am satisfied that AMERICAN GARDENING reaches a class of people who are buyers."—ALLEN D. MANWELL, Iowa.

"From inquiries received, we think we have acted 'just right' in placing AMERICAN GARDENING on our list."—BATEMAN MFG CO., N. J. Manufacturers of Farm and Garden Implements.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions.

Habits of the Bean Weevil.—I fear your Schenectady, (N. Y.) correspondent, whose letter regarding the habits of the bean weevil was published in the December 19 number, page 808, is not fully acquainted with the ways of that little pest. He has two kinds of soil in his garden, a sandy loam and a heavy loam. Beans grown on the former are infested by weevils, while those on the heavy loam are free from them. I have no doubt as to his facts, but I do question the soundness of his explanation. He probably plants his earliest beans on the light sandy part of the garden, and the later varieties or plantings on the heavy loam which is too cold and damp for very early working. If I am correct in this it is easy to see how he might be misled in his conclusions. According to my observations the bean weevil lays its eggs on the earliest beans in the garden or field. It then dies, as do most other insects after depositing their eggs, so that when the later varieties or plantings are in pod there are no weevils left to injure them in this way. My early wax beans, grown to be used as string-beans, if allowed to ripen seed, are almost sure to be heavily charged with weevils which come out the same season if the beans are shelled and put in a warm place. But late plantings, whether on light or heavy soils, are comparatively free from them. Of course, it is possible to have weevils in late beans if lively, mature weevils are at large when the pods are in condition. One may let loose a colony of them which have been shut up where they could not get away earlier in the season. Your correspondent's cucumber experience, it seems to me, is in the same line. The "striped bug" does the most harm in early summer. Late cucumbers are far less likely to be injured than early ones whether grown on heavy or light soils.—A. W. CHEEVER.

Flowering of Epiphyllum.—I had always supposed from experience and observation that the *Epiphyllum truncatum* bloomed but once a year, in November, but having lost one a few years since, procured another, and it has each year bloomed until quite into the winter, is still in blossom at this date and has eight buds in different stages of development. I see that Henderson says, in his handbook of plants, that with good care it may be kept in flower from November until March. I do not know of any special care mine has had, but if there is any that will cause it to so bloom I am sure it would give your readers pleasure to know it.—H. O. T.

[There is no special treatment, it is just a question as to how the flowering growth may happen to ripen that is all; the flowering period is from November to March.—ED.]

Select Hardy Shrubs Wanted.—Can you give me a list of hardy shrubs and Evergreens, such as *Rhododendrons*, *Azaleas*, etc., different from the ordinary natives usually grown, and which will stand the winters of this climate, which is similar to that of Northern Wisconsin.—AMATEUR, Toronto, Ont.

Remedy for Green fly.—I frequently see inquiries in regard to the destruction of aphids on plants in your publication, and a remedy which I have used for some years with perfect success never mentioned, namely Persian Insect Powder. I had given up the growth of several plants, among them the *Pelargoniums*, on account of the

pest, when I was told of this remedy, and have never seen green fly on the plants since, or on the Carnation, which is also subject to them. If the plant is infested with the fly I use it directly upon that and on the ground until the pest is destroyed, then simply puff it about the house once or twice a week, just as I would to rid a room of flies in summer.—MRS. H. O. TALLMADGE.

Wholesale Fruit Prices.—I like your journal. There are over a dozen fruit growers' papers coming to my desk, but none suit me as well as AMERICAN GARDENING. I like to see a diversity of topics from many sources. The prices that fruit is selling for in many of the eastern markets would be of interest to western fruit growers.—B. F. S.

[We expect shortly to quote prices for fruits and market produce at the large trade centers, and expect these reports to become one of the most valuable features of AMERICAN GARDENING.—ED.]

Old Asparagus Roots.—Have any of your readers had experience in transplanting old asparagus plants or roots? I should think if closely trimmed they would answer as well as young roots.—A. T. G., W. Washington, D. C.

The Vegetable Garden.

The Past as a Guide.—At the present time little can be actively done in the vegetable garden, but the busy season will soon be upon us, and it is good policy to prepare the way by having all our thinking and planning done now. A very useful habit to get into is that of keeping a brief, though correct, record in our own words of all our gardening operations for the year, our failures as well as our successes, the time of sowing the seeds and their maturity, how the manuring was done, how deep we dig or plow the ground, and any other data that may come to our notice. It is a practice to be encouraged, as it cultivates our powers of observation; we thus learn to grasp the minutest details, and in this way become enthusiastic and more intimate with our work. It is also invaluable as a guide to future operations.

Practice Rotation.—In these days of blight, insect enemies and innumerable diseases to which vegetables are subject, a complete system of rotation of crops should be followed as a preventive, and also for the reason that vegetables succeed better when a change of ground is given. Therefore, we should make our plans now, assigning a place for everything; even before we make up our seed list, so that when the busy spring comes we will have no need to stop to think, for we know exactly what, when, where and how to plant everything.

The Manure Heap.—The manure heap should be looked after and taken care of. The usual method is simply to let it stand just as thrown from the stables. The ammonia being a volatile gas, escapes to the atmosphere and is lost; the heap is liable to fire-fang, thereby destroying a large percentage of its value for plant food. To prevent this we spread the heap evenly at least once a week, and then sprinkle plaster all over the heap and around the stables. Used in this way plaster is invaluable to fix the ammonia. Some attention should be given to the liquid drainings of stables and manure heaps, and some method adopted to retain these until they can be used on the various crops. It is a most valuable form of manure, and being in solution, can be immediately assimilated by plants, if given to them during the growing season.

W. M. EDWARDS.

Small Fruits for Northern Indiana.

This was the subject of a paper by J. C. Grossman, which was read before the recent meeting of the Indiana State Horticultural Society. Mr. Grossman prefers a rich sandy loam, and applies twenty loads of stable manure to the acre. He sets plants in the spring.

Speaking of varieties of strawberries, he said, Haverland is the most productive variety; Wolverton is large and good quality; Bubach soft, but large; Warfield ranks first as a shipper and canner; Bederwood is a good fertilizer and productive; Greenville, good in quality; Parker Earle requires very rich soil and plenty of water; Marshall good, but shy bearer; last and best is the Brunette, rich red, and the sweetest berry he ever tried. Nemaha is a strong grower and one of the best black raspberries. Shaffer's Colossal is the best for canning. Golden Queen is better than Cuthbert. In blackberries, Snyder succeeds best with him. Mr. Van Deman said the Brunette excelled all others, in his opinion. It is of best quality and a good bearer. Mr. Sedgwick recommended the Eureka raspberry as one of the very satisfactory kinds, large and productive.

Mr. Newton was not pleased with the Loudon; it is not better than Cuthbert. Mr. Willard thinks Loudon a promising variety, one of the largest and best.

Stark County (O.) Horticultural Society.

—At the last monthly meeting, the election of officers resulted as follows: Joseph P. Hayhurst, president; Alfareta Saylor, vice-president; Margaret Rockhill, secretary; Watson Wise, treasurer; John F. Roth, Peter J. Palmer, and Michael Bitzer, executive committee. The next meeting will be held on the third Wednesday in January, 1897, at the residence of John Roth, three miles south of Canton.

A Botanical Garden for Brooklyn.—A local paper in an editorial asks the question: "Why cannot Brooklyn at least make a beginning in the direction of a comprehensive botanical garden? It will be objected that the funds are not available for such an undertaking, which is doubtless true, but a beginning might be made, and in time, as the public realized the great value of such a garden, in imparting a knowledge of plants, the money necessary to extend it would be forthcoming." Another reason is, in view of the establishment of the New York Botanical Garden, which will undoubtedly meet all the requirements of Greater New York, it would be a useless expenditure of money. In the meantime, let the authorities and good citizens of the City of Churches devote their spare wealth and energy to the very laudable object of providing more small parks for the people, a subject now under consideration.

Fertilizers for Window Garden Plants.

At the Farmer's Institute meeting, held in Horticultural Hall, Philadelphia, Saturday, December 10, Dr. Frear, in a talk on "Commercial Fertilizers," gave the following formula, suited to plants in the window garden: Five ounces sodium phosphate, seven ounces sulphate of potassium, six ounces nitrate of sodium. Mix and dissolve one ounce in 28 quarts of water, using only a very little of the solution in a great deal of water to wet the earth of the plants once in a while. Care must be taken not to wet the foliage.

Ornamental Gardening.*

There is scarcely a more fascinating employment than the planting and care of ornamental trees and shrubs. After we have planned our landscape, even though it have small pretensions, and have gotten what assistance, perchance we may from the journals, or possibly from observation or advice from some well-informed neighbor who has planted before us, we make our selection, and at this time we see with our mind's eye that which later we may truly realize, the buds starting forth in spring, the full leaf forming a shady canopy, and later the beautiful blossoms bursting forth in all their beauty and fragrance, and then the thought comes that this is all our own. We shall enjoy these luxuries, and more than this, our friends shall enjoy them with us. Our children shall be educated with such surroundings and a refining influence shall be exerted by them in our home. These pleasures shall not be evanescent, but the tree and the shrub will continue to improve in its beauty and usefulness. They shall cheer our lives and those that follow after us. Well might we

"Thank God for the beautiful flowers
That blossom so sweetly and fair."

True indeed it is that we should plant for fruit also and cultivate the soil for food and profit, but let us not forget that we have minds to feed and roughened natures to refine and cultivate. Henry Coleman, the distinguished agriculturist of Massachusetts, once wrote: "When I hear a man ask 'what's the use of flowers?' I am always tempted to lift his hat and see the length of his ears."

But we ask, How to plant and care for our home plot? One of the first things to do is to make a lawn, for no place, even though it be small, is complete without this. It is restful to the eye; all the varied colors of nature are shown best in a setting of green. When properly kept a lawn is clean and healthful. How much better a velvety green sward than barren looking and burning sand, or the disagreeable dust blown from a clay soil during a drought. When I first came into this section, about 15 years ago, as an expedient I gathered the small tufts of grass I found growing in my vegetable garden and transplanted them to a place where two walks came together forming a triangle of about 6 feet on a side. I cared for it, and the comfort I took sitting on my own original grass plot was something bordering on the exquisite. It brought me back, in memory, to the old homestead in the North, where as a child, I had frolicked on the grass under the shade of Maples, or when tired, had rested beneath the shade of a huge Balsam Fir. These things were not appreciated until, when without them, my handkerchief lawn brought me under the spell that carried me back to my boyhood home.

In the making of a lawn we should bear in mind that different localities require different treatment, but any place where a good garden can be made will be adapted to the growing of lawn grass. First the soil should be plowed to a good depth, and if it is stiff, subsoiling would be found beneficial. Drainage with tile is recommended when the location or character of soil demands it, and the land should be well fertilized. Generally a complete fertilizer containing the three elements, potash, nitrogen and phosphoric acid is the proper thing to use.

Well rotted stable manure, especially that made where a cow has been kept, is

as good, if not the best of anything, but personally I would object to stable manure on account of the weed seeds it contains. The manure should be worked well into the soil and the plot should be harrowed or raked into a fine tilth before the seed is sown.

In sowing the seed a time should be chosen when the air is quiet, generally early in the morning or after sundown, the seed should be mixed with about three times the quantity of dry sand or light soil, and in sowing, the plot should be sown one way and then sown across at right angles to this to get it evenly distributed. Sow with rather a lavish hand.

Now rake in lightly and wait for the early and later rains. I should sow close around all shrubs or trees that may be there, afterwards cutting out the turf made, using it to patch up any bare spots that might occur in the lawn.

After the grass has assumed a good growth, but not too high for the lawn mower, let the machine be put at work and use it at intervals during the growing season, the length of the intervals depending upon the season and growth of the grass. I should always leave the cut grass on the lawn as a mulch.

Using the lawn mower is one of the most effective ways of keeping the weeds from seeding. Most of them are annuals, and can thus be killed in one season. The lawn should be fertilized to maintain growth, and it is well to do this every spring and fall. Sowing on a good coat of cottonseed meal is excellent. Potash in the shape of wood ashes or ground kainit is good. Ground bone or acid phosphate is also good. It is often the best plan to lay off and cut out the walks after the lawn has been made, using the turf thus cut out to patch up bare places.

The straight walk leading from the street to house should scarcely ever be made unless the house is very near the street. It may almost be said that Nature abhors straight lines, and in all landscape work we should try to follow her teachings. Therefore curves should be used, not too exaggerated, but approaching the house or other object by about the nearest course. Some, so-called, "landscapers" have mutilated what otherwise might have been handsome places by using the corkscrew or Jacob's ladder style of walk, which, when put into practical use, was less than half used, the remainder of the walk being worn straight through the lawn. A good rule is to make only walks that are necessary to reach places that are frequently sought, as all others can be reached by walking across the lawn, and no lawn should be so precious that it cannot be used to walk upon occasionally.

Before we are ready to set the plants, shrubs, and trees in our grounds, we should inform ourselves as best we can, considering our time and means, as to their habit of growth, their size when at maturity, and their rapidity of growth in our climate and locality. A close perusal of some of the catalogues of our largest nurserymen and florists will give us a fund of information that will help us much, as a number of them are not only works of art, but veritable encyclopedias of plants and plant growth. A close perusal of a good horticultural journal in its successive issues is one of the sources from which to glean information.

On small places it will be necessary to use the smaller growing shrubs and trees, or if our place consist of only a small front door yard we will be confined to the use of a selection of herbaceous

War

Is declared by Hood's Sarsaparilla upon impure blood and all its disagreeable symptoms. By purifying the blood it cures rheumatism, neuralgia, scrofula and catarrh, and gives vitality.

Hood's Sarsaparilla

Is the One True Blood Purifier. \$1; six for \$5.

Hood's Pills are easy in effect. 25 cents.

BERKSHIRE, Chester White, Jersey Red and Poland China. Pigeons, Jersey, Guernsey and Holstein. Cattle. Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs. Catalogue. S. W. SMITH, Ocklawilla, Chester Co., Penna.

B KEEPER'S!

SEND FOR sample copy of **CLEANINGS IN BEE CULTURE.** A Handsomely Illustrated Magazine and Catalogue of **BEE SUPPLIES.** Valuable book on bees given FREE to each one who mentions this paper. THE A. I. ROOT CO., Medina, O.

POULTRY BREEDERS! Send 50 cts. for a 20-paged monthly devoted to Poultry, etc. Sample 6 cts. **MICHIGAN POULTRY BREEDER,** Battle Creek, Mich.

MONITOR INCUBATOR Illustrated Catalogue for stamp. Model and Builders Awarded at the World's Fair. A. F. WILLIAMS, 76 Race St. Bristol, Ct.

NEW MAMMOTH POULTRY GUIDE 1907. Something entirely new; almost 100 pages; showing lithographs of Poultry in nature and in the pen. Tells all about Poultry for profit or pleasure. Price 15 cents. **JOHN KAUSCHER, JR.,** Box 88, Freeport, Ill.

HATCH Chickens BY STEAM With the **MODEL EXCELSIOR Incubator.** Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatchery made. **GEO. H. STAMM,** 114 to 122 S. 4th St. Quincy, Ill.

WANT TO SUCCEED?

Then use the **NEW STYLE SUCCESSFUL INCUBATORS.** They succeed where others fail. This due to their new system of ventilation; new method of generating moisture; and the positive action of the new self regulator. Sold under positive guaranty. All about these and other things for poultrymen in our new catalogue and Book on Poultry. Sent for 6 cts in stamps. Address, **DES MOINES INC. CO.,** Box 92 DES MOINES, IA.

LOTS OF EGGS

when hens are fed green cut bone, cut by the Improved '06 **MANN'S GREEN BONE CUTTER** the standard of the world. 12 sizes. \$5 and up. U. O. D. or On Trial. Cut 1 lb. free if you name this paper. **F. W. MANN CO.,** Milford, Mass.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.00.

THE OHIO FARMER is a large, 30 page weekly, 31 per cent. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for illustrations, correspondence and Market Reports than any other of its class.

It is the Best and Cheapest news paper than others. Send for a **SAMPLE COPY** TO **THE OHIO FARMER,** Cleveland, O.

THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1898—14 months, if ordered at once. Address all orders to

AMERICAN GARDENING, P. O. Box 1897, New York

*Read at the meeting of the N. C. Horticultural Society August 20, 21, 1896, by Dr. G. H. Sadelson, Supt. of Parks.

perennials or small shrubs, or possibly some beds of annuals, although the latter, perhaps, are best planted in a flower garden proper. In larger places it will be permissible to use more or less of the larger shrubs and trees, and it is here we will have to use the greater skill and care. We should always plant for effect, but the effect should be a natural one.

The grouping of trees is a most effective way of producing natural beauty, selecting our subjects to make a contrast in form and color, not forgetting the colors which are produced in autumn when the trees are dressed in gala attire. We should seek to have large open vistas of lawn, which might be bordered first by flowering and decorating plants, then behind these and rising higher, low growing shrubs, and still behind these the lower growing trees, and then the higher trees, if the grounds are sufficiently large to justify it. Let the sky line formed by the tree tops be a broken one as you view it from a distance.

In selecting our varieties we should have in mind our deciduous trees and shrubs and herbaceous perennials for summer effect, and the coniferous and broad-leaved evergreens are useful to give color to the landscape in winter. Vines should have a prominent place in ornamental gardening. A summer house or arbor, when permissible, should be built and covered with vines. In my opinion, vines should be trained on a house but seldom, unless it be a stone or brick house, as the dampness that is retained by the foliage will soon cause the wood to decay, and, moreover, it is unhealthy to the inmates. The same might be said in regard to trees or shrubs placed too near a dwelling. People, like plants, need sunshine to make best development.

Now the people of this State are favored more, I believe, than most of them know in the wonderful variety and beauty of the plants, shrubs and trees that can be used to ornament their home grounds. Situated as we are in the middle of the temperate zone it can readily be seen that plant life that would succeed here would cover a territory reaching far north and south of us.

It may be urged that to embellish our grounds to any extent would necessitate quite an outlay of money as stock of this kind bought of reliable nurserymen is quite high. Without waiting to disprove this assertion, which is truly more fanciful than real, I would affirm that the poorest need not leave their surroundings unadorned. The fields and forests in the vicinity of each home and in all parts of the State will furnish material of sufficient variety, beauty and quality to add greatly to the beauty, comfort and value of each one's home plot, and they are to be had simply for the labor of digging and transplanting. Some idea of the truth of this statement can be had by reading "Curtis' Woody Plants of the State of N. C.," which is furnished by the Board of Agriculture. Why should our yards be barren wastes or disfigured by a few badly planted, illy cared for specimens that are only cultivated by the busy hen as she scratches for food around their roots for her attendant chicks? Why not have our own vine and shade tree to sit under, a green lawn, a shrubbery, or the cool rest of a vine covered summer-house rather than be forced to seek such comforts elsewhere? A little work that is fascinating, a little waiting that is constantly tinged with expectant pleasure, and these things are ours; and they are a legacy, always vernal, that shall be left by us to those who follow. Let

us change the phraseology of the golden rule somewhat, and apply it practically in our own home grounds. Plant for others as you would that others had planted for you.

"Give fools their gold and knaves their power;
Let fortune's bubbles rise and fall;
Who sows a field or trains a flower,
Or plants a tree, is more than all."

The Apiary.

A Suggestion.—A good many bee-keepers have complained of late years of the low price they have been getting. The question of profit depends upon the difference between the cost of production and the price obtained. We cannot regulate the markets to any great extent, so why not, instead of complaining about them, study to lessen the cost of production? This is in our own hands, and now is a good time to study the matter. So long as any product is put on the market, year after year, at a certain price, however low, we may be certain someone is producing it at a cost low enough to still make a profit, and as long as we must sell at the market price, we must produce a better grade, or at as low a cost as anyone, or quit the business.

A Tool House.—For small apiaries of but a few hives, and where lack of space renders it inadvisable to provide a regular honey-house, an outdoor cupboard or chest, with regularly constructed roof and water-tight sides, should be set directly back of or among the hives. This should stand up two or three feet from the ground, and by tacking sheets of tin about the supports it can be made safe from mice. Fit the inside with shelves or trays for holding smoker, veils, knife, hammer, separate pockets for three or four different size nails, sections, etc. This can be constructed now and set up in the spring. A hand-tray for conveniently carrying a few tools is a very handy thing. It may be fitted in as one of the shelves, and such things as the smoker hammer, knife, and a very few nails kept in it habitually. By fitting a door of wire cloth before another shelf, a very good temporary storage can be made for honey while removing sections, and several trips to the more distant permanent storeroom saved. If well-arranged, such a contrivance will hold a surprising number of tools, etc., will not cost much and will occupy but little more ground space than one or two hives.

WILDER GRAHAME.

Germantown, Pa.—At the annual meeting of the Germantown Horticultural Society, the following officers were elected to serve for the ensuing year: President, Jonathan Jones; vice-presidents, Charles J. Wister, Albert Woltemate, and John S. Hart; secretary and treasurer, George Redles, Jr. After the election Albert Woltemate gave an interesting talk on "Chrysanthemums and Carnations."

Pennsylvania Horticultural Society.—The following officers have been elected for the ensuing year: President, Clarence H. Clark; vice-presidents, Robert Craig, Charles H. Miller, and Dr. Geo. Goebel; treasurer, Wm. F. Dreer; secretary, David Rust; professor of botany, Thomas Meehan; professor of horticultural chemistry, Dr. Persifer Frazer; professor of entomology, Rev. Dr. C. H. McCook; executive council, Edwin Lonsdale, John Burton, David Bearn, Joseph Heacock, Thomas Cartledge, Henry F. Michell, and John Westcott.

AMERICAN GARDENING is one of the best papers that comes to the department.—AGRI. EXP'T. ST'N, Columbia, Mo.

Your anxiety is for your delicate child; the child that in spite of all your careful over-watching, keeps thin and pale. Exercise seems to weaken her and food fails to nourish. That child needs Scott's Emulsion with the Hypophosphites—not as a medicine, but as a food containing all the elements of growth. It means rich blood, strong bones, healthy nerves, sound digestion. No child refuses Scott's Emulsion. It is pleasant and palatable.

SCOTT & BOWNE, Chemists, New York.

OLD BOOKS SEND STAMP FOR LIST. Address A. J. Crawford, 519 N. 7th Street, St. Louis, Mo.

BLINDNESS PREVENTED

The Absorption Treatment a Success. Hundreds successfully treated for all diseases of the eyes or lids without knife or risk at their homes and at our Sanitarium, the largest and most successful institution in America. "Don't want to be blind." Pamphlet Free. THE BEMIS EYE SANITARIUM, Glen Falls, N. Y.

Lovely Sweet Peas.

After almost a decade of application and study to the growing of Sweet Peas for the Seed Trade of America and Europe, we have condensed our observations and conclusions into a little book, profusely illustrated, entitled

SWEET PEA REVIEW,

Containing 86 pages of reading matter and a valuable chart. Those who are interested in the beautiful Sweet Pea will find this publication a valuable aid in selecting varieties for planting. Sent, postpaid, on receipt of 25 CENTS.

Sunset Seed & Plant Co.,

427-9 SANSOME T., SAN FRANCISCO.

EXTRAORDINARY OFFER!

The Youth's Companion

to 1898, including the Christmas, New Year's and Easter Double Numbers for two years, the Twelve-Color Companion Calendar for 1897 (the most costly gift of its kind THE COMPANION has ever offered), and

American Gardening,

Both papers to Jan. 1, 1898, for only \$2.00 in advance.

Above offer is for new subscriptions only to both papers.

YOUTH'S COMPANION (new) and AMERICAN GARDENING (renewal), including all the above to Jan. 1, 1898, \$2.25.

YOUTH'S COMPANION (renewal) and AMERICAN GARDENING (renewal), including all the above to Jan. 1, 1898, \$2.75.

Address your orders to

AMERICAN GARDENING P. O. Box 1897 NEW YORK.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

The Fragrant Daphne.

No plant I have had gives me so much pleasure for the small amount of care I give it. When it is past bloom I tuck it away in the cellar, dark as it is. With the coming of spring I set it, box and all, out into the sunshine, and water it when I can. It has not been repotted in three years, yet it always blooms.

Is the Soil Wet?

The size and quality of the receptacles make so much difference as to the retention of water in the soil, that these must always be considered before applying any specific advice about watering. In a warm room, with plants in small pots, it is uncertain work trying to keep geraniums, for instance, "on the dry side" without letting them become killing dry. If, on the contrary, the room is not so warm, the sunshine less, or the pot six inches across, a medium-sized plant is much better kept as dry as the average flower-conscience will allow; perhaps a little drier would be better. It is practically impossible to lead the majority of window gardeners to employ pots really small enough for the size of the plants. It is therefore only the heat of stove and sun that save the plants from utter extinction, since a regular amount of water, at least every other day, is conceived to be a necessity. This conception is *all wrong*. Water when needed; regular watering may be death to the plants.

Fine Clusters of Narcissi.

Beauty and fragrance are very much in evidence when a single cluster of *Narcissus* consists of 14 or 15 large and well opened blooms. One such specimen pot of Giant White *Narcissus* is in bloom at present. Such a show is very seldom secured in the dwelling because of the too high temperature. This bulb was removed from 68° to 40°-55° as soon as two or three blooms had opened; otherwise the first flowers would have faded some time before the last were ready to open. The largest blossom in the cluster measures a plump inch and three-quarters, and the whole makes an ordinary "Paper White" near-by look quite insignificant. Paper White *grandiflora* comes perhaps about half way between the two, as to size, as we grow it. The occasional bulb throws two fine clusters.

The Coming Freesias.

It is about neck and neck with the California and the home-grown *Freesias*. Both were potted during the early weeks of September; both have been kept in a chimney-heated room, with a temperature of 50° to 60°; both are showing buds. The home-ripened bulbs are the ones which, last spring, were subjected to several weeks of roasting in a sunny south window, after being dried off as usual. The comparison of these with the wonderful new California giants has been most interesting. Growth has been about equal, except that the latter are a trifle shorter in foliage. Both are doing unusually well. Few indeed are the flowers which give equal pleasure with well-bloomed *Freesias*.

Choice of Varieties in Carnations.

About as pretty a sight as one could ask was a full house of Daybreak *Carnation*, seen last week, the clean, rank, well-opened plants bearing a heavy crop of buds and bloom, every blossom nearly being fit for

exhibition. As between the exquisite pale, clear color and perfect form, and the deeper rozier pink of Wm. Scott, few would hesitate an instant to declare in favor of Daybreak. Yet the grower shook his head. "It isn't so good as Scott," he said. "It takes too much work to keep it clean, and it don't crop so well." This is a greenhouse view, let it be remembered, a view colored highly by the thought of resultant dollars and cents, a wholly practical view. But probably the stamina of Scott would be in its favor even in the home window. Della Fox is a new beauty of grand size and color, but too tall for window work.

Grading the Dealers.

Usually it is the dealers who grade their goods. But the buyer may grade also. Yesterday a firm whose name is as well-known as that of New York itself, was asked concerning the novelties for next season. "Don't know that we shall put out anything especially new," was the reply. "unless it is a Rose." This brought to mind the thought that it is quite worth our while to study the business methods of the catalogue makers, as a guide to our own future grading of and dealings with them. They fall naturally into three classes: the conservatives, who seldom touch novelties until they cease to be really novel; the hustlers, who manage somehow to get hold of really valuable new things, more or less, each year; the keep-away-froms, who use grand flourishes and superlative adjectives to push things either worthless in themselves, or really desirable old things under strange new names and at strange, im positional prices. With which shall we deal? We may know them by their catalogues.

Warfare on Lice.

That the poultry world, as well as the rest of the world, is progressing, may be learned from the advertisers. Just of late a whole crop of these has sprung up advertising, each under a different name, a new liquid lice-killer. The value of this preparation lies in the fact that the dropping boards and roosts may be painted with it, and the fumes attack all insects within reach, on roosts or fowls. It is claimed that the new stuff kills all lice present, without harming the fowls, if used as per directions. Several people are selling recipes for making it, and best of all, a prominent poultry paper gives the recipe gratis to its readers. The word "it," as used above, of course implies that all these preparations are practically the same. It is not surely known that this is so, but the inference is thrust upon one.

Calcareous Nest Eggs.

Some one writes one of our poultry papers that he has "conceived the idea" of making nest eggs by filling empty egg shells with liquid plaster of Paris, which soon solidifies. Other people have had this idea years ago; but, when worked out, it is lacking in satisfactory results. The hens soon find the small exposed portion of the filling, and begin pecking at it. It disintegrates easily, and soon the eggs are about as good as so many unevenly shaped stones. The China eggs are now worth at the east less than the eggs which the hens lay. They never lead the fowls on to peck at the eggs until they become egg-eaters. They are lasting, and in every way the best for the purpose to which they are devoted.

Crowded Roosts.

Those who have the ability to learn from the experience of others (a rare and fruitful quality), may be cautioned as to crowded roosts. Unless forethought heads them off, fowls will always crowd to those positions which seem to them most desirable (such

"Mend it or End it,"

has been the rallying cry of reform, directed against abuses municipal or social.

For the man who lets himself be abused by a cough the cry should be modified to: Mend it, or it'll end you. You can mend any cough with

Ayer's Cherry Pectoral.

are the thin-edged perches, the high perches, the back perches). Anticipate and prevent this action by making perches 1½ x 3 inches, or 2 x 3 inches, and setting them on edge; by placing all perches at the same height; by taking care not to have merely two long, narrow roosts, but rather a compact block of perches. It all means practical results in the egg-basket, as, if the birds crowd, some are sure to grow weakly from this cause alone. Then, too, the central ones may be dripping with moisture one night; the next night they may be on the outside, cold and shivering; the next day sneezing with roup.

Applying Fertilizers.

A warning we are all familiar with, but which comes more forcefully when coupled with a reason, is put this way: "It is useless trying to feed a plant up until the soil is well occupied, as it only sours the soil."

MYRA V. NORRIS.

Good For His Last Dollar. — Your paper is the best of anything I have ever found. Shall stay with you as long as I can raise a dollar. — A. B. C., Mass.

ANY subscriber to *The Rural New Yorker* may have all his money back in three months if he is not satisfied with the paper. It does not want any man's dollar unless it is able to render that particular man a dollar's worth of value in return. We will send it and AMERICAN GARDENING both one year for \$1.80.

FOR \$4 we will send *Leslie's Weekly* (formerly *Frank Leslie's Illustrated Weekly*) and AMERICAN GARDENING to any address, one year. *Leslie's* is one of the most attractive of New York's numerous illustrated weeklies, and its subscription price alone is \$4 a year; therefore, it will be seen that our offer is a very liberal one. Address your orders to AMERICAN GARDENING. Sample copies of *Leslie's* on application.

In all the States of the Missouri Valley, consisting of Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota, the largest circulation credited to any publication devoted to agriculture and dairying is accorded to the *Woman's Farm Journal*, a monthly, published at St. Louis, Mo., and the publishers of the American Newspaper Directory will guarantee the accuracy of the circulation rating accorded to this paper by a reward of one hundred dollars, payable to the first person who successfully assails it — *PUBLISHERS' INK*, April 25th, 1896.

The American Kitchen Magazine

A magazine for every up-to-date house-keeper. The suggestions contained in a single number are worth more than a year's subscription. Price, \$1.00 a year. Sample copies free. SPECIAL. — We will send AMERICAN GARDENING and AMERICAN KITCHEN MAGAZINE, both one year, to any address, for \$1.50.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

SURE CROP!**MUSHROOM SPAWN**

LILIU HARRISH. DUTCH BULBS.

Illustrated Bulb Catalogues on application.

WEEBER & DON, Seed Merchants and Growers,
114 Chambers St., New York City.**Business Cards.**

Cards will be inserted under this heading at two CENTS PER WORD each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT. consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. J. O. Forsyth Johnson, P. O. Box 1697, New York City.**Situations Wanted.**

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER and Florist, 11 years' experience in all branches; best references from four European countries and the U. S., desires situation in commercial place. United States Nurseries, Short Hills, N. J. Anderson.**FOR SALE.**

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advt. and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.**RADISH and LETTUCE** Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedsman, Rochester, N. Y.**LEMON RANCH**—10 acres, with water, 6 acres choice lemons, 4 years old, beginning to bear. Price \$2,500. Address, Grower, Box 56, San Diego, California.**FOR SALE OR EXCHANGE**—Plymouth Rock, Blue Banded Chickens; 1 Cock and 5 Hens; Thompson's strain; some laying now. Geo. F. Kichline, Easton, Pa.**GLADIOLI, CANNAS, CLIVIAS,** Souchet and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings. Cannas, Italia, Austria, and best standards. New Hybrid Clivias. Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.**BOOKS.**—We can furnish any book treating on horticulture printed in this or any other country. Send for our Select Catalogue of Horticultural Books, free. American Gardening, P. O. Box 1697, New York.**BINDERS.**—Every subscriber should have one. We offer the best to be had, sent, postpaid, for 65 cents, or given free for two new subscriptions and the removal of your own. American Gardening, P. O. Box 1697, New York.**PAPER TUBES FOR MAILING PLANTS.**—The most perfect contrivance for shipping plants through the mail so as to reach their destination in best condition; furnished in all lengths and diameters. All dealers in plants should have them in stock. Send for our price list. A. T. DeLaMare Ptg. and Pub. Co., Ltd., P. O. Box 1697, New York.**THERMOMETER WITH WEATHER GLASS.**—One of the best combinations ever offered. Thermometer is specially scaled for greenhouse use, and we warrant it. Weather Glass is very correct, indeed. Both sent, prepaid, for two new subscriptions or 60 cents in cash. Highest recommendation from the trade and experts generally. You should not be without the combination one week longer. American Gardening, P. O. Box 1697, New York.**Colorado Springs, Col.****HANDSOME GREENHOUSE FOR SALE.**

Situated in the center of the city of Colorado Springs, where the climate is adapted to the growing of all species of flowers. Land 100 by 150, with 12,000 square feet of glass; steam-heat, electric light, first-class boiler and machinery, thoroughly equipped and in running order. The most complete establishment of the kind west of the Mississippi River.

Price, \$30,000.

Address Messrs. VARNUM and HARRISON, Counselors-at-law,
62 William street. - New York City.**PRIVATE GARDENERS.**

We solicit for publication under this heading notes on the work being done by private gardeners, changes in appointment, and all matters of interest to horticulturists generally.

Lenox, Mass.

At the regular meeting of the Gardeners' and Florists' Club, held recently, the following officers were elected: President, John White, of Pittsfield; first vice-president, Edward Dolby, of Dalton; second vice-president, William Griffin, of Lenox; secretary, J. G. McArthur, of Pittsfield; treasurer, Frank Howard, of Pittsfield; guard, George Neal, of Pittsfield; auditor, Thomas Campbell, of Pittsfield; executive committee, John White, T. T. Connors, J. G. McArthur, of Pittsfield, Edward Dolby, Neal Cobban, of Dalton, William Griffin, A. H. Wingett, George Thompson, J. F. Huss and P. J. Donahue, of Lenox.

vicinity of Hampton Court, at Ember Court Nurseries, which were established there by Cardinal Woolsey in the reign of Henry VIII. The elder Mr. Lewis was at one time proprietor of these nurseries, and well known as an expert on forestry and landscape gardening.

The subject of our sketch, after receiving a thorough training in all departments under his father, carried out some large operations for Lord Roslyn, and on Lord Vernon's estates, and early in the seventies came to this country, and was for eleven years in charge of the Virginia State grounds and conservatories; relinquishing that position he assumed charge of the famous Brook Hill estate, one of the finest in that state. He subsequently carried out landscape operations in Maryland, Delaware, and Pennsylvania, often in the mountain regions where his knowledge of forestry stood him in good service. Prior to his present position he had been Park Forester in Fairmount Park, Phila-



FIG. 5.—JOHN C. LEWIS, CITY FORESTER, PHILADELPHIA, PA.

Poughkeepsie, N. Y.

Dutchess County Horticultural Society. Mr. James Sloan, treasurer of the above Society, writes that all prize money due from the recent show has been paid, also all other bills, and that \$163 worth of property good for future use is in hand, and, better still, there is a good cash balance on the right side of the ledger. We are glad to be able to make this statement from the treasurer, and to show that this vigorous Society is prospering and wish it well for the year 1897.

John C. Lewis.

In the accompanying illustration is given a portrait of the City Forester of Philadelphia, Pa., the first holder of the office. He was born at Streatham, near London, England, and received his early training under his father in the

Philadelphia, and has made some great improvements along the famous drives, and beautified the landscape in many parts.

Mr. Lewis is retiring and unassuming in manner, but is held in high esteem by many who own large estates around Philadelphia. His advice being at times solicited by them. As City Forester he has charge of all the small parks throughout the city (some thirty in number), and also superintends all tree planting by the city. This phase of his work is likely in a few years to assume large proportions. The city will certainly profit much by having the services of one as experienced.

New Jersey State Horticultural Society.

—The twenty-second annual meeting of this Society will be held at the state house, in Trenton (court room), Wednesday and Thursday, January 6 and 7.

The Plant Registration Bureau.

In reference to the proposed Plant Registration Bureau, to be under the control of the Department of Agriculture (see page 790, issue of December 12), the following letter is received:

The writer, without claiming to be either an expert or an authority in the plant world, has often felt the need of some more definite means of locating the value of fruits and flowers, than the descriptions offered in the catalogues of interested persons. The business of propagation and dissemination is in the hands of live men all over the world, and a more active and energetic lot, both in real practice and the exercise of their imagination, would be hard to find.

Now, in reference to this proposed registration business, let us take a hypothetical case. When I was a good deal younger there was a man in Pennsylvania intelligently interested in small fruits. He noticed that a certain strawberry, the 700th in the row, was a better one than the others, and he immediately began to propagate and boom it.

Suppose now that this Registration Bureau had been in full blast, and he had taken advantage of it. The first thing to do would be to send a lot of his berry plants to Washington for determination of their value. Then he would have to wait till his certificate came, if that was what he wanted, and if he did not want it, what was the use of sending the plants at all?

Now the Department would have to test the plant, and supposing it did, and that it proved a very good berry in the sand and climate of Washington, is that any guarantee that it would do well in the mountains of North Carolina, the levels of Louisiana, or the prairies of the Dakotas? The only way to determine that would be to send out plants all over the country, for if there is any one thing that is settled, it is that there is no plant in existence that will do equally well in all sections of our wide-spread country. By the time the reports came in and were analyzed, and the case made up and ready for certification, years would have elapsed. Suppose now that it was all that was claimed for it, which is possible, it is utterly impossible that it should be universally so; what good would his long-delayed certificate do him in a commercial sense? He had emptied his fish into the head of the stream, and they had gone to the ends of the river, and had proved a good food fish. If he sets his net now at his home does he expect a monopoly of his fish? If he does he will be disappointed. In the very effort of determining his find he has practically given it away. The writer claims to be fairly patriotic, philanthropic to a degree, and as honest as the times allow, but he is under no obligations to get a package of plants from the Department of Agriculture, test them, turn them around in various ways, and then when they have proved superior, dig the whole lot up and return them or burn them. On the contrary, if the plants sent me proved valuable in a commercial sense, and I had no contract with the party sending them, I would at once propagate and flood the country with them, while the Bureau was thinking about it and making up the reports. If you think this is dishonest, tell me how I am under any obligation to take your setting of eggs, hatch out a lot of "pee-pees," raise them, compare their weight, color, and all that, and then send the whole outfit back to you, whom I have never seen, and who will immediately use my name and certificate for your own personal benefit. I believe in reciprocity, and who is going to pay for all this experimenting?

If I have a plant that I believe to be an improvement on existing types, the last thing I want to do is to let it get away from me into the hands of people in the business, unless I want to say good-by to it.

I have taken the illustration of the strawberry as a plant that can be determined in a few years, but how about an apple, a pear, or something of that kind? A good part of a lifetime would be necessary to settle its value in any authoritative sense.

There is absolutely no other way on earth

to determine the value of a plant than by trial. The conditions that surround it make it what it is, and as these conditions vary so varies the plant. No set of men living can pass intelligent judgment any other way than by the widest trial. That the proposed Bureau can get a hundred different strawberries under a hundred different names and finally settle that there are only six of them at all different is entirely feasible, and it would be perhaps profitable in the long run to the general public.

That a plant could be "patented" is all nonsense. The law can protect the manufacture and duplication of a washing machine, but it cannot govern the outcome of a new bean put forth by anybody. Weather, soil, carelessness, and all that sort of thing are not amenable to the revised statutes. Then again plants "run out," and it is possible that there may be an accidental reduplication of some previously existing form, and the best method of discovering its identity is to let it loose on the general public instead of asking our Uncle Samuel to hold a quest on it.

I still think that my original suggestion of a Novelty catalogue a good thing, if it could be arranged properly between myself, the producer, and the buyer of seeds and plants. In the very nature of things it would be ahead of the Government from three to five years. It is well known that there are thousands of people who run to specialists; this year and next they raise Pansies, then they take to Roses, and so on. There is perhaps no one person living who gets all the catalogues of specialists, and it is next to impossible to do so. It is proposed to collect in one catalogue all the latest introductions under their appropriate heads, with the names of the propagators, thus showing at a glance where the best things are to be had and for how much money. Whether they were really the best of their kind could not be determined by any Government Bureau, though it might come trailing along with its reports sent through your Congressmen long after you had settled it all for yourself.


Union Co., Pa.

HOWARD MILLER.

Western New York Horticultural Society.—The annual meeting of this important Society will be held at Rochester, January 27 and 28. Mr. John Hall, of that city, is secretary.

Salesman in Trouble.—A traveler for Crane Bros. & Co., of Cleveland, O., wholesale fruit dealers, was arrested in Norwalk, O., on December 18, on the charge of obtaining money under false pretences. He sold goods far below their actual value, collected the bills as fast as the goods arrived, and then moved to another town.

Bright Future for the Fruit Growers.—President Hobbs, of the Indiana Horticultural Society, believes that the day of extravagant prices for fruit has passed, never to return. Unusually low prices ruled this year, he says, because spring opened simultaneously over a wide range of country, and because all kinds of fruit bore liberally. But he looks for a long period during which the happy conditions will prevail of plenty of fruit at reasonable prices for the consumer, and at remunerative prices for the producer. The reasonable price to the consumer, he says, is brought about by the cheapened methods of growing and handling, in the cheaper transportation; while the grower is to profit through wider markets, and the aid to be rendered in the distribution of fruit by the American fruit growers' union, recently organized. It is the purpose of this union to keep thoroughly informed as to the exact condition of the market and so control the shipping as to prevent overstocking the markets and breaking them down. "It would seem," Mr. Hobbs concludes, "that the energetic, intelligent fruit grower has as bright a future before him as anyone who tills the soil."



**GOING FOR
WARNER'S
SAFE CURE**

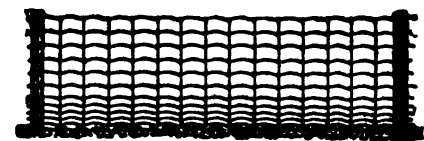
is much better than going for the doctor, and is quite as effective and costs less money. You need always at hand a safe, sure remedy like

Safe Cure

which will bring instant relief from sudden illness and work out a permanent cure.

**A POSITIVE CURE FOR
BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

Cures also, all those diseases arising from disordered Kidneys or Liver. Large sized bottle or new style smaller bottle at your nearest store. Try it and know the satisfaction of such a remedy.



Are You Insured?

Strange that a man will insure his buildings against fire and lightning, which come so seldom and yet take chances on destruction of crops and other losses arising from inefficient fences. Page fence is a permanent investment and the interest on that is the cost for absolute safety. Write for proofs.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

HSSEX Sells for 10c.

Flower Food.

Invigorates House Plants

YOUR DEALER should have this brand, but if he does not, mail eight 2-cent stamps to the . . .
Russla Cement Co.,
Gloucester, Mass.

The Most Useful of All

Our Premium Offers is that which follows:

AMERICAN GARDENING for 1896, unbound, 52 numbers, with the year's index, for only **THREE (3) NEW** subscriptions at \$1.00 each.

AMERICAN GARDENING for 1896, in good durable binding, cloth boards, half morocco, with the year's index, for only **FIVE (5) NEW** subscriptions at \$1.00 each.

This is a most liberal offer, and we trust our friends will appreciate it by working for the bound volumes.

AMERICAN GARDENING, P.O. Box 1887, N. Y.

Questions Answered.

This is a Bureau of Information, to which subscribers can apply freely for advice on any and all subjects in the field of horticulture.

In order to lessen labor, and that the Editor and his friends may understand each other, the following rules must be observed:

Rules for Correspondents.

Questions must be concise, plainly written on one side of the paper only, and addressed INQUIRY DEPARTMENT, AMERICAN GARDENING, P. O. Box 1697, New York City.

Letters appertaining to subscriptions, or other business matters, should be directed separately; otherwise delay may follow.

The name and address of the sender is required, in addition to a nom de plume. Use a separate sheet of paper, not a scrap, for each question. Questions will be attended to without delay. If by mistake a query fails to be answered, it should be repeated.

Specimens of plants for identification must be ample; mere scraps will not do, and no notice can be taken of such.

Questions relating to insects or diseased plants should always be accompanied by specimens, packed in a tin box, and forwarded at letter postage. Always send a liberal sample.

Conditions and soils vary so infinitely that we would be pleased to have our correspondents describe theirs.

Correspondents referring to articles which have appeared in AMERICAN GARDENING should mention page and date of issue.

We cannot promise to comply with requests to answer by mail.

**We cannot undertake to reply by mail.*

Answers Requested.

A. D. M. wishes to know if there is a tool manufactured for the purpose of cutting runners from strawberry plants.

Fertilizer for Chrysanthemums.

[Please say in AMERICAN GARDENING what is the best commercial fertilizer to use for Chrysanthemums grown in the open ground. My soil is a sandy loam, made very rich with rotted cow manure; also how much per square foot, and how often it should be applied during the season?—C. L. H., Mobile, Ala.]

—If your soil is made so rich by means of animal and straw manure, it would be unwise to use any artificial fertilizer; if you do, the chances would be in favor of the production of leaves and wood growth, with quantities of buds, but poorly developed flowers. Feed the soil liberally as you propose with cow manure, then you can, after the buds are set, water occasionally with nitrate of soda at the rate of 3 pounds of nitrate to 36 gallons of water; do this, say once a week.

Ammonium Carbonate.

[How much carbonate of ammonia to the gallon of water? or how many gallons of water to the ounce for watering pot plants?—E. O. Nathurst.]

—The ammonia in the carbonate is so very volatile that we rarely recommend its use alone. The only way in which we use it or recommend it to be used, and then with considerable caution, is with sheep manure at the rate of one-half pound of ammonium and one-half bushel of sheep manure to 36 gallons of water. By putting the two together in a bag and placing in a barrel and filling with water, all the strength is retained, and a strong concoction the result. The barrel can be filled two or three times if allowed to stand some time.

Double Cyclamen.

[I send you under separate cover flower of a double Cyclamen. It is so unusual to hear of such a flower that I thought it would be of interest to you. The plant is from seed sown last February, and is like any other Cyclamen except in bloom.—A. A., Newburgh, N. Y.]

—It is a very common occurrence to have Cyclamens show a tendency to become double. Usually they are abortive blooms, or in some cases it is the result of mechanical injury or excessive vigor of growth. All highly cultivated plants have sooner or later a tendency to the production of double flowers.

Valley Pips for Forcing.

[Is there any other way by which pips of Valley can be obtained except buying them of those who have them in cold storage ready for

immediate forcing? Can they not be field-grown and removed to the forcing house in say, November, or, if needed, earlier, for ship, ment in December? Can they be grown in the field as Violets or Carnations? Kindly state how to proceed, how to cultivate and get ready for placing in forcing house for commercial purposes. How many blooms are put in a bunch? Are they tied together with white thread?—L. D. B., Ulster Co.]

—The only practical way in which you can procure your Valley pips is to buy imported stock from some of the dealers who advertise in our columns. To answer by saying it is impossible for you to grow your own pips would not be strictly true, because it is not impossible but it is impracticable. To procure serviceable single pips special knowledge is necessary, and that has to be backed up by very special and intense cultivation, and then with that it would take three years to secure strong crowns ready for forcing, and in the cold section where you are situated it is doubtful whether they would ripen properly. We know of no one north of Baltimore, Md., who undertakes to raise his own stock. Fifty sprays to a bunch is the usual number. It is immaterial what string the bunch is tied with, for to use them the florist always cuts the bunch open; but how they are bunched does make a difference in the selling of them. The better the leaves and the more graceful the arrangement of the sprays, the better the price. And all sprays should be of uniform size, so that for selling they may be graded into special, regular, or shorts.

Names of Plants.—G. B. R.—Your specimens are much too poor for identification. No. 2 appears to be a withered leaf of Bryophyllum calycinum.

Chrysanthemum Showing Pink.—E. A. C., O.—It is a natural tendency in The Queen to show a pinkish tinge, and especially has this been the case this season.

Hydrangea.—E. A. C., O.—The plants should be in growth now, and kept steadily growing on till the time they are to flower in May. No need to force.

If the information you want is not found in these columns, just tell us what you are looking for. Our Bureau of Information will supply it.



TRY DREER'S GARDEN SEEDS

Plants, Bulbs and Requisites. They are the best at the lowest prices. Calendar for 1896 mailed free. Address

HENRY A. DREER, 714 Chestnut St., PHILA.

STRAW RASP
BLACK
GOOSE
DEW

ASK WM. C. DABCOCK, BRIDGMAN, MICH.,
For prices of strong STRAWBERRY PLANTS, dug out in solid blocks, not from between the rows, true to name. Competition Defied. QUALITY considered. Complete Stock of CURRANTS AND GRAPES. (Mention this paper.)

BERRY PLANTS

BATTLES' TESTED SEEDS.

Market Gardeners, Truck Farmers, and all Seed Buyers get my prices before you buy. Write for 1897 Seed Annual and Special Wholesale Price List.

Send for samples of any seeds you wish to test.

Salesmen wanted everywhere. Write now.

GROWER OF FARM AND GARDEN SEEDS.

✧ FRANK H. BATTLES, Rochester, N.Y.

The Savannah Line

Ocean Steamship Co. of Savannah & New England & Savannah S. S. Co.

LOW RATES! LOW RATES!

THE CHEAPEST AND QUICKEST, THE SAFEST AND BEST, THE GREATEST COMFORT To be found on the broad Atlantic, is via one of the Magnificent Vessels of SAVANNAH LINE FLEET. Elegant Service. Speed unequalled by any other Steamship Line on the Atlantic Coast.

PASSENGERS VIA STEAMSHIP AND SAVANNAH TICKETED TO ANY POINT SOUTH AND SOUTHWEST.

STAMEN FLY BETWEEN

NEW YORK and SAVANNAH, (from New York Tuesdays, Thursdays and Saturdays.)

BOSTON and SAVANNAH, (from Boston every four days as per published schedule.)

PHILADELPHIA and SAVANNAH, (from Philadelphia every five days.)

NEW IMPROVEMENTS. Sea Spray Baths, Electric Lights, Re-Carpeted and Handsomely Furnished State-Rooms, Modern Sanitary Arrangements, are some of the new improvements which are to be observed aboard the Elegant Passenger Ships of the Savannah Line Fleet.

Send two cent stamp for copy of "Savannah Line News" and three colored map showing attractions of the Atlantic Coast.

G. M. SORREL, Manager, New Pier 35 N.R., New York.



This Year 1897 is the GOLDEN JUBILEE ANNIVERSARY OF PETER HENDERSON & CO.

To commemorate our fiftieth business year, we have prepared the most beautiful and valuable SEED and PLANT CATALOGUE the gardening world has ever seen. Every copy costs us 25 cts. to produce, but in honor of this our "JUBILEE" year, we will send it this season FREE (in stamps) to cover postage and mailing. This "JUBILEE" CATALOGUE of EVERYTHING FOR THE GARDEN is a magnificent book of 170 pages, on which are displayed over 500 beautiful illustrations of Seeds and Plants, the work of our own artists. Also six full-size colored plates which in artistic beauty have probably never been equaled, certainly never surpassed.

The gorgeous products of our Gardens and Greenhouses are not only faithfully pictured and described in the Catalogue, but equally so every other desirable requisite, new and old, for both Farm and Garden.

A "SURPRISE SOUVENIR" will also be sent without charge to all applicants for the Catalogue who will state where they saw this advertisement.

PETER HENDERSON & CO.,
35 & 37 CORTLANDT ST., NEW YORK.



GAME COCKERS? Send 50 cts. for a monthly journal devoted to Game fowls. Sample 5 cts. **GAME FANCIES JOURNAL**, Battle Creek, Mich.



NEW PLUMS

TATGE

The Best.

MILTON

The Earliest.

CHAS. DOWNING

Most Beautiful.

Send for catalogue.

Silas Wilson Co.,

Atlantic, Ia.

AMERICAN GARDENING CLUB LIST.

LET US FILL YOUR ORDERS FOR 1897.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

General.		A.	B.	General.		A.	B.
Advance (Cong'l) renewals.....	new	\$2 00	\$3 90	Scribner's.....		\$3 00	\$3 60
American Field (new).....		2 60	3 60	St. Nicholas.....		3 00	3 60
" Renewals.....		4 00	4 25	Sunday School Times.....		1 50	2 10
" Kitchen Magazine.....		4 00	4 60	Texas Siftings.....		4 00	4 25
" Machinist.....		1 00	1 75	The Etude (new only).....		1 50	2 15
Aquarium.....		3 00	3 20	The Etude (renewals).....		1 50	2 35
Arena.....		1 00	1 75	The Outlook.....		3 00	3 60
Art Amateur.....		3 00	3 60	Toledo Blade.....		1 00	1 85
Art Interchange (with plates).....		4 00	4 85	Turf, Field and Farm (new).....		4 00	4 25
Atlantic Monthly.....		4 00	4 80	Renewal.....		4 00	4 60
Ava Maria.....		2 00	2 70	Womankind.....		50	1 20
Babyhood.....		1 00	1 90	Young Ladies' Journal.....		4 00	4 60
Baptist Missionary Magazine.....		1 00	1 90	Youth's Companion (new only).....		1 75	2 85
Carpentry and Building.....		1 00	1 85	Renewals.....		1 75	2 75
Century.....		4 00	4 60	Agricultural, etc.			
Chicago Times-Herald (Weekly).....		1 00	1 85	American Agriculturist.....		1 00	1 85
Chicago Inter-Ocean.....		1 00	1 90	Breeders' Gazette.....		2 00	2 40
Christian Herald.....		1 50	2 15	Country Gentleman.....		2 50	2 75
Christian Register.....		3 00	3 85	Farmers' Advocate (Canada).....		1 00	1 75
Churchman.....		3 50	4 10	Farmers' Magazine.....		1 00	1 75
Colman's Rural World.....		1 00	1 85	Farmers' Review.....		1 00	1 90
Cosmopolitan.....		1 00	1 90	Farm, Field and Fireside.....		1 00	1 90
Delineator (Butterick's).....		1 00	1 90	Farm and Fireside.....		50	1 40
Demorest's Monthly Magazine.....		2 00	2 60	Farm and Home.....		50	1 40
Detroit Free Press (Weekly).....		1 00	1 90	Farm Journal.....		50	1 30
Domestic Monthly.....		1 50	2 15	Farm News.....		50	1 20
Donahoe's Magazine.....		2 00	2 60	Gleanings in Bee Culture.....		1 00	1 85
Eclectic Magazine.....		5 00	5 25	Home and Farm.....		50	1 45
Electrical Review.....		3 00	3 80	Indiana Farmer.....		1 00	1 85
Engineering Magazine.....		3 00	3 80	Mass Ploughman (new).....		2 00	2 60
Forest and Stream (new only).....		4 00	4 90	Renewals.....		2 00	2 90
Forum, The.....		3 00	3 60	Michigan Farmer.....		1 00	1 60
Frank Harrison's Magazine.....		50	1 40	National Stockman and Farmer.....		1 00	1 85
Frank Leslie's Popular Monthly.....		3 00	3 50	Nebraska Farmer.....		1 25	1 85
Godey's Magazine.....		1 00	1 90	New England Farmer.....		2 00	2 50
Golden Days.....		3 00	3 85	New England Homestead.....		1 00	1 85
Good Housekeeping.....		2 00	2 70	Ohio Farmer.....		1 00	1 60
Harper's Bazaar.....		4 00	4 25	Orange Judd Farmer.....		1 00	1 85
Harper's Magazine.....		4 00	4 25	Pacific Rural Press.....		2 40	3 00
Harper's Weekly.....		4 00	4 25	Practical Dairyman.....		50	1 35
Harper's Round Table.....		2 00	2 50	Practical Farmer.....		1 00	1 85
Home Queen.....		50	1 35	Prairie Farmer.....		1 00	1 85
Illustrated American.....		4 00	4 90	Rural New Yorker.....		1 00	1 80
Independent.....		3 00	3 60	Southern Cultivator.....		1 00	1 85
Jenness Miller's Illus. Mag.....		1 00	1 75	Southern Farmer.....		1 00	1 85
Judge.....		5 00	5 20	" Florist and Gardener.....		1 00	1 75
Judge's Library.....		1 00	1 85	Strawberry Culturist.....		50	1 35
Ladies' Home Journal, The.....		1 00	1 90	Texas Farmer.....		1 00	1 75
Ladies Home Companion.....		50	1 45	Texas Farm and Ranch.....		1 00	1 85
Ladies' World.....		35	1 80	Poultry.			
Leslie's Illustrated.....		4 00	4 40	American Poultry Advocate... ..		25	1 15
Life.....		5 00	5 40	Fancier's Review.....		50	1 35
Lippincott's.....		3 00	3 25	Farm Poultry.....		1 00	1 50
Macmillan's.....		3 00	3 60	Ohio Poultry Journal.....		65	1 50
McClure's Magazine.....		1 00	1 90	Poultry Keeper.....		50	1 40
Munsey's Magazine.....		1 00	1 90	Poultry Monthly.....		1 00	1 85
Nation, The.....		3 00	3 80	Reliable Poultry Journal.....		50	1 40
New England Magazine.....		3 00	3 50	Horticultural, etc.			
New York Ledger.....		2 00	2 50	Canadian Horticulturist.....		1 00	1 90
" Tribune (Weekly).....		1 00	1 90	Garden and Forest.....		4 00	4 25
" " World (Tri-Weekly).....		1 00	1 75	Gardening (Chicago).....		2 00	2 50
North American Review, The.....		5 00	5 50	Green's Fruit Grower.....		50	1 35
Notes and Queries.....		5 00	5 50	Meehan's Monthly.....		2 00	2 50
Observer (new only).....		3 00	3 25	Foreign.			
Observer (Renewal).....		3 00	4 00	Farm and Home.....		2 25	3 25
Outing.....		3 00	3 35	Field.....		10 50	11 00
Peterson's Magazine.....		1 00	1 85	Garden.....		4 50	5 25
Philadelphia Press (Weekly).....		1 00	1 85	Garden Work.....		2 50	3 25
Phrenological Journal.....		1 50	2 25	Gardener's Chronicle.....		4 50	5 25
Popular Science Monthly.....		5 00	5 65	Gardener's Magazine.....		4 50	5 25
Popular Science News.....		1 60	2 50	Gardening, Illustrated.....		2 25	3 00
Puck.....		5 00	5 10	Gardening World.....		2 50	3 25
Puck's Library.....		1 20	1 95	Journal of Botany.....		4 75	5 25
Review of Reviews.....		2 50	3 25	Journal of Horticulture.....		4 00	4 85
Scientific American.....		3 00	3 60	Kew Gardens Bulletin.....		1 50	2 25
" " Supplement.....		5 00	5 25				
" " with.....		7 00	7 25				
" " Builders' edition.....		2 50	3 10				
" " inc. B'l'ds' edit.....		5 50	5 75				
" " All 3 editions.....		9 00	9 25				

ADDRESS
CASH WITH ORDER,

AMERICAN GARDENING, P. O. Box 1897, NEW YORK.

N. Y. Wholesale Market Reports.

The holiday rush is over, and a lull is the result. New Year's trade amounts to but little; Tuesday and Wednesday benefited slightly, but after that normal conditions prevailed, and following the lead of previous years this next two weeks may be expected to be very dull, and trade almost at a standstill.

Hothouse grapes, American, very poor, no price can be quoted; English, if not damaged by transit, 75c. to \$1.50 per lb.

Hothouse strawberries, New Jersey grown, more plentiful and in magnificent color (very choice) a variety known as Arch-deacon's seedling realizing \$9 per quart.

Native grapes, 11c. to 13c.

Florida Oranges, in fair supply and largely defective, very few of the lots offered show quality sufficient to reach fancy figures, \$2.50 to \$3.50 per box being the ruling prices.

Tangerine Oranges (Japan), these were in fine condition, and sold readily at \$3 per case.

California pears from storage opened up in prime condition and met with good sales. Winter Nellis, \$2.50 to \$3.50; Easter Beurre, \$2.50 to \$3.50; Anjou, \$3. to \$3.50; Beurre Gris, \$3 per case. Cases of the above varied from 100 to 150 fruits.

Apples.

Spitzenburg, fancy, per bbl. \$3 00—\$3 50
Spitzenburg, common to fair, per bbl. 1 00—1 50
Baldwin, Vt. and northern, fancy..... 1 25—1 37
Baldwin, w'n N. Y., fancy, per bbl..... 1 12—1 25
Baldwin, w'n N. Y., p'me, per d-h. bbl..... 90—1 00
Baldwin, w-river, prime, per bbl..... 1 25—1 37
Greening, Vermont & Nthn fancy, pr bbl..... 1 12—1 25
Greening, west'n N. Y., fancy, pr bbl..... 90—1 00
Greening, w'n N. Y., p'me, per d-h. bbl..... 90—1 00
Greening, w-river, per bbl..... 90—1 00
Common stock, per bbl..... 75—85
Lady apples, per keg..... 1 25—1 75

California strawberries have made their appearance, but so far are in poor color; they realized 40c. to 50c. per box.

Hothouse cucumbers were in short supply and condition poor; fancy made \$1.50 to \$2 per dozen; No. 2 made 75c. to \$1 per dozen.

Hothouse lettuces were about balanced in supply and demand, at from 40c. to 60c. per dozen for fancy heads. Florida lettuce arrived in bad condition, much of it badly frozen, and a good deal of the home-grown article suffered from the same cause.

Mushrooms are still in over-supply and low prices prevail, 10c. to 30c. per pound being the price; a quantity of stock goes unsold when off color and poor.

Tomatoes are in large supply, and realize only from 10c. to 25c. per pound.

Vegetables generally are arriving in poor condition, owing to the severe weather of late.

Cauliflowers are in very short supply; good to prime were worth \$2 to \$4 per barrel; extra fancy made \$5 to \$6 per barrel.

Onions are very steady and evidently a satisfactory crop just now. Prices are firm at the following figures:

Eastern white, per bbl..... \$3 00—\$5 50
Eastern red, per bbl..... 2 50—2 75
Eastern yellow, per bbl..... 2 00—2 25
State and w'n, yellow, per bbl..... 2 50—4 00
Orange Co., white, per bag..... 1 75—2 25
Orange Co., yellow, per bag..... 1 25—2 50
Orange Co., red, per bag..... 1 25—2 50

Shippers of hothouse stock are urgently advised to be more liberal with paper inside the boxes or barrels to protect from frost. The inside is more important than the outside.

Missouri River Horticultural Society held its annual meeting December 19. The Society embraces in its membership the fruit growers living in the vicinity of Kansas City, and co-operates with the State associations of Missouri and Kansas. The following officers were elected: President, Homer Reed, of Kansas City; vice-president, Ed. Taylor, of Edwardsville, Kan.; secretary, Clarence A. Chandler, Argentine; treasurer, G. F. Espenlaub, of Rosedale. The Association will hold monthly meetings during the year.

OUR PREMIUMS ARE OFFERED with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

LORD PENZANCE'S NEW HYBRID SWEET BRIARS.

Quite a New Feature in Roses.

The foliage of every one of them is as sweetly scented as the old-fashioned Sweet Briar that grew in our grandmothers' gardens.

The Sweet Briar or Eglantine, is acknowledged by all to possess one of the sweetest perfumes that nature has provided and its delicious scent is the object for which it is usually cultivated. These new varieties, now for the first time placed in commerce, are vast improvements upon the old sorts. They are hybrids (obtained by the Right Hon. Lord Penzance) between the common Sweet Briar and various old-fashioned garden Roses and are possessed of many advantages.

The flowers are borne in wondrous profusion, and vary in color from white, through several shades of pink, to very dark red or crimson.

The plants are perfectly hardy even in very bleak and exposed positions.

For vigor of growth there is scarcely anything in the rose world to equal them. Plants three years old have now many shoots on them that rise to the height of twelve feet. These, with a slightly outward bend, and clothed with flowers of exquisite tints, produce a gorgeous effect.

The buds are the most graceful, sweet and delicate objects imaginable.

The flowers are single or semi-double, and this adds lightness and elegance to their beauty.

After the flowers are over, they are followed by bright scarlet seed pods or "hips" in great numbers, which, nestling among the deep green, scented foliage, make the plant delightfully ornamental till quite late in the autumn.

No garden will be esteemed complete which does not possess a group of Hybrid Sweet Briars. They are so sweetly scented, so beautiful in color, so hardy and free from disease and the attacks of insects, as to make them eagerly sought after by all the knowing ones.

This is Our Offer. For one NEW subscription to American Gardening at \$1.00, we will forward you, all charges prepaid, your choice of two of the three following varieties:
Meg Merrilies, Red.
Anne of Geierstein, Pink.
Brenda, Blush White.

The above to be well-established plants out of 2½ inch pots.

The collection of Three above Plants for one NEW SUBSCRIPTION to American Gardening at \$1.95.

These plants will be forwarded to our subscribers direct from the growers, eminently responsible people, who guarantee them to be true to name and color.

Plants ready for shipment May 1. Orders booked now, however, owing to the expected enormous demand.

OUR GREATEST 1897 PREMIUM

The Wonderful New Climbing Rose

Yellow Rambler (Aglaia)

A worthy COMPANION to the well-known Crimson Rambler.
The Hardiest Yellow Climbing Rose Ever Introduced.

Yellow Rambler bears its flowers in immense clusters, often as many as one hundred and fifty blossoms in a bunch, the trusses being of handsome pyramidal shape.



YELLOW RAMBLER AS A CLIMBER.

Yellow Rambler holds its blooms from three to four weeks without fading; a large bush in full bloom is one of the most beautiful sights imaginable.

Yellow Rambler is a clear decided yellow, in marked contrast to many roses so described, but which have really only a yellow tinge.

Yellow Rambler is very vigorous; well-established plants often making shoots eight to ten feet in height in a single season.

Yellow Rambler represents the triumph of the century in the hybridizing art, and is the most valuable introduction in recent years.

Yellow Rambler is very sweetly scented.

Yellow Rambler combines the climbing habit and decided yellow color with hardiness.

Yellow Rambler will withstand, without protection, a zero temperature; with protection it will thrive where any other rose will.

Yellow Rambler is thus adapted to successful culture in nearly all of the northern parts of the United States.

Yellow Rambler is absolutely NEW on the market and will prove the sensation of 1897!

Yellow Rambler premiums will be shipped direct to our subscribers from the introducers, one of the largest and most reliable firms of nurserymen in the country.

All stock is guaranteed pure and will be shipped in good condition.

DON'T YOU WANT A YELLOW RAMBLER ROSE?

You Can Earn One in Ten Minutes!

READ OUR OFFER. We will forward, all charges prepaid, one well-established plant of **Yellow Rambler Rose**, from 2½ inch pot, for ONE NEW SUBSCRIPTION to American Gardening at \$1.00, or six plants for five NEW subscriptions at \$1.00 each.

The same plant will not be sold in 1897 for less than 50 cents. Plants will be shipped on and after March 15th. It is expected that the demand for this New Rose will be phenomenal, and we advise those of our readers who want a plant to be early with their order.

Corn

is a vigorous feeder and responds well to liberal fertilization. On corn lands the yield increases and the soil improves if properly treated with fertilizers containing not under 7% actual

Potash.

A trial of this plan costs but little and is sure to lead to profitable culture.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

DUFF LEGHORNS.—Winners for five years. Circular free. GEORGE S. BARNES, Battle Creek, Mich.

ALL THE LATEST NOVELTIES

AND PLANTS THAT CAN'T BE HAD ELSEWHERE.
Cannas, Ixoras and Anstria, at \$1 each.
New Roses, New Fruits, New Shrubs, New Bulbs.
10 Cents for \$1.—\$4 for 50 cts. Book on Cacti 112 pages, 120 cuts, 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free.
A. BLANC & CO., - Philadelphia.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodora B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.



FLORA OF JAPAN & CALIFORNIA

Chinese Narcissus, over 100 varieties of Lily Bulbs, Camellias, Palms, etc. **HARDY PLANTS,** Japan Maples, Iris K., Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan.

Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above.

H. H. BERGER & CO., San Francisco, Cal.
(ESTABLISHED 1887).

HARDY SHRUBS AND CLIMBERS.

Ghent Azaleas, Azalea Mollis, Hardy Roses, Ampelopsis Veitchii, Clematis Paniculata, RARE CONIFERS, IRIS KAMPEFFERI, EULALIA JAPONICA, with all hardy herbaceous plants and Grasses suitable for fall planting. Catalogues on application. High-class Plants for the conservatory, greenhouse, lawn and grounds of country places a specialty.

F. R. PIERSON CO., Tarrytown-on-Hudson, N. Y.

ELLIOTT'S SEED

ANNUAL FOR 1897.

Now Ready. Mailed free on application, by only mentioning "AMERICAN GARDENING."

WM. ELLIOTT & SONS,

54 & 56 Dey Street, NEW YORK.

GARDEN CROPS

of every kind may be greatly increased in quantity and improved in quality by liberal use of **NITRATE OF SODA**, either singly or in combination with other fertilizers. Best results from **EARLY VEGETABLES** are impossible without the use of nitrogen in soluble form. **NITRATE OF SODA** is the most soluble, cheapest and most reliable source of nitrogen. Your soil may contain all the other fertilising elements in sufficient quantity and fail to yield good crops because it is deficient in nitrogen. Cover this deficiency by using **NITRATE OF SODA**. All about its source, use and the profits resulting therefrom in book on "FOOD FOR PLANTS." Sent FREE. Address..... **S. M. HARRIS, Moreton Farm, P. O., N. Y.**

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897
Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable **NEW Novelties**, painted from nature.
"The Leading American Seed Catalogue." 42¢ Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

2400 years ago Socrates said

"GARDENING is the source of health, strength, plenty, riches and honest pleasure." For a successful garden you want the best seeds that grow. Our **GARDEN AND FARM MANUAL** tells all about them. It is free to seed buyers. Write now.

JOHNSON & STOKES, 217 and 219 Market Street, PHILADELPHIA, PA.

B. M. Watson, Jr.
Bureau Inst. South St.
Jamaica Plains

A SPECIMEN
COPY OF THE

AGENTS WANTED
CIRCULARS FREE

Ladies Home Companion

50 Cents a Year.

3 Months as a trial subscription 10 Cts.

This popular Ladies' Journal, now in its twenty-fourth year, is as readable and attractive as the best writers and artists can make it. In quality it is of the very best; in quantity, the most ever given for the money. During 1897 it will be the unsurpassed treat in periodical literature.

Each Number of the Companion

Is profusely illustrated with exquisite drawings; in short it has the best writers and most beautiful pictures money can buy. It gives from 24 to 32 pages, size 11 by 16 inches, each issue, printed on fine paper and put in a handsomely illustrated cover. It is an unrivaled high-class magazine of general and home literature. Goes to over 220,000 homes regularly.



Ladies Home Companion has no equal in the excellence of its special departments devoted to Fashions, Fancy Work, Housekeeping, Floriculture, Talks with Girls, Mothers' Chat, Home Adornment, Children, etc. Articles of general interest by thoughtful and experienced writers are features of every issue. Its many short and serial stories are especially fine and appropriately illustrated.

A splendid program of great variety has been prepared for the year, including the best work of such noted authors as

Lillian Bell
Octave Thanet
Opie Read
Julia Magruder

Frederick R. Burton
Cora Stuart Wheeler
Josiah Allen's Wife
Mrs. Mary J. Holmes

Stanley Waterloo
Elm Higginson
Sophie Swett
W. O. Stoddard

Hesekiah Butterworth
Harriet Prescott Spofford
William G. Frost, Ph.D.
Will N. Harben, etc., etc.

Address **LADIES HOME COMPANION** { NEW YORK CITY
CHICAGO, ILLINOIS
SPRINGFIELD, OHIO

Letters and subscriptions may be addressed to the office nearest you

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 107.
COMBINED SERIES VOL. LI.

NEW YORK, JANUARY 9, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Agaves, Pyramid of.....	27	Fruit Garden.....	21	Home Plot, The.....	26	Packing and Shipping.....	23	Vegetable Garden.....	21
Apples.....	21	Fruit Stored.....	21	Ice Houses, Making.....	17	Pansies, How to Grow.....	19	Water Lilies from Seed.....	26
Celery for Profit.....	25	Fruit Tray for Exhibiting.....	19	Insects, Destructive.....	22	Pear, Buffum.....	21		
Chrysanthemum Fly.....	28	Labeling.....	21	Labeling.....	21	Pears.....	21	Illustrations.....	
Commission Man, The.....	22	Fruits of Experience.....	27	Market Reports.....	30	Poultry Notes.....	26	Cutting Device, A.....	21
Concentration.....	22	Fruits, Russian, in America.....	20	Mushrooms Out of Doors.....	29	Private Gardeners.....	28	Dish for Exhibiting Fruit.....	19
Cropping Poor Land.....	29	Gardener's Position, The.....	28	Obituary: Ward, W. R.....	27	Red Cedar Work.....	20	Drain Tile, Cheap.....	27
Drain Tile, A Cheap.....	27	Grapes.....	21	Oranges, Grafting.....	29	Scale on Blackberry.....	25	Icehouse, An.....	17
Flower Garden.....	27	Holly from Seed.....	28			Tariff and Markets.....	23	Trees, How to Stake.....	18
Free Seed Humbug.....	25					Trees, Why Stake?.....	18		

Making an Ice House.

The whole secret of keeping ice for future use lies in the construction of a suitable place for its storage, surrounding it on all sides, top, and bottom with some dry non-conducting material, for what will keep the heat out will keep the cold in. As I have had to do with very

site should be a high and dry one, so that no water can collect and stagnate beneath the flooring of the structure; indeed, so as to insure perfect dryness at the bottom it would be well to first of all mark out on the ground the size of the building—that is to say its ground space, then removing the soil to the depth of two feet, filling in again with some good drainage, such as rock or large gravel. From the

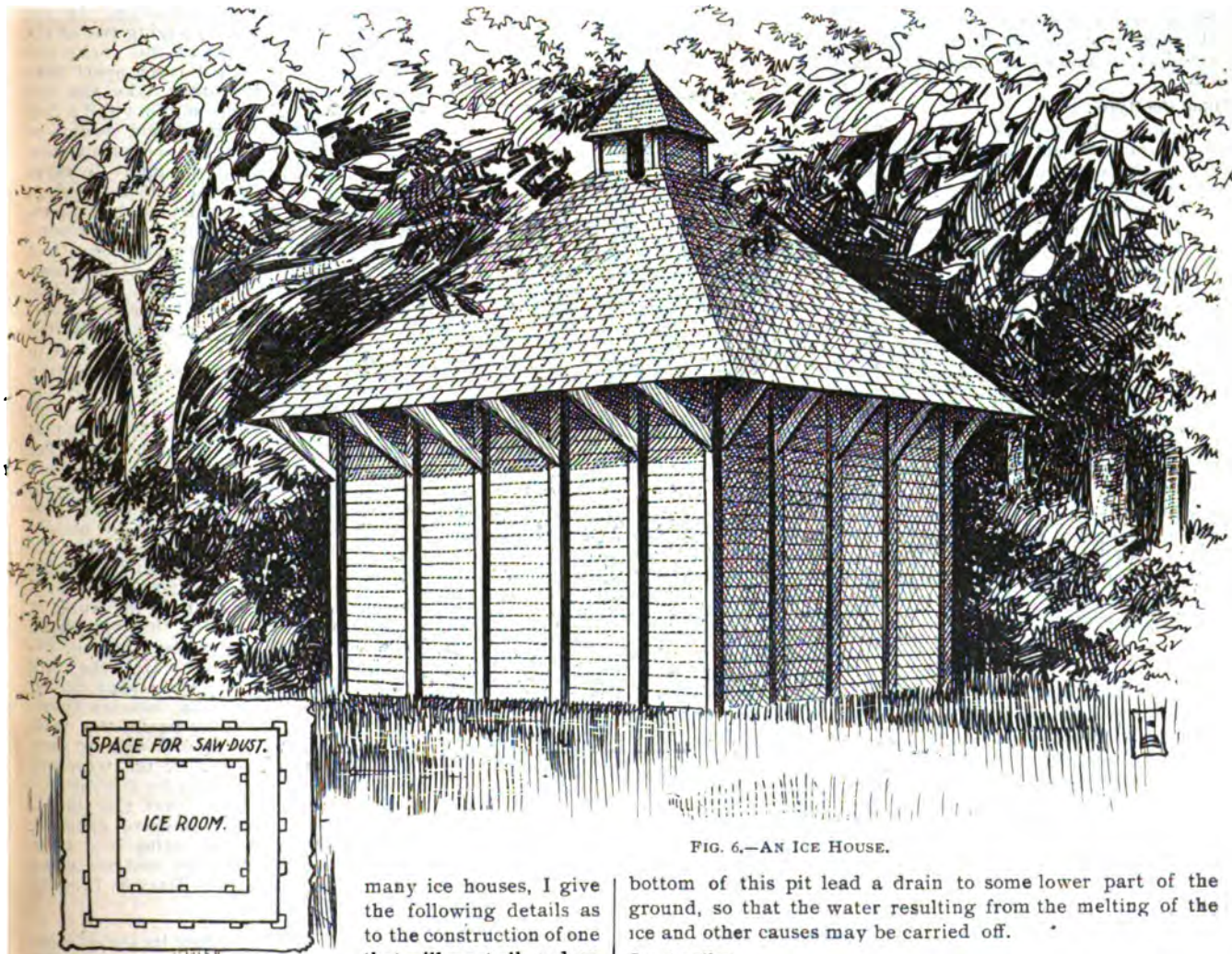


FIG. 6.—AN ICE HOUSE.

many ice houses, I give the following details as to the construction of one that will meet all modern

requirements. Security and ease of access to the contents. An ice house should be built entirely above ground and near to some large trees, the shade afforded by which will serve to shield it from the influence of the sun's rays. The

bottom of this pit lead a drain to some lower part of the ground, so that the water resulting from the melting of the ice and other causes may be carried off.

Construction.

Procure some posts (sawn lumber is best) 4x6 inches across, and 10 or 11 feet long. These should be of some good lasting wood, and should be put into the ground so as to stand 8 feet above. Make a double row of posts opposite

each other, as shown on the ground plan in the accompanying illustration (fig. 6), putting the rows at intervals of about 2 feet, and the posts of each row at about 3 feet distance. Well firm the posts into the ground and line them off squarely at the top, spiking on the top of each row a plate of wood, 6x6 inches, staying these plates so as to form a double frame. New plank up the inside of each line of posts with 2 inch boards, fitting the pieces well and closely, and carrying the work up to the wall plates. The space thus formed between the boards should be well packed with tan-bark or sawdust, which will make the sides of the house both sun-proof and air-proof; matters of prime importance in preserving the ice.

Lay across the inside and upon the ground some joists, upon which put loose planks as a floor. Cover the whole with a layer of dry straw one foot in depth and the ice receptacle is ready.

The Roof.

For the roof use 3x4-inch joists and have them long enough to form a pitch of full 35° and also to extend over the outer wall far enough to carry the roof quite 4 feet beyond the wall plate. Short struts as shown in the illustration may also be added to better support the overhanging roof. To the rafters thus made secure, nail closely fitting boards. Make a superstructure here 6 inches in height, and board up as before to form a box roof, and pack sawdust into it.

Cut a doorway through the roof, through which to put in and take out the ice. At the top of the whole insert a piece of stove pipe to afford ventilation, covering it by erecting 4 short posts 2 feet high on which is to be fixed a pointed cap. The ice house is now complete.

Filling the House.

The ice to be stored should be taken from the purest water possible, as many diseases are communicated by ice from contaminated water. The blocks are best cut about 2 feet square, and while they are being thrown in, there should be a man on the floor to spread them over evenly and also with a heavy hammer to break sufficient ice to fill in all the spaces between the large blocks. The whole mass may be rendered compact by throwing water over the layers of ice. When the house is filled to the level of the wall plates put joists across, resting them on the wall plates, covering over by a floor of loose boards leaving space for a trap door, and upon this floor a layer of tan-bark or sawdust 6 inches in thickness.

Summary.

An ice house should be made as air tight as possible, with good drainage, shaded by some large trees, or covered by a creeper (English Ivy where it will live), and built on a slight mound.

G. M. STRATTON.

Value of Good Roads.—It is computed that in some districts of Massachusetts there has been an average rise in the value of property along improved roads of over \$6 an acre. It is moreover estimated that the losses to farmers in that state hauling their product over muddy roads, as compared with the cost of hauling it over improved roads, amounts to more than enough to pay for the improvements. It will be seen, therefore, that as the profit in the hauling of produce pays for the cost of the road, the advanced value in the land is a clear gain to the land-owners. Some day perhaps the Virginia farmer will awake to the evils of bad roads.

Why Stake Trees?

From many, the answer to this question would be, to have them grow erect. That is a good reason so far as it goes, but not the only one, nor the most vital one. This one has to do with the appearance of the tree's head; the other to which I shall allude has to do with the root. Just as the root of a tree affords a better measure than the top of the tree as regards the tree's real condition, so it is more important to have regard to the need of the root; a lesson that the average planter seems all too slow to learn.

Now when one undertakes to dig up a seedling, a tree, or a fence post, one part of the operation is to work it to and fro in various directions, in order to loosen it. By working it you in a measure pry the roots loose, and push the soil away from the larger roots, so that it does not hold so fast. That is just what the wind does to newly-set trees that are not secured to stakes, or otherwise prevented from swaying about. Let us

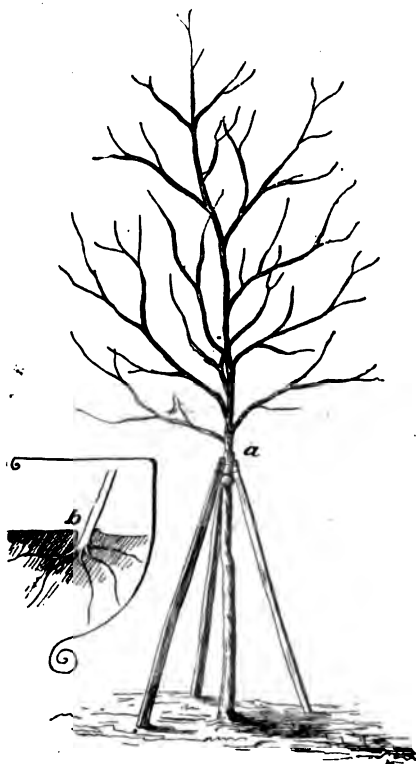


FIG. 7.—HOW TO STAKE A TREE.

remember, too, that at best the roots of a tree suffer impairment by transplanting, through loss of some parts that are cut off or broken in the operation. They may suffer damage likewise, from exposure to air or frost; from change of soil; from planting too shallow or too deeply and in other ways, some of which are avoidable. Is it not the part of good planting to so favor the root, already measurably injured in the transplanting, that it shall have every chance for taking hold of the soil and becoming established in the new quarters?

How to Brace a Tree.

In the accompanying sketch (fig. 7), which represents a newly planted tree, 10 feet in height, there is shown one of the most effective braces that can be provided for a subject of this size. It consists of three light oak or other stakes, about 5 feet in length, driven into the soil tripod-like, each 2 feet away from the tree, and with the right slant to just meet the trunk with the end, as at *a* in the engraving. Here a piece of matting is wound around the trunk to

protect it from the ends of the several stakes, which are then secured to the trunk, and to one another by means of tarred cord or by wire. Such a tree is held perfectly secure. Surely it is giving the subject the rational care which is its due in the crisis of transplanting.

To make this lesson of the tree's security the more impressive, I show a side sketch at *b* which indicates the bad predicament into which newly planted trees not rarely get. When I say that I have seen unstaked fall planted trees literally blown from the ground before spring, this present sketch need not be looked upon as fanciful. It represents, in fact, quite a common state. Not only does the injury come from a general loosening up of the roots and their displacement, but an opening is made around the trunk which will fill with water, which may cause damage in one of two ways; first water that follows readily down the root, hastens the softening process of the soil, and further aids the loosening of the roots; second, to have water stand next to the bark, which in case of a sudden freeze up is turned to ice, may work serious harm, to the bark throughout.

The advantages of this tripod method of staking trees over the single stake plan, are several; first, the tree is held more firmly in place than is possible to be done with the use of but one stake; secondly, these stakes are not driven into fresh earth, but into that just outside of the hole that was excavated and filled in during the planting process.

This method of staking is suited to trees in almost any situation. In the street, for instance, by having two of the stakes enter the soil at the curb, and these spread a little farther apart than the distance to the other stake, the tree may be brought within a foot and a half of the curb (and it should never be closer). It is at once apparent how easily the tripod may be made to serve as a tree-guard against horses and dogs by running wire, held in place by staples, horizontally from stake to stake around the tree. The first wire may be a foot above the ground to admit of the lawn mower passing underneath; above this they might be three or four inches apart.

The plan here illustrated is best suited to trees ranging from 6 to 12 feet in height. In the case of transplanting larger trees (except in the street), the same plan may be modified by substituting the use of wire for the stakes. In that event the stays may be attached higher up in the tree than when stakes are used; even among the branches, say at two-thirds the height of the tree, provision being of course made for attaching the wires both in the tree and at the ground. In the tree two iron half-bands fitted with L ends and short bolts should be made to tightly encircle the trunk at the proper height. To this completed band the wire stays are attached, extending to the ground. Here they are made fast to three stout stakes driven into the ground at equal distance apart and some feet away from the tree. Ordinary fence wire will answer very well for the purpose. If the trees are quite large the wire may be doubled.

Some one may say that the stakes, wires, and the work involve expense. This is true, but the outlay is a mere trifle as compared to the cost and value of the tree.

ELIAS A. LONG.

¶ Ill. State Hort Soc'y held its annual meeting at Springfield, Dec. 31. The following officers were elected: President, T. E. Goodrich, of Cebden; vice-president, F. D. Voris, of Neoga; secretary, H. M. Dunlap, of Savory; treasurer, Arthur Bryant, of Princeton.

How to Grow Pansies.

Extending as our country does through so many degrees of latitude, a wide variation of rules may be made to adapt them to different localities, and as the Pansy so readily accommodates itself in many ways to the wants of its admirers, there is perhaps no flower grown from seeds which may be successfully planted at so many different seasons. It is well, then, to consider

When to Sow Pansy Seeds.

From southern Illinois northward, if but one sowing is made, most satisfaction may be derived from planting out of doors early in spring. These plants will bloom from midsummer until snow falls, and if properly cared for, give the earliest flowers in spring, and an abundance of bloom until summer heat has drawn the branches out so long that they had better give way to younger plants.

South of the latitude above mentioned, it is better to depend on spring flowers from plants started in late summer and early fall, or from seeds planted in the greenhouse or house in January. Pansies commence to flower in from seventy to eighty days from the time of sowing, under reasonably favorable conditions.

In the latitude of northern Illinois and Wisconsin, seeds for plants to winter over should not be planted later than first of September. If plants are desired for winter blooming, sow late in July. Flowers can be had nearly as early from plants started in the greenhouse from middle of January to middle of February, but in the house it would be better not to plant earlier than March, for it is necessary to give the young plants room as they grow, planting out in shallow boxes before they become drawn and slender. If seeds are sown out of doors just before winter sets in, they will come up early in spring, and be in flower before July. If these indoor plants are too early for planting out of doors, they must be given more room as they grow, and will do better in shallow boxes holding a number of plants, than if grown in pots. In the greenhouse we plant in the benches as if they were long boxes.

Sowing Seeds.

The same care is required in sowing Pansies as for other small seeds. They must not be covered too deeply, nor be permitted to dry after they have commenced to germinate, for a dried plant is dead no matter how small it is.

Pansy seed should be sown thinly, in shallow furrows, not more than one-sixteenth of an inch deep, made with the sharpened edge of a piece of lath. The seed bed should be mellow and rich, leveled smooth before the seeds are sown, and after sowing the seeds should be covered evenly, and the surface pressed with a piece of board. The seed bed should be watered and shaded until the young plants are up, after which they should be gradually accustomed to full light. Shade for the seed bed may be secured by laying over some kind of frame about a foot from the ground, laths or pieces of sheeting.

As soon as the plants are up, the shading must be gradually removed, as there is always danger of "damping off" with any kind of small plants in close, warm and damp situations. Too high temperature in the seed bed is fatal to Pansy seeds, and those planted in midsummer will not germinate strongly if the thermometer in the shade ranges for a long time above 75°. If seeds are permitted to dry after they have sprouted, their vitality is gone. If covered too deeply they cannot come up.

Florists are in the habit of sowing Pansies under glass, which is not necessary, at will answer very well early in spring, at shading with cloth-covered frame is far better in summer, and those who have followed our advice with their August sowing have had much better success than men using hotbed sash.

How to Grow Pansies.

Pansies may be grown in the house or greenhouse in winter, if young plants are just commencing to flower late in the fall, and if they are not kept too hot and dry. Protection being given against green

fly and red spider. Old plants which have done service in the garden are not suitable for winter blooming. Several plants in a box are better than if grown in earthen pots. On the balcony, porch or window-sill in summer, if not directly facing the south; grown in this way, no plant better repays the care given. In the garden anywhere, if not in too hot a place directly facing the south, nor where they must struggle with larger plants and trees for nourishment.

General Management.

The plants which have flowered in the spring will do well again in the fall if the long branches are cut back late in June.

The ability of the Pansy to stand hot weather depends greatly on its treatment. If the soil is rich enough and not too dry, nor in too hot a situation, Pansies, with frequent cultivation, will stand a long siege of hot weather, if no seeds are allowed to form. With this care, one can have Pansies from young plants in midsummer. A rich sandy loam is best for Pansies, and if not too stiff, a clay soil is better than that which is very sandy. But whatever its texture, the soil should be made rich with well-rotted manure, thoroughly incorporated with the soil, and stirred several times while the plants are in the seed bed. This thorough preparation of the soil before transplanting is very important.

Well-rotted manure, if to be had, is preferable to commercial fertilizers, and many

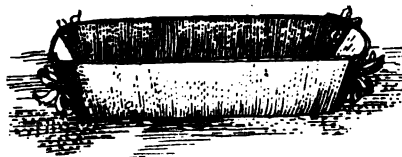
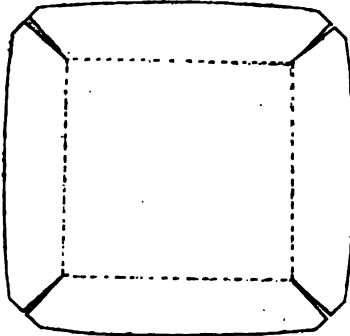


FIG. 8.—DISH FOR EXHIBITING FRUIT.

who think they cannot have a supply, might provide some by making a compost heap as if for a hotbed, a heap of manure covered with soil only being necessary. After heating and watering for some time, the whole mass, including the soil, should be mixed and piled again, any supply of hen manure on hand being included. In this way a good supply may be provided without the offensiveness of the ordinary manure heap. Transplant after the plants have attained the fourth or fifth leaf and before they have become drawn and slender with crowding. An eastern or northern slope is preferable. My own experience does not permit me to favor shade, although shade is preferable to too much heat, and shade of trees is more objectionable than shade of buildings. Temporary shade during the hottest portion of the day in extremely warm weather would be an advantage, but shade the whole season through will not admit the brightest colors, or an abundance of flowers.

If watering is necessary and possible, the ground should be well soaked in the evening and thoroughly stirred, about two inches deep, next morning, as soon as the soil is dry enough.

Cultivation without watering is better than watering without cultivation.

Keep the buds picked off after transplanting until the plants are well established, and also during very hot weather, for a good display of flowers in the fall.

When growing where they are to stay, about 8 inches to a foot square of space should be allowed each plant. Frequent stirring of the soil is necessary between the plants until they are too large.

A crust should never be permitted to form on the surface. Frequent cultivation is, more than anything else, the secret of success in Pansy growing.

Winter Protection.

The plants which have flowered through the summer and fall will usually winter over well if protected with a light covering of leaves or straw which is better if a little brush has been placed over the plants first.

Young plants are quite hardy if protected from sharp winds, and not allowed to become too wet near the surface of the ground. In cold frames a considerable mixture of sand is desirable, as the plants, with protection, winter better in sandy than in clay soil. The young plants should be transplanted from the seed-bed to winter quarters early enough to become well rooted before winter sets in.

Beards may be used instead of glass for cold frame covering; glass should be shaded if too warm, as it is desirable to keep the plants dormant, and they should be watered, if necessary, as the roots will sometimes freeze dry if not looked after.

A good way to protect pansy and other plants is to have a V trough of narrow boards to cover the plants with, and then throw on some coarse litter of leaves, straw, manure or shavings. In all cases thorough surface drainage must be provided to prevent water from accumulating about the plants and forming ice about them.

Pansy Pests.

Pansies, like many other flower plants, in hot, dry weather, are liable to be injured by the so-called "red spider," which attacks the under surface of the leaves of many garden and field plants, causing them to wither, as if from dryness. Spraying of water from a garden pump directed forcibly against the plants will reach the under side of the leaves and destroy the pest. The addition of pyrethrum powder, or else kerosene emulsion, to the water makes the remedy still more effective.

As the red spider flourishes best in a dry atmosphere, it is often the case that plants in the shade of trees suffer because heavy dews are kept from the plants. Aphids or plant lice cause more injury in gardens than people are generally aware of. A drenching of weak tobacco tea will remove them.

During close, hot, moist weather, quite large plants will "damp off," but I do not know of a remedy.

When rain comes after very dry weather, sometimes mildew will attack the plants—such as troubles Roses and many other plants. Whenever it appears, whether on Pansies or other plants, it may be destroyed by sprinkling with the following: Boil one pound of sulphur and one pound of lime in two gallons of water until it has lost two-thirds by evaporation; allow it to settle and bottle the clear liquid for use. Take one gill of this to four gallons of water and sprinkle to wet the mildew with it.—WILLIAM TOOLE, Baraboo, Wis.

For Exhibiting Seeds and Small Fruits.

The dainty little dish illustrated (fig. 8) was recently suggested to the writer at a county fair where various varieties of peas and beans were displayed in similar little plates. They are very attractive looking and can be easily made at almost no cost at all. The diagram shows how the cardboard or very stiff paper is cut. At the dotted lines the sides are turned up, the corners overlapped and either stitched in place or held by narrow ribbons as the sketch suggests. At horticultural exhibits cherries, plums and all kinds of berries will present a very pleasing appearance in these neat little plates, and their increased attractiveness more than repays the slight outlay of time and material. W. D.

Russian Fruits in America.

It is something more than fifty years ago—possibly sixty—when a few varieties of the apples of Russia were brought to America from England, and began to be propagated in the vicinity of Boston. They were unquestionably selected for their size, beauty, or early bearing; their cold-resisting power not being appreciated, or even discoverable, by any tests likely to occur near the Atlantic coast, in that latitude. The fact that they all proved to be summer or fall fruit was a bar to their extensive propagation; and at the time when my attention was first drawn to them, shortly after the close of the war, only their early bearing was emphasized. But exposed with other sorts to the severe winters of the Canada border, which soon destroyed every kind of tree fruit then in cultivation, these apples had a special value which could hardly be overlooked. As the same severity of climate was at that time nullifying the efforts of planters in our northwestern States, and was having a material tendency to check immigration from States where an abundant supply of tree fruits was regarded as one of the essentials of comfortable existence, a lively interest was widely manifested, and through the urgency of northwestern Congressmen, a large importation of Russian apples was made by the agricultural bureau (not then, as now, a Department), and widely distributed; but with such poor judgment that the bulk of the distribution was practically lost, the distributed cions not being utilized. Enough, however, was learned to satisfy interested parties that these trees would endure a much colder climate than any varieties hitherto tested in this country.

This knowledge became a spur to more extensive and more wisely conducted investigations and experiments; but still, as time went on, it appeared that though many of these Russian fruits were of great beauty and merit, none of them possessed the keeping quality which is so necessary, and so well represented among the older importations and their American seedlings. This necessity for more skill and knowledge in making proper selections, which was realized alike in the East and the West, and no less in Canada than in the United States, led to efforts resulting in what has been known as the Budd-Gibb expedition, consisting of Professor I. L. Budd, of the Iowa Agricultural College, and Mr. Charles Gibb, a wealthy gentleman of Canada, since deceased. These competent pomological explorers spent a whole season in studying the pomology of Russia, and brought home with them trees and cions, from Russian nurseries and orchards, which are now coming into bearing all through the "Cold North." One of the most important facts brought to our attention in the course of studying this subject is the geographical fact that nearly the whole of Russia lies north of the United States, and even of most of the populated portions of Canada. The consequence of this is that in bringing the Russian tree fruits to us, we bring them to a locality where the growing season is longer, and where apples, for instance, which are good keepers in Russia, may fail to be equally good keepers on our continent. This is now revealing itself practically, and causing some disappointments, yet it is also being shown that for our northern tier of States and for lower Canada, Russia has fruits, and especially apples which are from fair to good keepers along our northern boundary, while in size, beauty and quality they leave nothing whatever to be desired.

Messrs. Budd and Gibb did not limit their studies to apples alone. Pears, plums and cherries were also carefully studied, and not only these, but many valuable shrubs and trees, hitherto unknown to this con-

tinents, have been imported and distributed, with unquestionable advantage to the people of America. I speak in all this matter not as a mere observer, since both these gentlemen supplied me early with a bountiful collection, which has grown finely, and is proving to be of great value. Space does not allow me to refer more particularly to these matters in this article. I hope from time to time to refer to the subject with more particularity. Nearly all these large collections are now reaching a stage of growth and fruitage, which gives material for useful judgment and comment for the benefit of the horticultural public in general. I intend to do my part in this with severe impartiality. There are some antagonistic interests which seem impelled to decry and misrepresent this great work, but they must soon yield to the enlightening power of truth.

T. H. HOSKINS.

Red Cedar Rustic Work.

No one can probably tell when or why the idea got abroad that red cedar wood is obnoxious to insects. Certain it is that this wood has long been highly recommended for making moth-proof clothes chests, and housewives have been advised to place a few red cedar chips in the boxes or whatever other form of receptacles were used for storing away rugs, furs, and similar household articles for safe keeping during the summer months, and while the cedar preventive has been proved to be of no use in thousands of instances, it is still talked about, recommended, and used by those who have much faith and little knowledge of such matters.

That the heart wood of the red cedar, and in fact, nearly all species of the genus, is exceedingly durable in both dry and moist situations is too well known to be questioned; but the sap wood soon crumbles if exposed to the weather, unless kept soaked with oil, petroleum, or some similar preventive, and when treated with these our common Red Cedar will not remain sound longer than the Oak, Chestnut or almost any other kind of hard wood. But for many years Red and White Cedar were in great demand for making rustic work of all kinds, from front yard fences down to the small rustic hanging baskets on sale at all florists in city and country villages. This use of such material was in great part due to its reputation for durability, and when peeled and soaked in some kind of wood-preserved solution it answered the purpose well; but if not so treated its durability was more imaginary than real. The old rustic fences, gates, arbors and similar structures, once so abundant in their frightful incongruity, have mostly disappeared from the suburbs of our larger cities, not only in consequence of their rapid decay, but because there has been a marked change in the ideas of suburban residents in regard to the ornamentation of their home surroundings. Rustic art as formerly exhibited in crooked sticks with strips of loose bark fluttering in the wind reminded one of old rags hung out to dry by some rag-picker, but so long as fashionable it was of course eminently acceptable.

It must not be supposed, however, that rustic arbors and similar structures, built of straight and crooked cedar roots and branches, are entirely obsolete, for they are not, although less plentiful than formerly. I am occasionally reminded of their existence by correspondents, and quite recently a neighbor, who had been to considerable trouble and expense in procuring red cedar enough to build a rustic summer house in his garden, discovered, as many others have done before, that insects were rapidly demolishing the structure, and their meal-like excrement was constantly sifting out from

under the bark and falling upon the clothes of visitors. By request I examined the building and found the sap wood literally alive with the larvae of the red cedar borer (*Hylotrupes lignus*), a small beetle of the Longhorn family (*Cerambycidae*). These beetles vary greatly in size and coloring, and are seldom more than three-fourths of an inch long and one-eighth broad; rather flat, of a brown color, with a number of black patches on their wing-covers. They rarely attack healthy, live Red Cedar trees, but as soon as the tree shows signs of dying, or it is cut down for its wood, these pests appear and often in immense numbers; the females depositing their eggs in the cracks of the bark, and the grubs hatched therefrom bore into and through the sap wood in all directions, and later penetrate the red heart wood. The best preventive is to peel the bark clean from the stems and branches as soon as the trees are cut down, and then apply a liberal dressing of petroleum or common kerosene, and spread out the wood in the sun to dry.

A. S. FULLER.

Prof. I. L. Budd, of the Iowa Agricultural College, is identified with the introduction of Russian fruits to this country. Some of the local horticulturists do not look with favor on them, and at the late meeting of the State horticultural society resolutions were presented and adopted condemning these foreign fruits. Similar action, though more moderate in its nature, was taken last year. It is claimed that it is the universal experience of fruit growers that the Russian and other foreign varieties of fruits are unsuited to Iowa soil and climate, yet Professor Budd has for years not only constantly recommended them, but has established and developed on the college farm an extensive nursery of Russian apples and has sold the trees in large numbers throughout the State, and the members of the horticultural societies affirm this has entailed losses of hundreds of thousands of dollars to Iowa fruit growers. The Southeastern Horticultural Society also unanimously adopted a series of resolutions condemning the position taken by the experiment station.

Horticultural Legislation Asked for.—The Washington State Board demands that the county commissioners shall have power, upon the petition of fifteen fruit growers of the county, to appoint one or more deputy inspectors of fruit pests, and who shall have all the powers of the present State fruit inspectors to condemn and quarantine against fruit and fruit trees, etc., infested with noxious and injurious insect pests or infectious diseases, also that the powers of inspectors of fruit pests may be more clearly defined in the matter of the condemning and quarantining of infested trees and plants and fruit coming into the State. The present law gives a right of action to a fruit-grower who suffers from the fraudulent misrepresentation and practices of some nurserymen in selling fruit trees untrue to name, so that the grower who suffers loss thereby can recover. But as several years elapse, or until the trees begin to bear before the fraud is discovered, the amendment is asked that the statute of limitation should not begin to run in such case until three years after the sale of the trees is made.

Oranges, Etc., in California.—According to the official figures, the seven counties constituting Southern California, now have 1,472,743 trees of citrus fruit in bearing. There are also planted, but not yet in bearing, 2,676,369 trees. From those already bearing there are shipped about two million one hundred thousand boxes of fruit per annum. In three or four years, when the other trees (now planted) come into bearing, it is fair to estimate that there will be an increase of fully 4,000,000 boxes, or an output from the whole of 6,000,000 boxes per annum.

The Fruit Garden.

Apples.—Study the fruit catalogues and your present list before you order the latest candidate for public favor. It is always right to keep up with the times and to try to improve on what we already have, and every live man will do so if he have the opportunity. As I looked over the grand collections of fruits at the American Institute Fair last October, I was not content with the forty odd named varieties that I already have and which ought to be enough for one private place. Nine-tenths of the trouble is that we are reaching after something new because the other man has it, and perhaps neglecting some of the old standard kinds, for this section, as Early Harvest, Red Astrachan, Sweet Bough, King, Grimes' Golden Pippin, Fameuse, Williams' Favorite, Holland Pippin, Baldwin, Alexander, Graevenstein, Pound Sweet, Newtown Pippin, Hubbardston Nonsuch, Peck's Pleasant, Ladies' Sweet, Roxbury Russet, Rhode Island Greening, Spitsenburg, Yellow Transparent, and Wealthy. None of these are new unless the last two be so classed.

Stored Fruit.—Look over the fruits stored away. A cellar (not under a dwelling house) with a dry, sandy bottom, and the ceiling about 9 inches above the outside surface, makes a good place for apples and pears, if the temperature can be kept between 35° and 40° without artificial heat.

Pears.—When stocking a new place for home use, include Bartlett, Beurre Giffard, Clapp's Favorite, Manning's Elizabeth, Beurre d'Anjou, Idaho, Petite Marguerite,

Blackberries.—For hardiness and productivity, Snyder stands first; that, with Kittatinny and Wilson, give a good supply.

Dewberry.—Order some plants of Lucretia.

Gooseberries.—We grow Whinam's Industry, a first-class, hairy-skin berry, and Downing, a smooth-skinned berry.

Currants.—Are the bushes free from scale? If not, spray them with kerosene emulsion, made by dissolving one pound whale oil soap in one gallon of water. While hot, add two gallons of kerosene, churn with a syringe or flat stick until the mixture will stick to glass like paint without the appearance of oil. To use, add one part of mixture to three parts of water. To apply it, a good brass syringe is about as handy as, or more so than, a force pump, as you can cover under and over every part as you will.

Query.—What about the black knot law of New York State. Is it enforced? If so, by whom on Long Island? J. HOLLOWAY.

A Cutting Device.

The accompanying sketch (fig. 9), will afford some idea of how I proceed

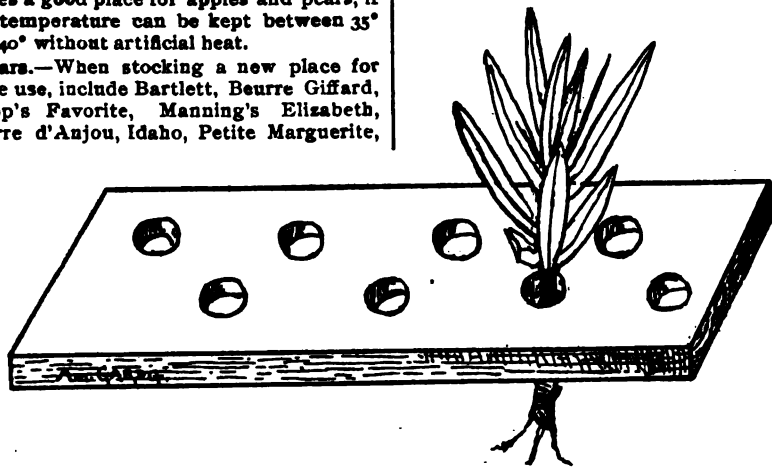


FIG. 9.—DEVICE FOR OLEANDER CUTTINGS.

Seckel, Sheldon, B. Easter, Winter Nellis, Dana's Hovey, and Buffum. In these you may not have size, but will get flavor and beauty if the fruit is handled right. Our best families are now looking more for flavor than size in fruits.

Buffum Pear is generally considered an out of date variety, with no size nor flavor, which is very true, if the tree is allowed to carry four times the crop it ought, and the fruit left to almost ripen on the tree. But if thinned, and two or three pickings made, it will push ahead of many of the summer pears in both flavor and beauty. Moreover, the tree will thrive where many will barely grow.

Labeling.—Look over your fruit trees to see if any need re-labeling. If so, try zinc labels. Cut them 6 to 8 inches long, 1/2-inch wide on one end, and running to 1/8-inch at the other. Write on them with a common lead pencil, moistened. Fasten by making a turn and a quarter around a small branch.

Grapes.—For black; plant Early Ohio, Moore's Early, Worden, and Concord. For red; Brighton, Lindley, Salem. For white; Moore's Diamond, Green Mountain, Niagara, and Pooklington. If limited to three varieties, my choice would be Worden, Brighton, and Moore's Diamond.

Raspberries.—Plant Herstine, Cuthbert, and Golden Queen. Last season small plants of Superlative made a good show of large, well-flavored berries, remarkably clean, and hanging a long time before dropping.

in the propagation of Oleanders by cuttings. I take a 3-inch flooring board, 3 feet in length, and bore into it half-inch holes as shown.

The board is then floated on water in a greenhouse with the cuttings put one into each hole, and of course, the lower end of each is immersed in the water. About six weeks ago I potted off a lot that had been rooted in this way, 85 per cent. of the cuttings striking. Any one who wishes to have a number of these shrubs will find the method described is a very rapid and easy one.

When the cuttings are well rooted pot them off into 3-inch pots, giving good drainage, for which purpose charcoal is to be preferred. Keep the plants shaded for a short time after being potted off when they will start into growth like magic. Here in the southwest the Oleanders develop into very large shrubs or even trees.—HARRY G. WOLFGANG, Tucson University, Arizona.

Muskegon (Mich.) Hor'l Soc'y, at its annual meeting, re-elected its officers as follows: President, J. H. Whitney, of Norton; vice-president, Orman Baxter, of Muskegon; secretary, Robert M. Pett, of Norton; treasurer, Riley Clemons, of Laketon; executive committee, Chas. E. Whitney, of Fruitport, and P. J. Martin, of Fruitland. The Society protests against hunters and sportsmen sowing wild rice in lakes and rivers, on the ground that it attracts enormous flocks of black-birds who attack the growing crops.

The Vegetable Garden.

Winter Vegetables.—At this season there is nothing more appetizing than some finely grown and nicely kept celery, lettuce, or mustard and cress for salad. The latter is one of the easiest to grow, yet how rarely we find it on our tables; a little seed sown weekly in a shallow box filled with fairly rich sandy loam, kept moist and placed in any temperature from 45° to 80°, and we may have a continuous supply that will be appreciated. Lettuce is also easily to be had now by those who can command some cold frames. About the last of August we made a sowing of lettuce, transplanted it in October into the frames, and by December it was fine. By having it well aired on fine days, and carefully covered up in cold weather, it keeps admirably; we have at this date sufficient to carry us for some weeks yet.

Success in growing and keeping celery requires good judgment and care, although apparently the thing is simple enough. The past fall, being so warm, was a hard one on celery. For winter keeping it should be autumn grown, and by having it well established by September 1, it will after that date make a stocky growth. It enjoys the cool nights and thick dews of that month, and if the proper varieties are selected (and we are not to be in too great a hurry to put it in its winter quarters), it should keep admirably. In the Berkshire Hills I have kept in fine condition, Sandringham Dwarf White and London Red until the middle of the following May, in an eighteen-inch trench outside on the grounds. Celery in trenches outside must be carefully protected when the temperature is playing round the zero mark, as when covered up it quickly bleaches out, and is so tender that a very slight frost is sufficient to destroy it.

For Spring.—Any work that can be done now in the way of preparing for spring to have everything in readiness, is so much time gained. Procure sufficient bean poles, pea brush, etc. W. M. EDWARDS.

The Robins.—California horticulturists are championing the cause of the robin. At a meeting at San José, a formal resolution was adopted favoring the protection of the birds from shooters, because they devour insects.

Columbus, O., Horticultural Society had a difficulty in holding its annual meeting, owing to poor attendance; it was eventually held, however, on December 26. The election of officers resulted as follows: President, Professor W. R. Lazenby; vice-president, H. M. Sessions; secretary, Professor J. S. Hine; treasurer, George W. Sinks; members of the executive committee, Dr. O. W. Aldrich, Professor D. S. Kellicott, and J. J. Janny; chairman of the standing committees, botany, E. M. Wilcox; vegetable pathology, Professor W. A. Kellerman; fruits, Dr. Aldrich; entomology, Professor Kellicott; meteorology, Professor Lazenby; plants and flowers, W. R. Beatty; vegetables, E. C. Green.

The Tariff is agitating the minds of citrus growers, who demand a high duty to bolster up their interests against foreign competition. A resolution adopted at Ontario said the growers of citrus fruits in southern California, respectfully petition the Congress of the United States for an increase in the tariff upon oranges, lemons, limes, and grape-fruit, which may be imported into the United States from foreign countries. In the tariff on fruits which come in competition with Californian producers, an injustice has been done the growers of citrus fruits. They ask, therefore, for such an increase in the import duty as will put them on a footing of equality with the foreign grower, considering the difference in the cost of labor, and the freight they have to pay to place the fruit in the eastern markets. At Los Angeles a tariff at the rate of 40c. per cubic foot on citrus fruits was urged.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY
A. T. DELAMARE PTO. & PUB. CO. LTD.
ROSE AND DUANE BYS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1897.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Concentration. THE expenditure of money without adequate return is never satisfactory and is seldom continued for any length of time.

This general rule applies to the garden and to the orchard as well as to anything else. People will not continue to cultivate the soil, either for business or for pleasure, when a fair return for the money and labor expended is not forthcoming. The era of economy through which we are passing presses home with force the truth of this statement.

It is the aim of AMERICAN GARDENING to demonstrate how the garden, the orchard and the farm can be made a paying investment.

Many thousands of our landholders are "land poor;" they are paying taxes and interest on properties which are yielding little or no returns beyond the cost of planting and harvesting the crops; they go on from year to year working hard to pay off interest and taxes on large areas of land which are of no earthly use to them.

It is no longer a question as to how many acres may be cultivated, but how one acre can be worked so as to bring the largest profit, at the minimum of expense.

We believe that the land in the eastern States, especially in the vicinity of the towns (and there is but little available land now remaining that is not in

the vicinity of towns) can be used to very much better advantage, than for the old-fashioned diversified farming. In the first place, this land should furnish a satisfactory and economical home for thousands of people who would escape the noise and excitement of the city. The land in demand for such homes is perhaps too valuable for truck farming or orchards, but would well maintain the small fruit and vegetable grower who cultivates under glass as well as in the open. The profitable development of American, as of all other farming, is along the line of intensive cultivation: shorter and deeper furrows.

AMERICAN GARDENING is devoted to the work of increasing the products and profit to be derived from our native soil, and when we examine the reports of the enormous quantities of fruits, flowers and vegetables that are imported from other localities, we are convinced that there is ample field, and abundant reward for the thrifty, intelligent, progressive American Gardener.

Of the thousands of letters which we receive none are more satisfactory than those which tell us of the saving and profit which has been derived from the hints and suggestions in AMERICAN GARDENING. It is a common thing for our readers to say that a single hint acted upon was worth very many times the subscription price of the paper.

Defence of the Commission Man. IT is considered to be the proper thing with a certain section of growers for market to assume as a fact *a priori* that all commission men are dishonest more or less, and such communications as the following, which appeared in a recent issue of the Rural New Yorker, are not uncommon:

"Of all ways, the most hazardous and unsatisfactory method of disposing of goods is to send them to a city commission man to be sold. In this way, the goods are put into the hands of those whose chief interest is in getting their commissions, and the chances are by many odds that the returns will be much less than the goods could have been sold for at home, for it is a peculiar condition that, almost invariably, the market price is always down just the day the goods are sold, and just as surely the shipper is informed that prices will be better next week. * * * Another thing; did any farmer ever send to a commission man any produce that proved of good quality, that the report was not nearly always received that the goods were of poor quality, or in bad condition? Something is always wrong. Seldom are quality and condition right."

This sort of talk is generally based on false conceptions and want of study of the market conditions. The commission man to-day is a necessity to quick distribution. The farmer or fruit grower cannot individually conduct his own sales, the time which would be occupied in the journeys is a dead loss, and the travelling expenses an unnecessary item of expenditure.

But that some premises for such words as we have quoted do exist, is true, and the cause of bad returns is to be sought very often in the grower's own want of

care at the last. The case is stated in part in this present issue, in the article on "Packing and Shipping." The subject now opened, will be followed up by detailed directions as to how to market.

Destructive Insects. TO the grower for profit it is a matter of importance to have an adequate acquaintance with the life histories of the more destructive insect pests affecting the crops upon which he depends for a living. Often the difference between failure and success rests upon this base, and to be able to apply a remedy with the certainty of best results the "when" is every bit as important as the "how," or "what."

In order to give our readers in as condensed and as reliable a form as possible, just the information requisite to enable them to cope with the pests, we have secured the services of Prof. W. G. Johnson, Maryland State entomologist, and inspector of nursery stock, who, during the coming year, will continue the series of practical insect talks of which the preliminary article appeared in last issue.

Any reader desiring further information regarding the subjects treated, or who may want information on any other matter relative to insects and their connection with the field, garden, or greenhouse should not hesitate to ask it of AMERICAN GARDENING.

American Gardening in 1897 will pay especial attention to those live issues which concern all growers. Its columns are thrown wide open for the intelligent discussion of unsettled vital questions, and nothing will please its publishers more than to see their offer freely used. There are improvements innumerable that can and should be made, and this is the paper in which to draw attention to them.

To the Best of Our Knowledge AMERICAN GARDENING is the only weekly published in this broad country devoted exclusively to intensive cultivation in its widest interpretation. Intensive, intense, thorough; hence, intensive cultivation signifies taking from the land all that it can be made to yield by thorough and systematic working. Under this designation are included: the market gardener, the fruit grower, the professional gardener, the vegetable grower, and all specialists, as well as the owner or occupant of a country home. All alike are interested in successful results.

Competition may be "the life of trade," but it is also death to the man who, through indolence or disregard of conditions, neglects all endeavor to keep up to the leaders. And better five acres intelligently cared for than one hundred slurred over.

The Best Markets, on the whole, are these nearest home. How and where to dispose of a crop is with many a harder nut to crack than that of its successful culture. Work up your home market diligently, establish a local reputation, and the rest will follow—as a matter of course.

Co-operation is a Good Thing, but the brainy grower will not allow himself, under any circumstances, to be brought down to the level of his less intelligent co-laborer. Success is more generally the result of individual application.

Packing and Shipping.—I.

To our minds this is a vital question, and the more we ramble in and about the various markets the more is its importance impressed upon us; and often indeed are we amazed at the quantities of good stock which is spoiled in the packing and shipping.

It is a matter of surprise to notice how many good growers there are, who do not seem to realize the first thing about the proper way of getting their goods to market, or to the consumer. It is puzzling to reconcile the one fact, that a man will lend his energies and his will to master the details of cultivation, with the other fact, that after giving it all this attention he will then practically sacrifice the whole of the result through want of even elementary knowledge in regard to packing, shipping, and market requirements. Yet such is the case with far too many growers.

Early this season the best American Beauty Roses coming into the New York market were from a gardener who had mastered the art of growing them, yet several of his shipments were a loss to him through the goods not being properly graded—i. e., all mixed up, long and short stems, anyhow. One day, when the commission man to whom they were consigned was not very busy, we watched him take and properly grade a lot, with the result that the grower himself would not have known his own goods. For some of the blooms thus assorted he took the best price obtainable in the city at that date. We advised the grower of this; he took the hint, and studied the question, with the result that to-day his average returns are nearly 50 per cent. higher than they were formerly.

We can quote another instance; a large grower of Chrysanthemums is surprised, now the season is over, that his average per bloom was only 4 cents, against his neighbor's 7 cents, knowing that he had many better blooms. We are in a position to assure him that the difference in price was entirely due to his disregard of grading, packing, and shipping to market.

It will be well to remark at this juncture, that buyers whose sole business it is to buy, and there are many such in our markets, are wide awake. It is their duty to buy as cheaply as possible, and with their training and experience they are quick to discern any discrepancies there may be and to take advantage of the same.

In looking over a lot of Roses they discover a few ringers or low grades, and they base their offer on those and not upon the better quality specimens which may be also in the box.

If a barrel of apples be opened and the buyer finds the top layer is of fine fruit, but further down sees a damaged or low grade sample, the whole barrel is discounted accordingly, and so with a box of cucumbers, or a barrel of lettuce, or what not.

It is of no use to blame the commission man, he is helpless in the matter; he does not have the time to look into these things in the bustle of the morning sales.

All too often growers fail to make themselves familiar with the requirements of the market. For instance, only last week we noticed a great loss on Pandorubium blooms through their being shipped with simply the flower stems; so short in this way they were worthless. Perhaps the grower had not the heart to cut away his plant, yet if so

done, they would have been worth 10c. to 15c. per bloom, but otherwise, except, perhaps for a very few, nothing.

Unfortunately, too, shippers cognizant of all the points alluded to, are guilty on all counts, in their anxiety to ring in their low grades among the good stock, and thus work it off; cheating the market. This is poor policy and never fails to militate against the ultimate interests of those who practice it, for they soon become known, and their stock is avoided by buyers; the salesman, even, is afraid to push the consignment until he has had time to examine it, and by which time the opportunity of a good sale may have passed. We noticed this happen with a shipment of cucumbers only last week.

Such methods are annoying and a double loss, wholesaler and grower alike suffer through this willful or woeful practice, and yet it is from this class of shippers that the constant wails of dissatisfaction come, and the complaints that other growers receive more satisfactory returns than they do.

Quality of stock averaging equal, there are always some growers who obtain better prices than others, and why? Simply because their stock is reliable, their grade marks can be trusted, the count always correct, and the stock well packed. Goods from these men sell on sight, frequently without examination, and realize the highest price. In every market there is such stock to be found, but it is never displayed, for as fast as it arrives it is placed out of sight, and held for the fancy and select trade which is sure to call for it.

Fruits, flowers, and vegetables are among the leading stocks whose value is enhanced, at first hands especially, by careful grading, wrapping, and packing. Study the methods of the men who make money on their shipments, and you will discover that just as much care, thought, attention, and energy is directed to the preparation for market as is given to the culture of the article itself.

[Our next article will contain pointers, gained from the best market practice, on how to pack and ship.—Ep.]

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Tariff Does Not Make Markets.—Messrs. Archdeacon & Co., of Washington Market, write us that a correspondent of theirs suggests a very high tariff on canned and dried stock would be advantageous to the market grower. Commenting on this the firm says that in their opinion such would not be the case; and further report that what is needed is another class of buyers for present stock in order to work off the second rate mushrooms, etc., which are now so plentiful. There is a certain class who need only a high grade, and will pay the price for the best, but they can only use a limited quantity, and no amount of paternal legislation will make more. Messrs. Archdeacon suggest that rather than wait for business to be created by such doubtful means it would be better to open up a regular scale grading, and thus allow the commission men to handle the goods accordingly, so that second rate goods should reach second rate customers at second rate prices.

Some Problems in Experimental Horticulture.*

By PROF. W. M. MUNSON, Maine State College.

Agriculture is based upon certain fundamental principles, and we must all recognize the fact that the highest type of experimentation consists in enunciating these principles rather than in conducting commercial operations which may be copied—with or without success. A principle is of value whether worked out in New England or in Texas; its adaptation is, of course, a personal matter which must be settled by individual farmers.

In general, purely scientific work does not give immediate cash results, and farmers cannot afford to conduct work of this sort. It is the special business of the experiment station to conduct certain lines of investigation until some definite statements can be made. Here are gathered together men whose lives are devoted to solving the mysteries of nature, and to applying natural laws to the practical affairs of life. Here also are the necessary apparatus for carrying on the work; and the books and periodicals which enable the workers to take advantage of the results obtained by hundreds of others who are likewise engaged.

The world is full of experiments, yet comparatively few of them result in the demonstration of valuable principles. Original or scientific work cannot proceed in the manner of a well established business; methods must be worked out by experience, and many a faithful worker has wasted his life in attempting to accomplish certain ends without a knowledge of what has already been done along the same lines.

The mere cultivation of a certain number of varieties of fruits, while of value in familiarizing the grower with these varieties, is not, properly speaking, experimentation—not that I would condemn a certain amount of variety testing, for this is to a certain extent valuable—but it is not the chief work which should occupy the attention of an experiment station.

What, then, are some of the horticultural problems which present themselves for solution? First of all we may speak of

Plant Breeding.

One of the most important lines of work which can be taken up is the amelioration of our native fruits and the production of types valuable in special localities. This work to be of the widest application must be based on general laws, and it is within the province of the experiment station to determine what those laws may be.

Through all the ages nature has been producing plants best fitted to meet the struggle for existence. She has been developing plants of the strongest constitutions and with organs best fitted for self perpetuation, regardless of other features. It remained for man to develop those organs best suited to his needs, and this he has done, regardless of the natural requirements of the species, to such an extent that some species would be utterly incapable of existence if dropped from cultivation.

The development of the great number of varieties and forms under cultivation has been the gradual outgrowth, in many cases, of centuries of care and selection on the part of man. The apple, the pear, the bean, the cabbage, wheat and some others have been under cultivation for more than

*Read before the Vermont State Horticultural Society at Burlington, Dec. 4, 1896, and communicated by the author.

4,000 years, while most of our cultivated fruits and vegetables have been grown for from 500 to 2,000 years. Until a comparatively recent date, however, no systematic attempts at improvement have been made.

In order that improvement may be made there must first be variation in character of a given type. So one of the first subjects for investigation in the systematic study of plant breeding is that of the causes of variation. We know that plants vary as a result of difference in climate, in soil, and in culture; as a result of crossing, of grafting, and of various other conditions and operations, but in very few instances can we generalize as to probable results from any course of treatment. In general we know that plants are dwarfed and the relative productiveness is increased as we go northward. We know that there is a certain place where the relation between size and productiveness is most profitable, but with none of our most common fruits do we know where that point is. We know that differences in soil may cause such a change in a given variety that its identity is lost, but we do not know the probabilities with reference to the transmission of offspring of such changed characters. We know that in some cases we may get immediate and marked effects from the crossing of two species or varieties, but we do not know how generally such results may be expected or how important they may be. We know that in some cases the amount and the character of pollen supplied may exercise an important influence on the amount and character of the fruit, but we cannot generalize on the subject at present, and the number of species studied is very limited. We know that in some cases there seems to be undoubted mutual influence of scion and stock, but the subject has received little careful study.

Crossing and hybridizing form important features in the improvement of plants, but the production of hybrids and the study of the laws by which they are regulated is quite a different matter from raising plants for general utility. The latter is comparatively easier of manipulation and more encouraging, because of the magnificent results often obtained and the profits attendant on it. But in the investigation of true hybrids manipulation is often difficult and failures are innumerable; the labor is incessant, and unless conducted with order, watchfulness, and in a spirit of fairness and freedom from prejudice, with accurate judgment, is entirely useless—or worse than useless, as wrong conclusions will be drawn. The great variety of objects demanding attention, the length of time required for even the simplest results, the careful labeling of every plant, and registering the phenomena as they appear, the difficulty of preventing confusion among hundreds or thousands of seedlings—all of these conditions enter into the study of plant breeding, and must precede the most important part of the work, that of generalizing upon the observations made and formulating laws which shall be of real value in practical work and in future study.

Importance of Pedigree.

Perhaps no part of the work of a horticulturist is the subject of greater misapprehension in the minds of people generally than that of plant breeding or the improvement of cultivated plants. By the breeder of fine stock the importance of pedigree and of careful selection of individual parents has

long since ceased to be questioned, but by the average fruit grower or nurseryman little attention is paid to the development and the inherited tendencies of the plants he is growing or propagating.

Plant breeding bears the same relation to horticulture that the improvement of live stock does to animal industry. Pedigree is as valuable in the one as in the other. Care in the parentage of each successive generation is essential to the future value of the race. Pedigree is valuable only as historical evidence of such care.

Right here I wish to digress for a moment and refer to the importance of pedigree in plants. At horticultural exhibitions the inherent value of a given variety should receive quite as much consideration as is given to individual excellence. At present exhibitors go through the orchard picking a fruit here and there wherever specially fine individuals may be found without reference to the general habit of the tree, its usual productiveness or hardiness, and awards are too often made on the general appearance of collections without reference to the quality or adaptability of given varieties to the locality where grown. Again, we know that there is as marked individuality among trees as among animals, yet I venture to say not one nurseryman in 100 pays the slightest attention to this fact in propagating a given variety. As a rule scions are taken from the most available source, either from nursery rows or from any convenient tree of the variety in hand, without reference to individual characteristics. There is little doubt that this fact has more to do with the failure of orchards than any other one condition. This is one very potent factor in the "running out" of varieties. Breeds of horses, cattle or swine treated in a similar way would very soon "run out."

(To be continued.)

Insects Injurious to Stored Grain.—In publishing the bulletin entitled "Some Insects Injurious to Stored Grain," F. H. Chittenden, Assistant Entomologist of the Department of Agriculture, has provided a popular account of some of the pests which destroy large amounts of valuable farm products, with suggestions as to the best means of preventing their access to granaries, mills, etc., and of destroying those which have already found shelter within the grain, flour, or meal. Upward of two score of species which occur commonly in granaries are treated. The parasitic and other natural enemies of these grain destroyers are noted, and under "Methods of Control" both preventive and insecticidal measures are recommended and described. Among the first, early harvesting and threshing are recommended, and as a remedy the bisulphide of carbon treatment is stated to be the simplest, most effective, and least expensive remedy for all insects that affect stored cereals.

Horticulture in Kansas is decidedly slipping behind in its commercial aspects, according to the figures published in the Tenth Biennial Report of the State Board of Agriculture (1895-96), a copy of which has just been received. In 1895 the cash values of garden and of horticultural products are respectively given as \$939,000 and \$930,000, whereas in 1896 the figures show only \$760,700 and \$642,300 respectively. This decrease in value may perhaps be accounted for to some slight extent by decreasing value of the soil products, but the report shows that the areas under cultivation are largely diminished, as regards all crops excepting strawberries which show an increase of one-twelfth. In importance as regards number of trees, apples rank first, with over seven millions, and peaches are second, with about one half that number. Pears are but little grown.

Save

The expense of doctors' bills. Keep your blood pure, your digestion good and your system regular at this season by taking a course of

Hood's Sarsaparilla

The Best—in fact the One True Blood Purifier.

Hood's Pills are the only pills to take with Hood's Sarsaparilla.

ALL THE LATEST NOVELTIES

AND PLANTS THAT CAN'T BE HAD ELSEWHERE.
Cannas, Italia and Austria, at \$1 each.
New Roses, New Fruits, New Shrubs, New Bulbs.
10 Cents for \$1.—5 for 50 cts. Book on Cacti 150 pages, 125 cuts, 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free.
A. BLANC & CO., - Philadelphia.

We Grow Seeds.

Our Specialties are:

Cabbage, Celery, Onions, Tomatoes, Potatoes and Improved Farm Seeds.
Prices low. Please ask for Catalogue.

JOSEPH HARRIS CO.,
Moreton Farm (P. O.), Monroe Co., N. Y.



TRY DREER'S GARDEN SEEDS

Plants, Bulbs and Requisites. They are the best at the lowest prices. Calendar for 1896 mailed free. Address

HENRY A. DREER,
714 Chestnut St., PHILA.

THE GAULT RASPBERRY



One of the most valuable acquisitions yet introduced. A black cap, with vines hardy and free from rust. Fruit large, handsome, and of delicious flavor. The only variety that has proved a decided success as a perpetual bearer. Order plants direct from the originator. Great inducements to nurserymen and agents. Send for circulars.

W. C. GAULT, Box 80, RUGGLES, OHIO.

Stark Fruit Book

contains new and copyright colored plates of over 100 rare fruits, etc.—write for particulars. Ask for list of Stark Trees—\$3 per 100 and up. STARK BRO'S, Stark, Mo.

STARK TREES BEARFRUIT



NEW PLUMS

TATGE
The Best.
MILTON
The Earliest.
CHAS. DOWNING
Most Beautiful.
Send for catalogue.
Silas Wilson Co.,
Atlantic, Ia.

Celery for Profit.

An Experience in Trenching Celery. The Matter of Marketing.

The latter part of October I trenched some Golden Self-Blanching Celery for my Thanksgiving trade. It has all been taken out and sold, and I think I have gained some experience that will be of use to me in the future. On opening the trenches I found that the blanching process had gone too far; that the leaves and hearts of the celery had commenced to decay! Over the trenches, so as to keep out rain and frost, I had put a roof made of two boards nailed together. This ought to have been removed during the pleasant weather and the leaves exposed to the air, which would have kept the leaves green, and the celery would have been better preserved and presented a more attractive appearance when offered in the market.

The Golden Self-Blanching is a very handsome celery when it is well grown, but it seems more subject to disease than other varieties. It needs to be grown in a very rich, moist soil, and I have succeeded better in blanching it in trenches than with boards or earth when it is grown as an early celery.

This variety is more easily blanched than the winter varieties, and I sometimes use it to follow the White Plume for the late fall trade, for it is of much better quality. Last spring I had good celery in April and May.

To preserve celery until spring it should be left out as long as the weather will permit, and after it is trenched must be left uncovered during all the warm weather so as to delay the blanching as long as possible, and when the trenches are covered for winter plenty of openings should be left for ventilation, and these filled with straw, which may be taken out if there should be much warm weather during the winter. In this way the green varieties, like the Half Dwarf and Golden Heart, may be kept until late in the spring, when most of the celery is out of the market, and it brings a good price.

It is my experience that the very early and late celery is the most profitable. I have tried storing celery for winter both in the cellar and trenches out of doors, and the latter way has proved the most satisfactory to me, for I can dig trenches and cover them at less cost than I can draw the celery to the cellar, and, moreover, it keeps better and is of better quality. On warm days in the winter I open the trenches, take out the celery, and draw it to a room heated with a stove, where it is prepared for the market.

I am near three or four large villages, and the most of it is sold from the market wagon. During the cold weather it is kept from freezing when it is being distributed by wrapping from five to 25 cents' worth in paper before it is packed in baskets, which are also lined with thick paper.

My time is usually occupied with other work in the winter, so I give a reliable man one-third of the money received for preparing and marketing the celery.

W. A. JENKINS.
Delaware County, N. Y.

Trade News.—The Jackson County Nursery Co., Lee Summit, Mo., has been incorporated; capital, \$5,000. Incorporators are Frank K. Graves, N. C. Cowherd, and E. H. Graves.—The California Nursery Company, of Niles, will open an agency on Market st., San José, Cal., opposite the post office. The stock of fruit trees, ornamental plants, etc., will be very large and choice.

Rose Scale on Blackberry, Etc.

Herewith is a piece of blackberry cane which is badly infested with some kind of scale insect. Kindly inform me what species it is, and what to do to destroy it.

H. F. GILBERT.

—The piece of raspberry cane sent is badly infested by the Rose scale (*Diaspis rosæ*). It is a very common and widely distributed species, and is at times a serious pest on roses, blackberries, and raspberries. It can be kept in check by carefully pruning out the badly infested canes, and spraying or washing the suspicious ones with whale-oil soap, while the plants are dormant. There are many grades of whale or fish-oil soap on the market, and care should be taken in selecting the proper one. The soaps made with the potash lye are the most efficacious, and should not cost more than 6 cents per pound in small quantities, and not more than 3½ cents per pound in bulk by the barrel. The soap should be dissolved in hot water; two pounds to a gallon is sufficient. It should be applied with a good spray pump, but if this is not convenient, use any sort of a whisk broom or brush. Bear in mind that this is a winter or fall treatment, and should not be applied when the plants are in full foliage.

If in the spring it is found that all the culprits have not been destroyed, the plants should be thoroughly sprayed with kerosene emulsion, diluted with ten to twelve parts of water. The time of spraying should be determined for locality. The young usually appear in May, or early in June, and are easily destroyed at this time with the emulsion diluted as indicated above.

W. G. JOHNSON.

The Free Seed Humbug.—It is not often that beneficiaries oppose making gifts, especially when the gifts come from the Government and are paid for out of the public purse, yet if the agricultural and horticultural papers reflect the sentiments of their readers, there is very serious opposition to the present so-called free-seed distribution. Can it be that the tillers of the soil think that the principle is wrong, and that for every dollar's worth of seed they get in this way they have to pay many times over for in increased taxes, etc., in other ways? Commenting on the distribution the *American Agriculturist* says: "After all said and done, there is a chance that the free seed humbug will be foisted on the country another year. The House Committee on Agriculture has inserted in the bill for appropriations for the coming fiscal year an item for the distribution of 'free' seeds. There is no popular demand for any such action, and it is to be hoped this unnecessary item of expense may be cut out." The *New York Farmer* also comments on the subject: "The House Committee on Agriculture has completed its fiscal bill for the ensuing year, appropriating about the same as last year, \$2,300,000. No appropriation for free seeds was recommended by the secretary, but the seed beggars put one in, all the same. It is a contemptible piece of business, and has nothing to recommend it."

Arkansas Winter Fruit Crop.—Cherries blossomed in Arkansas in October, and in November, strawberries ripened in the open air, the second crop of red June apples was half grown, and pears were in bloom.

Central Ill. Hort Soc'y met recently at Carthage, when the following officers were elected: H. Augustine, Normal, president; C. G. Winn, Griggsville, and Samuel Black, Clayton, vice-presidents; H. L. Doan, Jacksonville, secretary; J. T. Johnson, treasurer.

Anæmia means "want of blood," a deficiency in the red corpuscles of the blood. Its cause is found in want of sufficient food, dyspepsia, lack of exercise or breathing impure air. With it is a natural repugnance to all fat foods. Scott's Emulsion is an easy food to get fat from and the easiest way of taking fat. It makes the blood rich in just those elements necessary to robust health, by supplying it with red corpuscles.

For sale at 50 cents and \$1.00 by all druggists.

SCOTT & BOWNE, New York

GAME COCKERS! Send 50 cts. for a monthly journal devoted to Game fowls. Sample 5 cts. **GAME FANCIERS JOURNAL**, Battle Creek, Mich.



How to Raise Poultry for Pleasure and Profit.

A practical work on Breed, Breeding, Rearing, General Management, &c. 223 Pages. Over 100 Illus. 35 cts. postpaid, worth ten times its price. **G. LABORDE**, Woodside, N. Y.

HATCH Chickens BY STEAM—
With the **MODEL EXCELSIOR Incubator**
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made. **GEO. H. STAMM**, 114 to 122 N. 6th St. Quincy, Ill.

BEEKEEPERS!
SEND FOR sample copy of **CLEANINGS IN BEE CULTURE.** A Handsomely Illustrated Magazine and Catalogue of **BEE SUPPLIES.** Valuable book on Bees given FREE to each one who mentions this paper. **THE A. I. ROOT CO., Medina, O.**

A GOLD DOLLAR
is about the actual worth of our new book on Incubation and Poultry. Contains a full and complete description of the **Reliable Incubator & the Brooder** of same name, together with cuts and instructions for building poultry houses and much of interest and great value to the poultryman. Sent on receipt of 10c. **RELIABLE INCUBATOR & BROODER CO., QUINCY, ILL.**

INCUBATORS
The **OLENTANGY Incubator** has proved to be the best. Have taken prize after prize. Brooders only \$5.00. Before buying elsewhere, send for free description and testimonials. Also brooder of 40 varieties of high-class poultry, 110 yards. 110 houses. Address **G. S. SINGER, Cardington, O.**

LOTS OF EGGS
when hens are fed green cut bone, out by the Improved '96
MANN'S GREEN BONE CUTTER
the standard of the world. 12 sizes. \$5 and up. U. S. D. O. On Trial. Cut 1/2 g. free if you name this paper. **F. W. MANN CO., Milford, Mass.**

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Pale Yellows in the Window.

The value of yellow coloring in lighting up the window garden is not so well known as is the same value in connection with textiles. There is really nothing that can add so much brilliancy to a general collection as a touch of yellow. Pale yellow is seldom inharmonious, and, fortunately, most of our yellow blossoms and yellows in foliage as well, are toned sufficiently from orange, so that they can be used anywhere and in any color company. Among decorative plants of yellow variegation, two good things are the old Leopard Plant, and the newer *Begonia manicata aurea*. The Leopard Plant is not fond of strong sunshine, and this makes it of especial value to those who lack sunny windows. The *Begonia* is one of the prettiest things known in the way of creamy-tinted foliage stuff, and the touch of pink sometimes delicately seen, adds the final bit of charm to the coloring.

A Sweet Yellow Jonquil.

The so-called Great Golden Sacred Lily, which was to stand freezing and any amount of abuse, and bloom well for anyone in any window, is not giving a good account of itself in water. Bulbs of the same plant, bought of another firm under a better known name, and at a fair price are now coming into fine bloom, while the "Great Golden Sacred Lily" shows no sign of bloom as yet, and moreover, gives no promise of doing so. These earth-potted bulbs were put away about the first of October, and with cool treatment, came in just in time for Christmas. The bulbs will give several large blossoms each, and a pot of half a dozen is indeed a most beautiful and fragrant and satisfactory thing. Jonquil odoratus rugulosus is the catalogue name generally given, and the bulbs are so cheap that anyone can have them.

The Zanzibar Water Lily.

This striking plant bears the distinction of having the largest flowers of all the blue Water Lilies, as well as the deepest color. The blooms come 10 to 12 inches in diameter, the leaves twice as broad. Well-grown plants should be in bloom in 110 to 120 days from seed. The later sowings will doubtless be safer, more sure as to good results, but earlier work, if successful, will insure a longer duration of bloom. We nurse a tomato 100 to 150 days for its prosaic fruit; why not a Water Lily for its esthetic blooms? Who's for a Lily pond this season?

The Insinuating Thoroughbred?

"How long are you intending to keep your surplus cockerels—those black ones," was asked of Mrs. Suburban one day last week. "What! the Langshans? Don't mention it, please; we couldn't eat them any more than we could—, well one of the family. They are too intelligent, too affectionate, too aristocratic, if you will." "But I thought you told me—" "Yes, I know I did; and we expected to eat them, of course. What else are surplus cockerels for? But how was I to know beforehand that thoroughbreds were so much like folks? I haven't petted them, either; they have just wormed themselves into our affections. I must try to find sale for them alive for some one's breeding yard. Really, it is the only thing I can do."

Scarcity of *Dracænas* and *Asparagus*.

The lately-developed and developing passion for decorative plants, as against

the older preference for plants that bloom, is making some of the desirable things scarce. *Dracæna terminalis*, with its tints of rose, is one of the good old things which can hardly be propagated fast enough to supply the demand, although the price has not fallen below 50 cents. This is a plant which must have age before it has beauty, and is therefore more costly to grow to salable condition. *Asparagus plumosus* is another favorite that feels the pinch of popularity. Both these plants are such really good subjects for house culture that it seems a pity that there should be any lack of supply. If you want a *Dracæna*, you cannot buy it too soon, nor take too good care to get the genuine.

What is a Fresh Egg?

"What do you call a 'fresh' egg?" It was an amateur poultry raiser who asked. "I mean, when you sell first-class fresh eggs what is the limit of age?" "That depends a little on the market," was the reply. "For fancy up-town grocery trade in New York City three or four days is the limit. Here, in our own town, where arbitrary distinctions between 'fancy' and 'prime,' etc., are unknown, a week, or two, or three even, in cool weather, would not injure the egg for our best grading. Our grades (perhaps you do not know) are merely 'Home-raised,' 'Farmington' (from an up-country district), and 'fresh case.' The last are the ones that have six good, three fair, and three demoralized to the dozen." "But if an egg will keep fit to use for several weeks, where do all the poor ones come from?" was the puzzled query. That is one of the mysteries many a buyer would like to fathom; one to which the poultry papers are just now giving an unusual amount of attention.

Growing Water Lilies from Seed.

Did all notice the beautiful cut of the water garden in AMERICAN GARDENING of October 3, and read that the specimens of *Nymphaea Zanzibarensis* which bloomed from June onward were seedlings of the same season? If so, the desire to do likewise must be rampant. *N. Zanzibarensis* is classed as a tender sort, but since it requires little care, blooms the first season, and is not very expensive as to seed, it is a kind to have, or give up the name of being a flower lover. The seed is best sown early in January in pans about 2 inches deep, half filled with loam. It is scattered thinly on the surface, then covered with about an inch of water. Think of sowing seeds which do not have to be watched constantly, lest they get too wet or too dry! No; the difficulty will not be here this time, but in getting enough sunshine and heat so early. The heat is to be kept at from 70° to 80° F. Later sowing will make more sure of this, and plants may still bloom the first season, but not so early. The four-weeks seedlings will be ready to transplant into pans an inch deeper, prepared in exactly the same way as the seed-pans, except that one-half gravel is added to the loam. Transplant quickly, as the small plants will very soon. January-sown plants will be ready for the tubs in April, or for open ponds as soon as the weather is favorable in May. Since the plants are tender, it is a rather desirable plan to pot them in medium-sized pots, which may be sunk in a pond a foot or a foot and a half, and merely transferred to a tub of moist earth in safe temperatures for the winter. Popular taste runs strongly toward the rarer-colored sorts, and as *N. Zanzibarensis* has two variations at least from the type, it can be had in the typical purple-blue, in lighter blue, and in rose pink.

MYRA V. NORRIS.



The
Bane
of
Beauty.

Beauty's bane is the fading or falling of the hair. Luxuriant tresses are far more to the matron than to the maid whose casket of charms is yet unrifed by time. Beautiful women will be glad to be reminded that falling or fading hair is unknown to those who use

Ayer's Hair Vigor.

Just a Crack.

Two hens with eyes swollen shut; three pullets with bronchial throats; an anxious woman; a visit to the druggist; an expenditure of money, time, and temper; all these as a resultant from one unsuspected crack near the roosts. Lucky, indeed, that several birds were not lost. Look for the cracks.

SEND \$1.80 for *The Rural New-Yorker*, and AMERICAN GARDENING, both for one year. Read *The Rural* three months. If not satisfied, say so and we will return your money for *The Rural*—all of it. It always stops when the time paid for expires.

FOR \$4 we will send *Leslie's Weekly* (formerly *Frank Leslie's Illustrated Weekly*) and AMERICAN GARDENING to any address, one year. *Leslie's* is one of the most attractive of New York's numerous illustrated weeklies, and its subscription price alone is \$4 a year; therefore, it will be seen that our offer is a very liberal one. Address your orders to AMERICAN GARDENING. Sample copies of *Leslie's* on application.

In all the States of the Missouri Valley, consisting of Iowa, Kansas, Minnesota, Missouri, Nebraska, North Dakota and South Dakota, the largest circulation credited to any publication devoted to agriculture and dairying is accorded to the *Woman's Farm Journal*, a monthly, published at St. Louis, Mo., and the publishers of the American Newspaper Directory will guarantee the accuracy of the circulation rating accorded to this paper by a reward of one hundred dollars, payable to the first person who successfully secures it.—PUBLISHERS' INK, April 25th, 1896.



We have the largest and finest collection of
PALMS, ORCHIDS, FERNS
and **FOLIAGE PLANTS**
for Conservatories.
Hardy Herbaceous Plants,
Flowering, Shade and
Ornamental Trees, Vines.
Everything for a private place.
Estimates and Plans for Planting
Places and furnishing stock
(free).

SIEBRECHT & SON'S,
Rose Hill Nurseries, New Rochelle, N. Y.

**ELLIOTT'S
SEED**

ANNUAL FOR 1897.

Now Ready. Mailed free on
application, by only mention-
ing AMERICAN GARDENING.

WM. ELLIOTT & SONS,

54 & 56 Dey Street, NEW YORK.

Obituary.

William Rankin Ward, the well known strawberry grower and horticulturist, of Lyons Farms, near Newark, N. J., died Sunday, January 3, at his home, after a painful illness. Mr. Ward was born in Lyons Farms, fifty-four years ago. He was a charter member of the New Jersey Horticultural Society, which was organized in 1875; vice-president of the State Board of Agriculture in 1886-87, and its treasurer from 1895 to the time of his death. In 1889 he succeeded Professor George H. Cooke as secretary of the New Jersey State Experiment Station, and of the State Agricultural College, holding the positions until he died. Mr. Ward had charge of the New Jersey State Horticultural exhibit at the World's Fair, Chicago, in 1892, from which time has never been well. He is survived by a wife and one son.

A Cheap Drain Tile.

Fifteen years ago I had a piece of land wet and cold in the spring, almost a cold quicksand. No drain tile were made about here, none nearer than Detroit or Buffalo, and I had no money to send on for them. I went into a black ash swamp and cut small trees four to six inches in diameter, and cut them into convenient lengths for splitting, then split through the center and

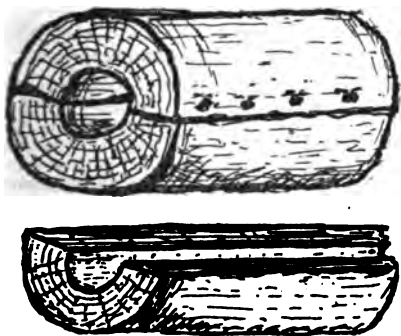


FIG. 10.—A CHEAPLY MADE DRAIN TILE.

split the heart out, and then placed the halves together and nailed them. I laid them in the ditch, and placed sods and weeds over the joints and covered the whole. After fifteen years I dug into the ground to make connection with another ditch, and found the first in perfect order and sound. I would not recommend this for draining large fields, but for a man on a new place it will often come very convenient. L. B. R., Michigan.

Lawn and Flower Garden.

It must be confessed that the above title at this time of the year seems to be somewhat out of place, yet in the matter of turning over the lessons of the past season and shaping a course for the next, there is something to be done. An observant man must have seen something or other which appealed specially to him. You, reader, what did you notice? What most impressed you during last summer? Do you recall what it was? If so, write to AMERICAN GARDENING about it, so that others may learn from you. We can all learn from each other. Do not think others will not be interested in your fancy, and do not consider for a moment where the idea originated; the humblest peasant may often have the true artistic taste.

Perhaps the nicest thing I saw this last summer was a pyramid of Agaves. The stone frame was symmetrically built, and the larger plants placed at the base, and proportionately smaller ones towards the apex. This is worthy a trial.

JOHN SHORE, N. Y.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Large Berries always sell readily.

A Small Plum orchard in the chicken park.

The Stored Roots.—Be sure that the root pits are frost-proof.

Every Strawberry Runner clipped off means a new fruit germ formed.

Now is a good time to scatter fine manure evenly over the lawns.

Roots of all Kinds keep better in pits than in cellars.

In Cultivating the first two or three times with Breed's Weeder we find that it is necessary not to set the strawberry plant too shallow or it will often be pulled out.

Small Fruit plants should be cultivated as soon after setting as possible.

The Successful Fruit Grower is on the alert for any hint that will aid him. He gets his most valuable help from gardening papers.

Seedlings.—Select a few of the finest specimens of "dead ripe" strawberries next summer and try growing a few seedlings.

Seldom, if ever, have we known apples to decay as rapidly as this winter.

Drainage.—Have you so arranged the orchard that it will have perfect drainage?

A Good Grindstone.—How often the fruit grower can find use for one.

Only by Testing for Yourself will you find out what varieties of strawberries do best on your own soil.

Large Strawberry Plants I prefer for "cone setting" and medium sized ones for setting with the spade.

Theory and Practice.—The beginner may have many theories in regard to fruit growing, but do the theories put into practice give profitable returns? If so, why go ahead.

Ideal Strawberry must be a good shipper since it can be shipped to large cities and from them to smaller towns and arrive in good fresh condition.

Study Varieties of small fruits and plant only those which have a record of doing well on the largest variety of soils.

Much illness is from the lack of fruit in the diet. If you don't believe it eat less pork and try it.

Spread the Manure from the wagon as you haul it out that the first rains may have a chance to wash it into the soil; do not leave it in piles.

The Painstaking Fruit Grower is the one who will succeed in the future. He will grow a fine grade only, and the market each year is demanding more good grades and less poor ones. One of his secrets of success is the choice horticultural papers which he keeps on file, and which he frequently reviews.

The Farmer's Institutes are increasing in interest each year. I look upon these institutes as one of the grandest movements to benefit the farmer, and, by the way, they always give the horticulturist a most hearty welcome to take part in their work and discussions.

Free Seed Distribution.—Who is being benefited by it? The congressman by making himself "solid." Why not appropriate the money for encouraging horticulturists and agriculturists in growing new varieties of real merit in their respective lines?

Maple Trees.—Over 20 years ago I helped to set out a quantity of Maple Trees for protecting a friend's home from wind storms and for shade. Labor, trees, and all expenses amounted to about \$5. To-day the same gentleman lives there, and it would take a good many hundred dollars to get consent to destroy them—a good investment. CHAS. C. NASH.



You can get a SAFE and SURE remedy for all the ordinary ills of life as well as a SURE CURE for

BRIGHT'S DISEASE,
URINARY DISEASES,
FEMALE COMPLAINTS
GENERAL DEBILITY,
MALARIA

and all diseases caused by
disordered kidneys and liver
at the Country Store. . . .

WATKINS
Safe Cure

a PURELY VEGETABLE PREPARATION
that has cured thousands
and will cure you. Large
bottle or new style smaller
bottle at your nearest store.

POULTRY BREEDERS! Send 50 cts. for a 20-paged monthly devoted to Poultry, etc. Sample 6 cts. MICHIGAN POULTRY BREEDER, Battle Creek, Mich.

HARDY SHRUBS AND CLIMBERS.

Ghent Azaleas, Azalea Mollis, Hardy Roses, Ampelopsis, Vitis, Clematis paniculata, RANUNCULUS, IRIS KAMPEFERT, EULALIA JAPONICA, with all hardy herbaceous plants and Grasses suitable for fall planting. Catalogues on application. High-class Plants for the conservatory, greenhouse, lawn and grounds of country places a specialty. F. R. PIERSON CO., Tarrytown-on-Hudson, N. Y.

EXTRAORDINARY OFFER!

The Youth's Companion

to 1898, including the Christmas, New Year's and Easter Double Numbers for two years, the Twelve-Color Companion Calendar for 1897 (the most costly gift of its kind THE COMPANION has ever offered), and

American Gardening,

Both papers to Jan. 1, 1898, for only \$2.00 in advance.

Above offer is for new subscriptions only to both papers.

YOUTH'S COMPANION (new) and AMERICAN GARDENING (renewal), including all the above to Jan. 1, 1898, \$2.25.

YOUTH'S COMPANION (renewal) and AMERICAN GARDENING (renewal), including all the above to Jan. 1, 1898, \$2.75.

Address your orders to

AMERICAN GARDENING P.O. Box 1697 NEW YORK.

When answering advertisements please mention American Gardening.

SURE CROP!**MUSHROOM SPAWN**

LILUM HARRISHI. DUTCH BULBS.

Illustrated Bulb Catalogues on application.

WEBER & DON, Seed Merchants and Growers,

114 Chambers St., New York City.

Business Cards.

Cards will be inserted under this heading at two CENTS PER WORD each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. J. Forayth Johnson, P. O. Box 1697, New York City

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER and florist, life experience in all branches, wishes position on private place; intelligent and trustworthy. First-class references; married, age 38. Box 73, Au Sable Forks, N. Y.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advt. and each initial, or a number, counts as one word. No cuts or display type allowed.

BULBOSCH BROS., bulbs and plants, Englewood, N. J.

STRAWBERRY PLANTS for sale. Catalogue free. Charles Howard, 3 Johns, Md.

RADISH and **LETTUCE** Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedsman, Rochester, N. Y.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 715 Wharton St., Philadelphia. Three shipping points, can save you freight.

STRAWBERRIES, Potatoes, Seeds. Send to the Rocky Comfort Gardens for the brightest little catalogue published, with up-to-date prices. Wm. A. Olds, Okemos, Mich.

STRAWBERRY PLANTS, Clyde, best early perfect flowering variety ever introduced. Sixty varieties, best plants at lowest prices. Catalogue free. Enos W. Dunham, Stevensville, Mich.

GLADIOLI, CANNAS, OLIVIAS, Bouchet and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings, Cannas, Italia, Austria, and best standards. New Hybrid Olivias. Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.

PAPERS, MAGAZINES, ETC.—We will make you liberal concessions when you order other periodicals for the year, whether in connection with your own subscription or not. Send us your list for estimate American Gardening, P. O. Box 1697, New York.

WE HAVE BACK VOLUMES American Gardening for sale; of some years we have a good supply, others are short; bound and unbound. Will be pleased to quote prices on any year desired. American Gardening, P. O. Box 1697, New York.

HOME GROUNDS, HOW TO LAY OUT.—The most perfect plan ever given the public, by which to lay out an estate of one to ten acres or more. We give the cardinal principles which govern the art so clearly that all may easily understand. Heavy paper, safely packed, postpaid, for 25 cents. It will pay you to study this plan. American Gardening, P. O. Box 1697, New York.

Colorado Springs, Col.

HANDSOME GREENHOUSE FOR SALE.

Situated in the center of the city of Colorado Springs, where the climate is adapted to the growing of all species of flowers. Land 100 by 150, with 12,000 square feet of glass; steam-heat, electric light, first-class boiler and machinery, thoroughly equipped and in running order. The most complete establishment of the kind west of the Mississippi River.

Price, \$30,000.

Address Messrs. **VAENUM and HARRISON**, Counselors-at-law, 62 William Street, New York City.

PRIVATE GARDENERS.

Dutchess Co., N. Y., Horticultural Society Banquet, which was previously announced for January 6, has been postponed until further notice.

W. Plumb has been appointed superintendent of the gardens, grounds, etc., of C. P. Huntington, at Throggs Neck, N. Y. Mr. Plumb commenced his duties January 1.

Generally speaking, the flower shows of the past season have not been marked successes financially, so far as we can learn. Is the public nauseated or what?

The Gardener's Position.

No one can make any mistake by doing his best to encourage the culinary use of all vegetables, by supplying a good selection of them well grown successively through the season. We are far behind the older countries in the epicurean art. We are nevertheless growing and improving in this as well as in all other arts; and our cosmopolitan nature, the progressive instinct and the intercommunion our people enjoy with the rest of the world lead us to the belief that sooner or later the inevitable outcome will be that we shall excel in all the fine arts, and lead the rest of the world.

Many a gardener is put to many inconveniences from a lack of conveniences and of the needed requisites to carry on his work successfully, arising from the want of a horticultural interest in his employer, who, being so engrossed in business affairs, gives but little attention to the home establishment. Our future prospects in this respect also are improving, and the gardener of the future will be better understood and appreciated. Many wealthy owners of country estates, particularly these of Newport and Lenox, are yearly devoting more attention to them, and educating themselves in their needs and requirements. This will prove of mutual benefit; so let this give us the impulse to excel in all our undertakings.—W. M. EDWARDS,

Violet Princesse de Galles.

It may be a matter of fancy as to whether the single or double varieties of violets be favorites for the nonce, but there is no gain-saying that the recent advent of fine singles has made a decided tendency to regard them more highly. For our own part we are glad of the change, and like some of each.

Gardeners should grow such a beautiful variety as Princesse de Galles; it is very long stemmed, highly fragrant, and of a clear, bright, true violet color. A bunch of these flowers was recently presented to us; each bloom measuring, without spreading, one and a half inches across. This variety is an excellent one for frames, demanding plenty of ventilation.

New York.

New York Gardeners' Society meets on Monday, January 11, at 6 P. M., when W. Scott will open a discussion on grape growing under glass. On the same day the American Gardeners' Society meets at Mott Memorial Hall, Madison ave., New York City, at 1:30 P. M., to receive report of the provisional committee, and all are invited to attend. The gardeners will be entertained in the evening by the New York Florists' Club, to a "smoker" for which some good talent has been engaged. The American Institute Farmers' Club meets on Tuesday at the rooms, 111 W. Thirty-eighth st., New York.

Assignment.—On December 28, Vice Chancellor Pitney, in Jersey City, N. J., appointed John Young, of that city, receiver for the business of Thomas W. Weathered's Sons, greenhouse builders, etc. It is stated that liabilities amount to \$47,000, with assets at nearly \$60,000.

Questions Answered.

This is a Bureau of Information, to which subscribers can apply freely for advice on any and all subjects in the field of horticulture.

In order to lessen labor, and that the Editor and his friends may understand each other, the following rules must be observed:

Rules for Correspondents.

Questions must be concise, plainly written on one side of the paper only, and addressed INQUIRY DEPARTMENT, AMERICAN GARDENING, P. O. Box 1697, New York City.

Letters appertaining to subscriptions, or other business matters, should be directed separately; otherwise delay may follow.

The name and address of the sender is required, in addition to a nom de plume. Use a separate sheet of paper, not a scrap, for each question. Questions will be attended to without delay. If by mistake a query fails to be answered, it should be repeated.

Specimens of plants for identification must be ample; mere scraps will not do, and no notice can be taken of such.

Questions relating to insects or diseased plants should always be accompanied by specimens, packed in a tin box, and forwarded at letter postage. Always send a liberal sample.

Conditions and soils vary so infinitely that we would be pleased to have our correspondents describe theirs.

Correspondents referring to articles which have appeared in AMERICAN GARDENING should mention page and date of issue.

• We cannot promise to comply with requests to answer by mail.

•• We cannot undertake to reply by mail.

Black Fly on Chrysanthemum.

(To J. V. Wallace.)—The insect sent has been given the name of Siphonophora chrysanthemi by American writers, but it is a question whether this species is not the same as one that has been described in Europe as Siphonophora artemisiae. It is known among forcing-house men as the "Black" or "Brown" Fly, and rarely attacks any plants under glass other than the Chrysanthemum. It will, however, sometimes attack Feverfews and similarly related plants. The remedy which forcing-house men use almost universally and find most practical is fumigating with tobacco. The fumigation is commenced as soon as the plants are started in the greenhouse, and continued weekly until the flower buds begin to open. After the flowers begin to open the beds and walks are mulched with tobacco stems. I have failed to see any practical results from the latter treatment. A few growers use tobacco dust on the plants because it is less dangerous to the plants than fumigation, but they never get entirely rid of the pest by that means; others use Rose-leaf insecticide, Antipest, and numerous other patented remedies. All are expensive when applied thoroughly enough to give good results. The consequence is, the use of them results in failure more often than in success. Frequent spraying of the plants with properly made kerosene emulsion will rid a Chrysanthemum house of the pest, but it requires more skill to make this correctly for use under glass than to use tobacco fumes. During the past fall I have had excellent success in the use of hydrocyanic acid gas in Chrysanthemum houses. This did not require over twenty minutes work after the men had left the houses. The houses were left closed until morning. Not a single living Brown Fly was to be found in the house after the treatment, although the plants were only half grown when treated. One fumigation with this gas was all that was needed. At present the use of hydrocyanic acid gas is an unsafe remedy to recommend, as the chemicals used in the manufacture of it vary to such an extent, in per cent. of purity. A formula, giving a certain amount of ingredients to be used in a given number of cubic feet of space might work to perfection, while a second lot of the material, purchased from the same druggist, might be of double or treble the per cent. of purity of the first, and when used kill every plant in the house.—F. A. SERRINE. [We would emphatically caution against the use of so virulent a poison by those unskilled in the handling of such dangerous substances.—ED.]

Raising Holly from Seed.

[Can you or your readers give me any information in regard to raising the Holly from seeds.—D. H. B., Spring Hill, Kansas.]

—When the berries are collected in sufficient quantity, dig a hole in the ground, say 3 feet in depth, throw in the berries, then stamp upon them or do something to bruise slightly, at the same time sprinkle some light soil or

and in with them. When all are in the holes cover up with leaves or litter of any kind to prevent frost or rain from getting at them. In early spring the seed will be ready to sow. Prepare a bed in some out of the way corner where it will not be disturbed for a year or so. Make a preparation of light soil, consisting mainly, if possible, of leaf mold and sand; tread it firm, smooth the surface, and sow the seeds thickly either in rows or broadcast. Cover lightly with soil of the same nature, and either run a roller over it or make firm by beating with the back of a spade in order to have the seeds firmly encased. The seed germinate irregularly, a few plants will appear very quickly and will be ready to move into nursery rows the first season others will keep coming up from time to time, even for two years after sowing.

Manettia Vine.

[What is the matter with my Manettia Vine? I bought it last spring, it was then in bloom and all the catalogues say it blooms constantly, but mine has not blossomed. It has grown and covered a trellis a foot high. I have two plants, one seems to be dying off, and I have set it away to rest, only giving sufficient water to keep from drying out; the other is still growing and putting up fresh shoots from the root, but if the surface gets dry, as it does sometimes in one night, the leaves turn black and are crisp as if burned, the next morning. Does it require much or little water, and sun or shade; also what temperature is best suited for it?—*Manettia*.]

—These evergreen climbers like a warm, sunny position, and in the summer will stand a high temperature; during the winter from 45° to 55° is sufficient. There must be something the matter at the roots. Is the drainage right, or is it in the way of hot pipes or draughts?

Cropping Poor Land.

[I have a few acres of land which is very poor. I had it plowed this fall with a view of seeding it down next September. I would like to know what crop, one that would not require much care, would be best to plant on it in the spring. I was thinking of sowing some rye just for the straw, which I would use for bedding. Could I get much of a crop from spring sown rye? Would it be better for me to lightly manure the land in spring and then give a heavy dressing at the time of laying it down to grass in September?—*S. B. C.*]

—If you sow rye be sure that you sow spring rye, otherwise it will be of no use. Why not sow the grass at the same time? Or put on some other crop, potatoes, for instance would do. Then when this crop is cleared away cultivate and manure again, next sowing winter rye, and at the same time lay down to grass; the rye will serve as a protection to the grass.

Chrysanthemum Cuttings.

[Will you please answer the following question in your paper: I am going to raise some Chrysanthemums. Will it be best to take cuttings and root them, or take from the old plants shoots with roots on them?—*A. Ashton*.]

—The tops of young growths are the best; that is, if large blooms are desired, but if size of plant and quantity of bloom be wanted, a nice young sucker, slightly rooted, will give good results.

Mushrooms Out of Doors.

[Will you please give me the proper instructions for planting mushrooms near a cottage on the coast of Maine during the summer months? They grow wild abundantly near by. —*Mrs. J. V. Menick*.]

—If you have any grass land near the house give it a good dressing of common salt this coming spring, and at the same time, or at least a few days after, insert at intervals some spawn of the ordinary mushroom (*Agaricus campestris*). This you can procure from our advertiser. Break the bricks into pieces at two inches in diameter, open the ground with an iron bar or any tool of the kind, drop in a piece of spawn so that it will have an inch of covering, and make firm with your foot. If there should be no grass or meadow land available, but only shrubbery or wood, or a rubbish heap in some out of the way corner, try *Agaricus subrufescens*, the summer mushroom. For particulars of this see page 524 in issue of August 15, last year.

Grafting Oranges.

[What is the best way to graft an orange on a lemon? The lemon tree is about fourteen years old and does not bear fruit, but the orange is just on the point of blossoming, and the oranges also. I want to take, if possible, a shoot from the orange tree and graft it onto

the lemon. The lemon tree is about four feet high. What is the best time of year to do it?—*James Leakes*.]

—Possibly the present time is the most suitable. The best plan will be to bud as many shoots or branches of the lemon tree as you may wish to remain. Select a part of the branch on which to bud, where the wood is only partially ripened, and on which the bark will lift readily and cleanly in order to allow the insertion of the eye which you will take from the orange. In selecting the bud, try to secure a plump growth in about the same stage as the wood you are working on; make a clean cut into the wood. Securing a leaf with the eye, and having the bark on each side of it undisturbed, or rather cut clean and not jagged on the edges, have only enough of wood or pulp inside to keep the bud firm, which means a very small particle. Insert well under the bark and bring the edges back again over the inserted bud, making all firm with bast, woollen thread, or any soft tying material. Keep the place moistened from time to time, and if necessary, shade from strong sunshine until the buds have "taken." When growth begins from the bud, shorten back the lemon tree nearly to the buds in order to throw the strength into the orange.

Live-for-Ever.

[I have a field that is covered with Live-for-Ever. Is there any way to get rid of it?—*D. W., Johnston, N. Y.*]

—The term Live-for-Ever is so indefinite that an answer is impossible. There are several subjects that bear the cognomen, but usually it means some of the Sedums. But surely that is not what is troubling you. Send a specimen.

Kaffir Corn.

(To Denison, Texas). Kaffir corn is a variety of Sorghum, cultivated for both forage and grain, and is peculiarly valuable to southern sections. The culture of the same is exactly the same as that of field corn. A bulletin on the subject was recently issued by the Department of Agriculture.

Names of Plants.—*C. M. C.* It is impossible to determine a plant from a single leaf. The one you send may be from a *Pittosporum*, but we cannot say more without having ample material for examination.

At this writing our advertisement has appeared but once in *American Gardening*, but already we have received sixteen (16) known inquiries. We consider this very good, coming so early in the season. **BATEMAN MFG. CO.**
New Jersey.

ROOSEBERRY AND CURRANT—50,000. Other Nursery Stock.
T. G. ASHMEAD, Nursery, Williamson, N. Y.

The American Kitchen Magazine

A magazine for every up-to-date house-keeper. The suggestions contained in a single number are worth more than a year's subscription. Price, \$1.00 a year. Sample copies free. **SPECIAL.**—We will send *AMERICAN GARDENING* and *AMERICAN KITCHEN MAGAZINE*, both one year, to any address, for \$1.50.

AMERICAN GARDENING, P. O. Box 1697, N. Y.

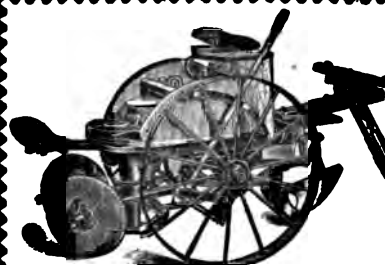
STRAW
RASPBERRY
BLACK
GOOSEBERRY
DEW

ASK WM. C. BABCOCK, BRIDGMAN, MICH.
For prices of strong STRAWBERRY PLANTS, dug out in solid blocks, not from between the rows, true to name. Competition Defied. QUALITY considered. Complete Stock of CURRANTS and GRAPES. (Mention this paper.)

BERRY PLANTS

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897
FOR
Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." 42c Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.



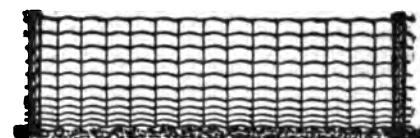
The Improved—Robbins Potato Planter

Plants 100% of the seed correctly. Opens a loose furrow, mixes the fertilizer with the soil, drops the seed, and covers with discs. Recommended by leading potato growers and guaranteed to give satisfaction. Send for Catalogue describing 50 different Implements.

BATEMAN MFG. CO., Box 106, Grenloch, N. J.

BUFF LEGHOENS.—Winners for five years. Circular free. **GEORGE S. BARNES, Battle Creek, Mich.**

CANTON GARDEN PLOW
THREE SHOVELS AND RAKE ATTACHMENT.
WEIGHT, 20 POUNDS
\$3.75 EACH.
CASH WITH ORDER.
PARLIN & ORENDORFF CO.
Largest and oldest permanently established Plow Factory in America.
CANTON, ILLINOIS



The Only Coiled Spring Fence.

It has taken us ten years to convince the public that elasticity is absolutely necessary in an efficient and durable wire fence. It was the Coiled Spring that did it. We own the original patent on this device. "A word to the wise is sufficient."
PAGE WOVEN WIRE FENCE CO., Adrian Mich.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.60.

THE OHIO FARMER is a large, 30 page weekly, \$1 per year. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for illustrations, Correspondence and Market Reports than any other of its class. It is the Best and Cheapest no more than others. Send for a SAMPLE COPY to **THE OHIO FARMER, Cleveland, O.**

THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1898—14 months, if ordered at once. Address all orders to **AMERICAN GARDENING, P. O. Box 1697, New York**

AMERICAN GARDENING CLUB LIST.

LET US FILL YOUR ORDERS FOR 1897.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

General.	A.	B.	General.	A.	B.
Advance (Cong'l) renewals.....	\$2 00	\$3 90	Scribner's.....	\$3 00	\$3 60
" new.....	2 00	2 60	St. Nicholas.....	3 00	3 60
American Field (new).....	4 00	4 25	Sunday School Times.....	1 50	2 10
" Renewals.....	4 00	4 60	Texas Siftings.....	4 00	4 25
" Kitchen Magazine.....	1 00	1 75	The Etude (new only).....	1 50	2 15
" Machinist.....	3 00	3 20	The Etude (renewals).....	1 50	2 35
Aquarium.....	1 00	1 75	The Outlook.....	3 00	3 60
Arena.....	3 00	3 60	Toledo Blade.....	1 00	1 85
Art Amateur.....	4 00	4 25	Turf, Field and Farm (new)....	4 00	4 25
Art Interchange (with plates).....	4 00	4 25	Renewal.....	4 00	4 60
Atlantic Monthly.....	4 00	4 80	Womankind.....	50	1 20
Ava Maria.....	3 00	3 70	Young Ladies' Journal.....	4 00	4 60
Babyhood.....	1 00	1 90	Youth's Companion (new only)...	1 75	2 35
Baptist Missionary Magazine.....	1 00	1 90	Renewals.....	1 75	2 75
Carpentry and Building.....	1 00	1 85			
Century.....	4 00	4 60	Agricultural, etc.		
Chicago Times-Herald (Weekly).....	1 00	1 85	American Agriculturist.....	1 00	1 85
Chicago Inter-Ocean.....	1 00	1 80	Breeders' Gazette.....	2 00	2 40
Christian Herald.....	1 50	2 15	Country Gentleman.....	2 50	2 75
Christian Register.....	3 00	3 85	Farmers' Advocate (Canada)....	1 00	1 75
Churchman.....	3 80	4 10	Farmers' Magazine.....	1 00	1 75
Colman's Rural World.....	1 00	1 85	Farmers' Review.....	1 00	1 90
Cosmopolitan.....	1 00	1 90	Farm, Field and Fireside.....	1 00	1 80
Delineator (Butterick's).....	1 00	1 90	Farm and Fireside.....	50	1 40
Demorest's Monthly Magazine.....	2 00	2 60	Farm and Home.....	50	1 40
Detroit Free Press (Weekly).....	1 00	1 90	Farm Journal.....	50	1 80
Domestic Monthly.....	1 50	2 15	Farm News.....	50	1 20
Donahoe's Magazine.....	2 00	2 60	Gleanings in Bee Culture.....	1 00	1 85
Electric Magazine.....	5 00	5 25	Home and Farm.....	50	1 45
Electrical Review.....	3 00	3 20	Indiana Farmer.....	1 00	1 85
Engineering Magazine.....	3 00	3 80	Mass Ploughman (new).....	2 00	2 60
Forest and Stream (new only)....	4 00	4 30	Renewals.....	2 00	2 90
Forum, The.....	3 00	3 60	Michigan Farmer.....	1 00	1 60
Frank Harrison's Magazine.....	50	1 40	National Stockman and Farmer...	1 00	1 85
Frank Leslie's Popular Monthly.....	3 00	3 50	Nebraska Farmer.....	1 25	1 85
Godey's Magazine.....	1 00	1 90	New England Farmer.....	2 00	2 50
Golden Days.....	3 00	3 35	Ohio Farmer.....	1 00	1 60
Good Housekeeping.....	2 00	2 70	Orange Judd Farmer.....	1 00	1 85
Harper's Bazaar.....	4 00	4 25	Pacific Rural Press.....	2 40	3 00
Harper's Magazine.....	4 00	4 25	Practical Dairyman.....	50	1 35
Harper's Weekly.....	4 00	4 25	Practical Farmer.....	1 00	1 85
Harper's Round Table.....	2 00	2 50	Prairie Farmer.....	1 00	1 85
Höme Queen.....	50	1 35	Rural New Yorker.....	1 00	1 80
Illustrated American.....	4 00	4 80	Southern Cultivator.....	1 00	1 85
Independent.....	3 00	3 60	Southern Farm.....	1 00	1 85
Jenness Miller's Illus. Mag.....	1 00	1 75	" Florist and Gardener.....	1 00	1 75
Judge.....	5 00	5 20	Strawberry Culturist.....	50	1 35
Judge's Library.....	1 00	1 85	Texas Farmer.....	1 00	1 75
Ladies' Home Journal, The.....	1 00	1 90	Texas Farm and Ranch.....	1 00	1 85
Ladies Home Companion.....	50	1 45			
Ladies' World.....	85	1 80	Poultry.		
Lealle's Illustrated.....	4 00	4 40	American Poultry Advocate.....	25	1 15
Life.....	5 00	5 40	Fancier's Review.....	50	1 35
Lippincott's.....	3 00	3 25	Farm Poultry.....	1 00	1 50
Macmillan's.....	3 00	3 60	Ohio Poultry Journal.....	65	1 50
McClure's Magazine.....	1 00	1 90	Poultry Herald.....	50	1 40
Munsey's Magazine.....	1 00	1 90	Poultry Keeper.....	50	1 40
Nation, The.....	3 00	3 80	Poultry Monthly.....	1 00	1 85
New England Magazine.....	3 00	3 50	Reliable Poultry Journal.....	50	1 40
New York Ledger.....	2 00	2 50			
" Tribune (Weekly).....	1 00	1 90	Horticultural, etc.		
" World (Tri-Weekly).....	1 00	1 75	Canadian Horticulturist.....	1 00	1 90
North American Review, The.....	5 00	5 50	Garden and Forest.....	4 00	4 25
Notes and Queries.....	5 00	5 50	Gardening (Chicago).....	2 00	2 50
Observer (new only).....	3 00	3 25	Green's Fruit Grower.....	50	1 35
Observer (Renewal).....	3 00	4 00	Meehan's Monthly.....	2 00	2 50
Outing.....	3 00	3 35			
Peterson's Magazine.....	1 00	1 85	Foreign.		
Philadelphia Press (Weekly).....	1 00	1 85	Farm and Home.....	2 25	3 25
Phrenological Journal.....	1 50	2 25	Field.....	10 50	11 00
Popular Science Monthly.....	5 00	5 65	Garden.....	4 50	5 25
Popular Science News.....	1 60	2 50	Garden Work.....	2 50	3 25
Puck.....	5 00	5 10	Gardener's Chronicle.....	4 50	5 25
Puck's Library.....	1 20	1 95	Gardener's Magazine.....	4 50	5 25
Review of Reviews.....	2 50	3 25	Gardening, Illustrated.....	2 25	3 00
Scientific American.....	3 00	3 80	Gardening World.....	3 50	3 25
" Supplement.....	5 00	5 25	Journal of Botany.....	4 75	5 25
" " with.....	7 00	7 25	Journal of Horticulture.....	4 00	4 85
" Builders' edition.....	2 50	3 10	Kew Gardens Bulletin.....	1 50	2 25
" inc. B'd's edit. 5 50	5 50	5 75			
" All 8 editions.....	9 00	9 25			

ADDRESS
CASH WITH ORDER,

AMERICAN GARDENING, P. O. Box 1897, NEW YORK.

N. Y. Wholesale Market Reports.

Business generally is very slow. The weather having moderated so much has caused much of the stock to reach the market in better condition, especially southern stock. There not being frost enough to affect transshipment locally grown produce suffers in price accordingly.

Hothouse grapes (English) 75c. to \$1.25 per lb. when in good condition; demand slow.

Native grapes, 11c. to 13c. per lb.

Hothouse strawberries, plentiful; color and quality fully up to the high average noted last week, but price reduced by one half. They now realize \$4.50 per quart.

Florida berries are now arriving, but so far the quality is poor.

Florida oranges are still in poor condition and much of the stock fails to realize full market figures. Grape fruit is doing well, fancy selling as high as \$8 per box (36 to 54 fruits). The possible supply, according to reliable reports will be very limited and prices may be expected to remain firm.

California pears from storage are in prime condition, sales slow. Winter Nelis, \$2.50 to \$3.50; Easter Beurre, \$2.50 to \$3.50; Anjou, \$3 to \$3.50; Beurre Gris, \$3 per case. Cases of the above contain from 100 to 150 fruits.

Apples remain as quoted last week. Fancy stock moved slightly better during the week. Hothouse cucumbers are still in light supply and prices firm; fancy, \$1.50 to \$1.75 per dozen; No. 2, 50c. to 75c. per dozen.

Hothouse lettuce moves slowly, sales having been checked by the excellent condition of late arrivals of Florida stock. For fancy stock, good heads, prices rule from 40c. to 50c. per dozen; lower grades vary from \$1 per barrel upwards. Florida, 75c. to \$1.50 per basket.

Mushrooms still in over-supply; prices range from 15c. to 40c. per lb.

Tomatoes are poor in color and size; the supply is not heavy, but the quality is so poor that prices keep down, 25c. and 30c. being the best figures obtainable, and much of the stock sells lower still. Florida, per carrier, \$1 to \$2.

Hothouse radishes are very plentiful; the average price for good stock is \$3 per 100 bunches, with an average of eight in a bunch.

Other vegetables: Celery is in fair supply and very quiet, prices favoring the buyer. Cauliflower nominally unchanged in absence of fresh receipts. Cabbages and other local winter vegetables generally unchanged. Norfolk steamer brought 1200 barrels of spinach and 600 barrels of kale; trade is slow and prices show no improvement. A fair supply of Florida vegetables in by freight and express. Most of the string beans are offering at \$1 to \$1.25, being too old or otherwise inferior; a few lots brought \$1.50, and one or two strictly fancy marks of White Refugee were placed at a considerable premium. Egg plants would sell well if fancy; offerings generally defective and hard to move.

Beets, Florida, new, per crate.....	\$0 50—\$1 00
—Charleston, new, per doz. bchs.....	40—50
Brussels sprouts, per qt.....	6—12
Cucumbers, Florida, per crate.....	2 00—4 00
Cabbages, per 100.....	3 00—4 50
Cauliflowers, extra fancy, per bbl.....	5 00—7 00
—fair to prime, per bbl.....	2 00—4 00
Celery, flat bunches, per doz. bchs.....	50—1 00
—fancy large, per doz. stalks.....	40—50
—average best, per doz. stalks.....	20—35
—small to medium, per doz. stalks.....	10—15
Egg plants, Fla., per 1/2-bbl. box.....	75—1 50
—Florida, per bbl.....	1 00—2 00
Kale, Norfolk, per bbl.....	40—60

Onions are still improving in price, making quite an advance from last week. Keeping quality poor:

Eastern, white, per bbl.....	\$4 00—\$5 00
Eastern, red, per bbl.....	3 00—3 25
Eastern, yellow, per bbl.....	2 75—3 00
State & W'n., yellow, per bbl.....	2 25—2 60
Western, white, choice, per bbl.....	4 50—5 20
Orange Co., white, per bag.....	2 50—4 00
Orange Co., yellow, per bag.....	2 25—3 50
Orange Co., red, per bag.....	2 25—3 75
Bermuda, per crate.....	1 75—2 00

OUR PREMIUMS ARE OFFERED with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by **AMERICAN GARDENING** in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

LORD PENZANCE'S NEW HYBRID SWEET BRIARS.

Quite a New Feature in Roses.

The foliage of every one of them is as sweetly scented as the old-fashioned Sweet Briar that grew in our grandmothers' gardens.

The Sweet Briar or Eglantine, is acknowledged by all to possess one of the sweetest perfumes that nature has provided and its delicious scent is the object for which it is usually cultivated. These new varieties, now for the first time placed in commerce, are vast improvements upon the old sorts. They are hybrids (obtained by the Right Hon. Lord Penzance) between the common Sweet Briar and various old-fashioned garden Roses and are possessed of many advantages.

The flowers are borne in wondrous profusion, and vary in color from white, through several shades of pink, to very dark red or crimson.

The plants are perfectly hardy even in very bleak and exposed positions.

For vigor of growth there is scarcely anything in the rose world to equal them. Plants three years old have now many shoots on them that rise to the height of twelve feet. These, with a slightly outward bend, and clothed with flowers of exquisite tints, produce a gorgeous effect.

The buds are the most graceful, sweet and delicate objects imaginable.

The flowers are single or semi-double, and this adds lightness and elegance to their beauty.

After the flowers are over, they are followed by bright scarlet seed pods or "hips" in great numbers, which, nestling among the deep green, scented foliage, make the plant delightfully ornamental till quite late in the autumn.

No garden will be esteemed complete which does not possess a group of Hybrid Sweet Briars. They are so sweetly scented, so beautiful in color, so hardy and free from disease and the attacks of insects, as to make them eagerly sought after by all the knowing ones.

This is Our Offer. For one NEW subscription to American Gardening at \$1.00, we will forward you, all charges prepaid, your choice of two of the three following varieties: Meg Merrilies, Red. Anne de Geierstein, Pink. Brenda, Blush White.

The above to be well-established plants out of 2½ inch pots.

The collection of Three above Plants for one NEW SUBSCRIPTION to American Gardening at \$1.25.

These plants will be forwarded to our subscribers direct from the growers, eminently responsible people, who guarantee them to be true to name and color.

Plants ready for shipment May 1. Orders looked now, however, owing to the expected enormous demand.

OUR GREATEST 1897 PREMIUM

The Wonderful New Climbing Rose

Yellow Rambler (Aglaia)

A worthy COMPANION to the well-known Crimson Rambler.
The Hardest Yellow Climbing Rose Ever Introduced.

Yellow Rambler bears its flowers in immense clusters, often as many as one hundred and fifty blossoms in a bunch, the trusses being of handsome pyramidal shape.



A CLUSTER OF YELLOW RAMBLER ROSES.

Yellow Rambler holds its blooms from three to four weeks without fading; a large bush in full bloom is one of the most beautiful sights imaginable.

Yellow Rambler is a clear decided yellow, in marked contrast to many roses so described, but which have really only a yellow tinge.

Yellow Rambler is very vigorous; well-established plants often making shoots eight to ten feet in height in a single season.

Yellow Rambler represents the triumph of the century in the hybridizing art, and is the most valuable introduction in recent years.

Yellow Rambler is very sweetly scented.

Yellow Rambler combines the climbing habit and decided yellow color with hardiness.

Yellow Rambler will withstand, without protection, a zero temperature; with protection it will thrive where any other rose will.

Yellow Rambler is thus adapted to successful culture in nearly all of the northern parts of the United States.

Yellow Rambler is absolutely NEW on the market and will prove the sensation of 1897!

Yellow Rambler premiums will be shipped direct to our subscribers from the introducers, one of the largest and most reliable firms of nurserymen in the country.

All stock is guaranteed pure and will be shipped in good condition.

DON'T YOU WANT A YELLOW RAMBLER ROSE?

You Can Earn One in Ten Minutes!

READ OUR OFFER. We will forward, all charges prepaid, one well-established plant of **Yellow Rambler Rose**, from 2½ inch pot, for ONE NEW SUBSCRIPTION to American Gardening at \$1.00, or six plants for five NEW subscriptions at \$1.00 each.

The same plant will not be sold in 1897 for less than 50 cents. Plants will be shipped on and after March 15th. It is expected that the demand for this New Rose will be phenomenal, and we advise those of our readers who want a plant to be early with their order.

Successful

growers of **fruits, berries,** and all kinds of **vegetables,** know that the largest yields and best quality are produced by the liberal use of fertilizers containing at least 10% of

Actual Potash.

Without the liberal use of Potash on sandy soils, it is impossible to grow fruits, berries and vegetables of a quality that will command the best prices.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.
GERMAN KALI WORKS,
 93 Nassau St., New York.

OLD BOOKS SEND STAMP FOR LIST. Address
A. J. Crawford, 815 N. 7th Street, St. Louis, Mo.

Greenhouse Construction

FOR ESTIMATE WRITE TO
JOHN G. MONINGER

412-422 Hawthorne Ave.,
 CHICAGO, ILL.

SOLE MANUFACTURER OF THE
CHICAGO VENTILATOR LIFTER

BUY BERRY BOXES

32-page Illustrated Catalogue for 1896-7 mailed FREE.



Climax Baskets for Peaches, Grapes and Melons.

CYPRESS
 IS MUCH MORE DURABLE THAN PINE.

CYPRESS SASH BARS
 UP TO 32 FEET IN LENGTH OR LONGER.

GREENHOUSE
 AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
 Send for our Special Greenhouse Circular.
THE A. T. STEARNS LUMBER CO.,
 NEPONSETT, BOSTON, MASS.

When answering advertisements please mention American Gardening.

FREE SEED DISTRIBUTION

(NOT BY THE U. S. GOVERNMENT.)

A Superb Collection of Beautiful Flowers—hundreds of popular varieties, annuals, biennials and perennials in every conceivable shade, tint and color, is enclosed, free of charge, with every copy of our beautiful **NEW CATALOGUE OF SEEDS, PLANTS and BULBS** for 1897, to all applicants from this advertisement. The book contains much information of value to all lovers of flowers, plants and good vegetables. Postage 4 cts.

PITCHER & MANDA, Short Hills, N. J.
JOHN N. MAY, Receiver.

BATTLES' TESTED SEEDS.

Market Gardeners, Truck Farmers, and all Seed Buyers get my prices before you buy. Write for 1897 Seed Annual and Special Wholesale Price List.

Send for samples of any seeds you wish to test.

Salesmen wanted everywhere. Write now.

GROWER OF FARM AND GARDEN SEEDS.

✱ **FRANK H. BATTLES, Rochester, N.Y.**

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All of our pots from 7 in. and upwards have our Patent Excessor Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pans.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.

BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
 Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

GLASS For Greenhouses, Grap- GLASS ories, Conservatories, Hothouses and Hotbeds.

AN HORNE, GRIFFEN & CO.
 13, 15 & 17 LIGHT ST., AND 52, 54 & 56 VARICK ST.,
NEW YORK.

The Savannah Line

LOW RATES! LOW RATES!

THE CHEAPEST AND QUICKEST, THE SAFEST AND BEST, THE GREATEST COMFORT To be found on the broad Atlantic, is via one of the Magnificent Vessels of SAVANNAH LINE FLEET. Elegant Service. Speed unequalled by any other Steamship Line on the Atlantic Coast.

PASSENGERS VIA STEAMSHIP and SAVANNAH TICKETED TO ANY POINT SOUTH and SOUTHWEST.

STRAMERS FLY BETWEEN

NEW YORK and SAVANNAH, (from New York Tuesdays, Thursdays and Saturdays.)

BOSTON and SAVANNAH, (from Boston every four days as per published schedule.)

PHILADELPHIA and SAVANNAH, (from Philadelphia every five days.)

NEW IMPROVEMENTS. Sea Spray Baths, Electric Lights, Re-Carpeted and Handsomely Furnished State-Rooms, Modern Sanitary Arrangements, are some of the new improvements which are to be observed aboard the Elegant Passenger Ships of the Savannah Line Fleet.

Send two cent stamp for copy of "Savannah Line News" and three colored map showing attractions of the Atlantic Coast.

G. M. SORREL, Manager, New Pier 35 N.R., New York.

LORD & BURNHAM CO., HORTICULTURAL ARCHITECTS AND BUILDERS.

STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
 Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
 ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK.
 Factory: Irvington-on-Hudson, New York. Mention paper

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 108.
COMBINED SERIES VOL. LI.

NEW YORK, JANUARY 16, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Agricultural Tariff.....	39	Forcing House.....	37	Lettuce.....	37	Private Gardeners.....	44	Vegetable Forcing.....	37
Am. Hort. Secy.....	44	Fruit Garden.....	36	Market Reports.....	43	Problems.....	41	Vegetable Garden.....	37
Asparagus Roots, Old..	40	Greenhouse Manage-		N. Y. Gardeners' Socy..	44	Prospects.....	42	Violets.....	45
Beans.....	37	ment.....	45	Old Fashioned Border,	33	Protection Wanted.....	38		
Begonias.....	45	Growing for Sale.....	38	Packing and Shipping..	39	Readers' Notes.....	40		
Carnations, About.....	35	Home Plot.....	42	Plant Registration.....	36	Seeds.....	37	Illustrations.	
Casabanana.....	40	Hoya Carnosa.....	34	Pollenizer Wanted.....	40	Soil, Preparation of.....	34	Codlin Moth, The.....	37
Codlin Moth, The.....	37	Inquiry Department....	45	Potatoes, English.....	37, 40	Strawberries.....	36	Hoya Carnosa.....	34
Currants.....	36	Insects, Injurious. II..	37	Poultry Notes.....	42	Varieties Choosing.....	38	Old Fashioned Border..	33
								" " Garden..	35

An Old-fashioned Border.

We hear a great deal of talk and read a great deal of writing upon the merits of the "Old-fashioned Border," as against the stilted, laborious, and unnatural effects of the more often seen carpet bedding. For our own part, we revel in the naturalness, the freedom, and the luxuriance of growth, as seen in the so-called "old-fashioned" style, where is seen the art that does reflect, nay, is nature.

It is pleasurable to be able to present herewith, in figure 11, a representative of such a charming garden; that of Mr. Samuel Henshaw, on Staten Island, N. Y., and it is hoped that the view may serve as an aid to others who desire to have a garden which shall be a "thing of beauty" and "a joy forever." But let the owner speak for himself:

"The illustration (fig. 11) shows part of the 'Grandmother's Garden,' an old time herbaceous border, a style of gardening so much in vogue fifty or sixty years ago. The border altogether is about 175 feet in length, with an average width of 13 feet, and three-fourths of the occupants

are entirely hardy, requiring no protection whatever; the rest of the plants are what may be termed transient visitors, such as Cannas and Dahlias, a few of the most reliable annuals, and some native plants commonly known as weeds; in fact, one of the most beautiful objects during the past summer was a plant of *Cassia Marylandica*, this is a common swamp plant, usually found growing about four feet high. In this border it covered a space six feet in diameter, and had a height of seven feet, and was laden with its golden pea-shaped blossoms for two months. Other native plants

responded to cultivation by extra size, and profusion of bloom not seen when growing wild, among these may be mentioned the *Rudbeckia*, *Coreopsis laciniata*, *Veronica*, *Vinca*, *Leucanthemum*, *Asters* and *Solidagos*. There are several annuals which come up every spring, and require to be treated as weeds—just thinning out to leave only such as are needed.

"The plants most prominently seen in the border are the Day Lily, Cannas, Dahlias and Hardy Grasses; *Eulalia japonica* is the best of these, and gives the least trouble. *Erianthus Ravennæ* or Pampas Grass, grows taller, but is not as picturesque.

The two varieties of old-fashioned Ribbon Grass, or 'Gardener's Garters,' are both worthy a place, the old one makes the brightest show in early summer, but the other retains its variegation all through the hot weather, and even after the first frosts is cheerful.

"For reliability and constancy of bloom nothing can beat the *Pæony*; Perennial *Phloxes*, in different colors; the Siberian and Iceland *Poppies*; *Funkias*, *Hollyhocks*, *Foxgloves*, *Dianthus*, and other old-time oc-

cupants of the garden; any gaps that occur during the summer can always be filled up with such annuals as *Zinnias*, French or African *Marigolds*, *Alyssum*, *Mignonette*, *Portulaca*, *Asters*, and many others that may be taken from a reserve sown in the cold frame in spring."

"Hardy *Roses*, not forgetting the Moss Rose and Sweet-brier, are planted at intervals of 12 feet, the whole length of the border, and are always acceptable."

"The illustration (fig. 13) of one wing of the extension of my house draped with climbers shows a treatment that is



FIG. 11.—A TYPICAL "OLD-FASHIONED" BORDER.

all in keeping, with such plants as the Golden Honeysuckle, *Vitis hetrophylla* variegata, *Clematis paniculata* grandiflora, *Ampelopsis Veitohii*, and *A. Virginica*, Climbing Roses, and the "Bonnie Brier Bush." The low-growing plants are *Tradescantia commelina*, and *T. Virginica*, *Aegopogon*, *Euonymus radicans*, *Phlox subulata*, *Azaleas*, *Opuntia*, hardy *Pyrethrums*, and the fragrant Southernwood." The distant corner of the border just spoken of is seen in the right side of this view.

"One of the pleasures of the Herbaceous Border is that a flower of some kind can be picked from it any time during ten months out of the twelve; there is always something coming up, or in flower, and a walk along it every morning reveals something not seen before."—SAMUEL HENSHAW, Landscape Gardener."

A Reliable Old Window Plant.

In recent years there has been a very wholesome reaction in gardens in favor of what are known as old-fashioned hardy plants, such as paeony, phlox, ferns, etc. There comes to my mind one of the oldtime window and greenhouse plants, that is deserving of much more attention than it is now receiving. It is a wax plant, *Hoya carnosa*, sometimes called honey flower because the pretty blossoms are tipped with honey drops. For adaptability to the average treatment that plants receive in our homes, it easily stands second to that iron-clad, the English Ivy. It can be killed, but the chances of this are slight compared with the average house plants. Some florists, who run the plant along the rafters or over the back walls of their greenhouses, claim that the more the plant is neglected the greater is the yield of flowers. I do not make this well-grounded statement with a view to encouraging ill treatment of the plant. It must be borne in mind that the worst treatment that plants ordinarily receive in a greenhouse is approximately as good as would be good treatment in the window garden.

On one account the wax plant is better suited to house culture than is the English Ivy. The wax plant is a lover of heat; its heavy, fleshy leaves stand atmospheric dryness almost as well as do those of a cactus. For this reason it may be trained about the top sash of and over a window, where the air of the room is the hottest, and thrive all the while.

An objection would be raised to the wax plant by some, to the effect that it is a slow grower while young. This frequently is the case, but at the same time let it be said that once it is under way no house plant grows faster. The slowness of growth at the start, however, may be overcome in some measure by treatment. It is a plant that does not like much moisture at the root during the period of slow growth, therefore be careful not to keep the soil anything like soaked. The plant is not a great rooter, hence does not require as much pot room as does the average house plant. One way, therefore, of hastening growth and bloom is to keep it in rather a small-sized pot. As for soil, one consisting of about one-third sand, the balance a rich loam, and withal a considerable portion of little pieces of pounded bricks, will suit it well.

The annexed engraving, showing a young plant raised by layering (a very good way to propagate), gives a good representative of the flower truss, as well as of the foliage, of the wax plant. The flowers are very attractive

and wax-like, of a pinkish white color, with a dark star-like protuberance in the center. It cannot, however, be called a profuse flowerer.

Although the wax plant is well adapted to training about a window, it forms handsome specimens when grown over a trellis. One of the finest is the globe or the balloon shaped trellis.

In the matter of temperature, the wax plant enjoys a warm place, and will make little growth in any other. About 60 degrees as a night temperature suits it well, but its remarkable adaptability will enable it to get along where it is much cooler, although here no growth can be expected.

This plant is almost insect proof; hardly another besides the mealy bug will touch it in the window garden, and this can be easily kept down by washing with warm soapy water. In speaking of this old favorite, mention should be made of some other members of the genus that are fit companions as window and hot-house plants. *Hoya bella* is more slender in



FIG. 12.—THE WAX PLANT: HOYA CARNOSA.

growth and has smaller leaves than *H. carnosa*. Moreover, it enjoys a little higher heat, and is well suited to a warm sitting room window.

Being of more delicate habit, it is sometimes grafted on strong growing kinds like *carnosa*, in which case it grows faster and blooms more freely than on its own roots.

ELIAS A. LONG.

Reforestation.—The Fall Mountain Paper Company (Mass.) has been studying for the past few years, methods of reforestation their large tracts of wild land, and the past season have gathered large quantities of Spruce cones, to be planted on their cleared lands in the upper White river valley. It owns nearly half of the towns of Hancock and Granville, and large tracts in Rochester, Pittsfield, Stockbridge and Chittenden. Its policy will be to keep the growth of the young trees equal to their cuttings of the old, so as to make the supply permanent.

Preparing the Soil for Crops.

The matter of preparing the ground for the future crop is one very much neglected, the plowing or digging very indifferently done, and the ground just turned over the regulation 5 to 8 inches in depth. No one has a right to expect a good crop of vegetables to succeed on such shallow soils, for when a drought comes, as it invariably will every summer, the plants dry right up and will wilt down flat, thus receiving a check that frequently encourages lettuce to bolt to seed. The same with celery, and what were intended for cauliflowers turned out only buttons, and so on indefinitely. There are some soils that will absorb moisture from the atmosphere, or by capillary attraction better than others. Fertile and deeply pulverized soils containing finely divided clay, some sand and lime, with a good dressing of organic manures, will supply moisture to plants for a much longer period than others not so constituted. I have found onion roots 17 inches below the surface on ground that was trenched 2 feet in depth, growing unchecked all through the season; the bulbs were pictures to look upon, they were so fine.

Many garden soils, after years of intensive cultivation, become sour, the surface during the growing season quickly showing a sticky green. This is due to the accumulation of undecomposed organic matter in them. Many soils are also deficient in the phosphates. Whenever possible it is good practice to trench such soils somewhat more deeply than they were turned over previously, putting a layer of manure in the bottom of every trench, also a sprinkling of bone dust to supply phosphoric acid. After completing this, apply a liberal dose of fresh lime on the surface, harrowing or raking it—not plowed or dug in to any depth; lime will work its way down quick enough, and will have a beneficial influence on the soil by neutralizing the acidity causing the sourness, and decomposing all organic matter. Lime will also break up heavy clay soil and bind loose sandy soil. It will not, however, take the place of organic manure, but it will make the plant food already in the soil more available for absorption by the roots, and not the least important is the fact that it is peculiarly obnoxious to many insects and cut worms that may be in the soil. One of the many advantages of well-drained, deeply pulverized soils is that they quickly warm up in spring. When the particles of soil are full of water, as during rain, the air it previously held was displaced by the heavier water, and as quickly as this water soaks away, fresh warm air enters from the atmosphere and warms the soil. This is important for those desiring early vegetables, as plants cannot grow satisfactorily where the roots are much colder than the prevailing atmosphere; but where water freely enters and as freely passes away, and fresh air enters, the soil becomes warm and vegetables then grow.

Apple Exports to England.—Returns from the apple shipments to England from New Hampshire this season, says a local paper, show the business to have been a dismal failure, and prove this to have been the most disastrous apple year in the history of this section. The actual cost per barrel to the farmer was 60 cents. From their various shipments they have received prices from 19½ cents to 90 cents, and on the last shipment there is an extra charge of 1¼ cents per barrel. At these prices only three shipments brought any profit, and each succeeding one showed an increasing loss, until on the last one the farmers have had to pay charges of 1¼ cents a barrel for the privilege of sending their fruit abroad.

Concerning Carnations.*

The Carnation to-day is one of the most popular garden flowers, and regard for it has entered so deeply into the hearts of flower lovers that no mere caprice of fashion will ever appreciably effect its standing. It fashion deigns to favor it for a season, it is only still more in request, but though fashion changes to other flowers to gratify its whims, it is almost certain to have aroused other sympathies and respondent love.

Origin and History.

Lost in the dim obscurity of distant ages, and, so far as we know, unrecorded, are the initial efforts of those who began the work of developing and improving this flower. Whether there was first a vari-colored race of single-flowered forms, or how and when doubling took place the oldest records of this flower tell not, yet it has an ancient history, and was much beloved when outdoor garden flowers were few indeed, and glass floriculture unknown. The early stages of its evolution into a flower of such varied beauty were hardly chance results, for we know the wild type and parent, and you may see it to-day still the same, ekeing out a perfect subsistence upon old castle and

pictures of the early Dutch Painters Carnations are unmistakably and admirably portrayed.

The most interesting feature in the flower's modern history is its amenability to development and improvement along well defined and widely divergent lines, till to-day we have several distinct classes diverse in constitution, in habit of growth, period of blooming, form of flower, and variety of coloring. Most interesting and instructive especially is the latest acquisition of a race adapted to the requirements of the cultural systems practised in this country, which alone has brought this flower rapidly into the prominent and well-deserved position it now enjoys here.

It will at least be interesting, if not of decided practical value, to growers in this country to briefly review and remark upon the characteristics of the several classes of European Carnations.

European Classes.

The earlier Carnation fanciers appear to have been most attracted to the bizarre or oddly colored varieties, for as early as 1769 the Carnation was classified according to color vagaries under the names of Flakes, Bizarres, Picotees, and Painted Ladies. The varieties belonging to the three first named classes found not a few admirers; they be-

tended popularity of Carnations that marks the last decade. The flower as a unit, quaintly variegated in color, did not appeal to many, but when it was to be had in clear, bright, and simple colors, wedded to a charming fragrance, it soon came into general request to decorate the gardens and adorn the house. In some of the best English flower gardens the Carnation, in fine self-colored varieties, has been elevated to its rightful place as second only to the Rose, which it succeeds in time of blooming. These are distinctly summer bloomers, with a few slight exceptions, and to what extent, or, indeed, if they are fitted at all, for outdoor culture in this country, has yet to be determined. At a future date I may be able to give a more definite expression of opinion regarding their behavior under American summer skies, having some on trial.

The so-called tree or perpetual flowering Carnations make another distinct class. In England they are grown in pots and pass the summer in the open air, being housed for the winter flowering. In their season of blooming, and its long continuance, they possess apparently acquired and immutably fixed characteristics developed along another divergent line.

This class has its counterpart in this country, embracing those varieties now flowering on the benches. But whilst there are winter flowering Carnations in England and America, they form two well-defined classes.

Carnations in America.

The history of Carnation culture on this side of the Atlantic should not be hard to write, since it hardly embraces many decades. Knowing little of the origin of the American Carnation, and having had but small experience in their growth, it would perhaps be presumptuous on my part to attempt to go closely into details of management, but as far as my observation goes, there are some fundamental principles to be observed, and certain important factors to reckon with in all successful Carnation culture; whether you practice it on this side of the water or the other.

I believe that these American varieties are offspring from the perpetual flowering varieties, raised and sent out by Mons. Alegatiere, in France, as also were most of the winter flowering kinds first grown in England. It would be interesting if we could mark the parting of the ways, the beginning of the separation into two families, for as we see them now they have a well-marked divergence of character or habit. The varieties of European growth make large plants. They have a main central stem, and I have often seen plants up to 3 feet in height well furnished with side shoots, which produce the flowers on comparatively short stems. Here we have varieties of a close and tufted growth naturally inclined that way, and rendered more so by summer pinching, and when they flower, the flower-spike disbudded to the terminal bud attains a length of from 12 inches to 24 inches or more, according to the kind, and if well grown the stems are strong enough to stand erect and support the flower. These stems are cut right down at the base, and when cut are quickly succeeded by others, and this continues for months. All the varieties in cultivation here partake of the characteristics of the earlier types of Carnations in having fringed petals, more or less of fragrance in the flowers; in short, they represent the embodiment of what a Carnation should be, possessing variety of form and expression, light and shade, and more satisfying by far to the majority of flower lovers than the smooth-edged, flat-petaled, geometrically formal type of flower. So much for the American Carnation as a distinct type.

We may now with profit briefly look at some of the individual varieties. It is not my intention to say much about them, for, as in most of the popular branches of floriculture, we are in a state of perpetual transition as regards kinds. Those generally grown to-day are superseded and discarded a year or two years hence by novelties not always of superior merit. Carnation growing here, however, being yet in its infancy, we may for a time reasonably look for, in fact we have before us evidence of, marked improvement in some of the new candidates for popular favor.

(To be continued.)



FIG. 13.—THE "OLD-FASHIONED" GARDEN. (See Page 33)

fortress walls, as at Rochester, in England, whilst across the channel, in Normandy, high up on the enduring ruins of ancient feudal towers, it lives on, braving the storms in winter; in summer perfecting its by no means attractive flowers, and ripening seeds that find an ample seed bed in the flint masonry. Here it knows no spot nor rust, and eel worms and wire worms have not to be reckoned with.

Such are the conditions under which grows *Dianthus Caryophyllus*, which botanists agree is the type and parent of the Carnation. *D. Caryophyllus* is but one of a very large family, and Mr. F. N. Williams, who monographed the Caryophyllaceae, told us that four or five species of *Dianthus* had possibly been used in hybridization, but we have no direct proof.

It is known, however, that the Carnation was cultivated in England during the reign of Edward III., 1327-1357. Chaucer mentions it in 1386, calling it the "Clove Goffe."

The modern name Carnation was mentioned by Henry Lyte, in 1578. Gerrard, in his "Herbal," published in 1597, mentions a yellow Carnation that a merchant of London procured from Poland, "and which befell that time was never seen nor heard of in these countries." In the beautiful flower

came "florists' flowers," their improvement was taken in hand by a small body of enthusiastic florists who set about evolving their ideal Carnation in form as precise and perfect as though cast in a mould, its petals smooth and without fringed edges, the several colors as clearly and as sharply defined as though lined out upon a color chart, and to assist the eye in seeing all the good points of the flower when placed upon the exhibition table, its petals were severally arranged with tweezers, supernumeraries withdrawn, and when the "dressing" was complete the bloom was inserted in a round white paper disc. You may see this done yet at the annual shows of the English Carnation Society, and there is a tolerably large body of enthusiasts who take a delight in it, but it is not the type of Carnation that appeals to the great flower loving majority. It represents, however, many years of patient work, and it is a wide gulf that separates the simple single one-colored wild Carnation from the most perfect refined high-bred Bizarre or Flake of to-day.

The Clove Carnation.

A very old class is the Clove, the name having reference to the clove-like odor of the flowers, which are self or one-colored. There are now many varieties belonging to this class in which we may embrace all selfs, and it is these that have been mainly instrumental in bringing about the greatly ex-

*Paper by A. Herrington, Madison, N. J., read before the Morris Co. (N. J.) Horticultural Society, May 13, 1897.

That Plant Registration Bureau.

In your issue of Jan. 2, page 12, Mr. Howard Miller presents his ideas in regard to the proposed Bureau of Plant Registration. As a member of the committee, I wish, if possible, to correct false impressions or misapprehensions in regard to this matter.

In the first place, the idea of plant registration is not the testing of varieties, neither is it to be made a means of distributing seeds or plants. It is not intended to handicap the originator or introducer of a new variety or species, but, on the other hand, to give him a sort of precedence by an official guarantee in the form of a registration number and a recognized name. It is not the idea that plants can be patented or copyrighted, but that the general public will, in self-defense, buy only officially registered stock. The person, therefore, who neglects to procure official recognition from this national agency will be disregarded by enlightened buyers, and in order to successfully compete with others in the same business, he will find it to his advantage to procure the Government seal upon his introductions. It will work the same as the fertilizer laws do. Manufacturers have their goods analyzed and registered in West Virginia, because they wish to put them on the market in that State, and because they know that intelligent buyers will not purchase a brand that does not carry the marks of registration given on all brands analyzed by the Experiment Station of that State. I anticipate that it will not be long before people will be as careful to require the official tag on fruit and ornamental plants as are the purchasers of commercial fertilizers nowadays.

To comply with the requirements of this proposed bureau would be no hardship, and would entail no loss of time to the originator or introducer, for certainly no conscientious grower would put a plant upon the market before having thoroughly tested it for himself, and before he had produced a stock sufficient to meet the requirements of introduction.

The idea of a novelty catalogue is a good one, and would be of great aid to all classes of growers, but it does not and cannot cover the ground of the proposed registration system. The one in nowise interferes with or overlaps the other.

The aim of the proposed scheme is to defend both buyer and seller; to eradicate fraud and the factors which stimulate falsehood and misrepresentation on the part of agents and advertisers. It is hoped that the official number will be considered as binding as a bond upon producer and seller, and the fraudulent use of the privilege shall be made a misdemeanor, subject to heavy penalty.

L. C. CORBETT.

—After reading the article in your issue of Dec. 12 last I wrote a letter on the subject, which I intended to send to you, but Mr. Howard Miller, of Union County, Pa., has so nearly expressed my own views on the question, that there is but little more to be said, at least by me.

It is well known that in all departments of the Government there is so much of "red tape"—which, I suppose, is necessary—that the institution of a department such as is proposed, compelling each originator of a new fruit, flower, grain, forage or textile plant to first place it in the hands of a Government bureau, to test and

determine its value, and which bureau would be at liberty to consume all the time it fancied in making and reporting as to its merits, would be to place the originator of a plant of possible value in a position that would be an injustice to him. Its effect would be to, in a great measure, discourage people who take an interest in experimental work from making further efforts in the crossing or hybridizing and growing of seedling plants. Besides, in order to establish a Government bureau that would be qualified to intelligently pass upon the merits of a new fruit or other plant, it would be necessary to have sub-stations in at least every Congressional district in the country. Even should the reports from a majority of these stations be favorable to a new fruit or plant, the report would be of but little value to the average planter.

Suppose, for instance, that I have originated a new variety of strawberry, one which I believe to be of value. I would first have to notify the department; next, I would have to furnish all the sub-stations, as well as the central station, with plants for testing. This would cost as much as the novelty would be worth, and yet after furnishing the plants I would have to wait at least two years before the bureau could determine even the possible value of the variety. All this time my plants would be in the hands of more than a thousand growers, and I would practically have lost all control over the stock; and the only way in which I could hope to receive any return for my labor would be directly from the Government, in the shape of a pension.

Again, as to value of the reports. Should those from the station nearest me be favorable to a new variety of fruit, it would not prove that the novelty would be a success under the cultivation and soil conditions that I would give. I have had some little experience in the originating and introducing of new fruits, and I certainly would not be in favor of Government control for any new thing in which I had an interest, if I ever expected to get anything like a reasonable return out of it. While favorable reports from experimental stations and specialists are of value in the way of an advertisement to the introducer of a new fruit, they are of but little value to the planter, whose method of cultivation and soil conditions may be different from those of the station where the trials have been made. It should always be remembered, regarding favorable reports on new fruits or other plants that are sent out by experiment stations or by specialists, that these plants have been given the very best possible conditions; conditions such as the average planter seldom gives, and in forming his own estimate of the variety, should discount the opinions accordingly.

The only experiments that are of positive and practical value to the planter are those which he has conducted on his own soil and under his own methods of cultivation, and for this reason every fruit grower should have experimental grounds of his own where to grow and fruit a few plants of all the most promising introductions. This will cost but little in time or money, and will be found to be much more satisfactory and profitable than to jump in, purchase at a high price and plant largely of a thing that may prove to be utterly worthless on his soil. If after one season's fruiting the candidate proves to be of

value, one can soon work up a stock of plants at little cost. If it proves to be of no value, the experience has been gained at small cost.

To the originator of new fruits I say hold on to them until you are ready to send them out; then those who buy will do the experimenting, and they will soon let you know whether or not your berry is of value.

Push the novelty catalogue idea, and let the Government Bureau scheme go by the board. Even should the practical working of the bureau prove to be all that its friends expect of it, by the time that its reports are printed and distributed through the usual channels, the information offered will have become ancient history.

W. H. RIDGEWAY, Wabash City, Ind.

The Fruit Garden.

Strawberries will need no attention for the next six or eight weeks. In the meantime let us look back and see what progress we made in the past season; having brought forward for competition with the older kinds, Greenville, Mary, Marshall, Timbrel, Hunn and Brandywine. In Michel's Early we have a productive plant with berries of fair flavor but of short season. Crescent, ripening at the same time, has a longer season and is very productive, but not quite so sweet; plant a vigorous grower, altogether a good old variety which can be found in most catalogues. Wilson is another old kind which gives a heavy crop of firm, medium sized berries; just the kind for preserving; they will look something like strawberries when used in mid-winter. Parker Earle and Sharpless take up the mid-season; the latter is too well known to need comment. Parker Earle sets a wonderful number of berries which are of fair quality and fine color; yet, here it is not satisfactory and probably will have to give way to Brandywine or Greenville, which are both good. Greenville, for size and productiveness, Brandywine, for color and size. Gandy is not a handsome berry nor very prolific here, but is a very sturdy grower with large berries of good flavor. The most satisfactory late berry here is Jersey Queen; perhaps it is too soft for market, but is a fine, handsome berry for table use, is slightly acid unless fully ripe. It is a poor grower and needs the very best of treatment. Mary, Timbrel and Marshall did not come up to my expectations. Hunn I did not receive in time to justify an opinion at present, only that the growth is clean and vigorous.

Currants. — Fay's prolific is fine, even though the bush be not graceful and inclined to break down, or reach the ground at the wrong time, making it very necessary to have a mulching to keep the fruit clean. Although really not quite so early as Cherry it can be used as early for the berries are not so acid. For white, White Grape is the best, these, with Victoria for late, will cover the whole season.

Currants for Market. — For market the Cherry currant is perhaps the most serviceable, as the ground, if cultivated, is most easily cleaned about the Cherry than around Fay's without danger of breaking the bushes. Also the yield may be slightly more in weight, yet a basket of each, side by side, will show a decided difference in favor of Fay's.

Black Currants with us have no call only from inquisitive children, or inquiring friends from over the pond. The variety grown, Black Maples, is a strong grower, requiring little attention except to thin out the oldest branches when they become too thick to admit light and air.

J. HOLLOWAY, L. I., N. Y.

Destructive Insects and Methods for Controlling Them.—II.

PROF. W. G. JOHNSON.

The Codlin Moth.

Every lover of fruit is familiar with the so-called "worm" common in apples, but there are possibly some readers of this paper who are not aware of the fact that this repulsive creature is the young of a very beautiful little night-flying moth. It is not a native American insect, and was introduced into this country nearly a hundred years ago from the old world. Perhaps there is not a fruit grower in the United States who has not suffered more or less from its ravages. If we could ascertain the actual loss occasioned by it no doubt the figures would excite incredulity, as millions of dollars would not cover it.

Its Life History.

The adult or parent insect, which emerges from its winter quarters about the time the trees are in full bloom, is very rarely ever seen by the average observer. It is a small brownish-gray moth, with a wing expanse of about three-quarters of an inch, and is represented in the illustration (fig. —) at *f* and *g*. The eggs are laid upon the forming fruit about the time the petals or blossoms fall.

It has been generally believed that the eggs were laid in the calyx cavity, or the point where the blossom had dropped off, but Prof. Slingerland, of Cornell University, has observed that they are deposited at almost any point on the surface of the apple. The worm emerges from the egg in a few days, and after feeding on the outside for a day or two, makes its way into the fruit, usually entering at the blossom end. It burrows its way into the core, moving freely upwards and downwards, and enlarging the entrance hole to push out the excrement.

Full growth is attained in about a month, at which time the infested apples begin to fall, but whether they fall or not, the worm bores to the side and issues through a round hole, as shown in the cut. A worm emerging from a fallen apple makes its way back to the trunk of the tree, or other convenient place, and transforms in some crevice or under some piece of loose bark. Worms coming from fruit still on the trees crawl down the branches, until they reach the rough bark, where they spin their cocoons. Usually about two weeks elapse from the time the worm leaves the apple before the full-fledged moth appears. There are two broods, except in the northern part of the country, the moths of the first brood appear about midsummer, and lay the eggs for the worms found in the ripe apples.

Remedies.

It has been customary in some fruit-growing sections to wrap the trunks of trees with paper or rag bandages. Although productive of much good, this method has been superseded by a simpler and better one. It has been found that trees can be protected by spraying them with one of the arsenites. One spraying is sufficient under favorable circumstances, but usually it is better to spray twice, and, if rain interfere, even a third time. The first spraying should be applied just as soon as the blossoms fall, and the second a week or ten days later if the weather be favorable.

Spraying with Paris green is now generally used by the most successful and advanced apple growers of the North and West, especially where a sufficient

number of trees is grown to justify the purchase of the proper spraying apparatus. Many of our apple growers, particularly in the South, have failed to appreciate its importance, and fancy that the time and means required to spray effectively are lost. To be effective the spraying must be done before the worms hatch, and the mixture must be on every fruit to be protected. If a film of poison can be kept on the blossom end of the fruit until after the eggs hatch success is assured.

A fine spray well directed from the center of the tree is most effective. One pound of Paris green or London purple in 150 gallons of water is a good strength. Some growers use a mixture double this strength, but much care must then be taken not to burn the foliage.

The illustration here used is copied from a drawing by the late Dr. C. V. Riley, formerly U. S. Entomologist.

Md. Agt. Col. and Exp. St'n,
College Park.

The Forcing House.

Vegetable Forcing after this date will be much easier work than it has been up to now. As the days begin to lengthen, the better light has a telling effect. If the efforts to maintain a supply of vegetables have so far succeeded, there should be no difficulty

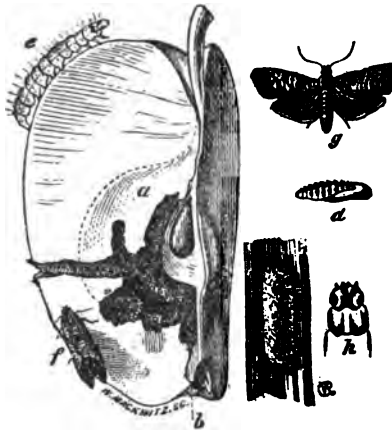


FIG. 14.—THE CODLIN MOTH.

from now on. As I have before stated, rotation of crop is necessary on a private place, and where there is space at command, it is an easy matter to keep up a continuous supply during the winter months.

Beans.—For a private establishment this is a very satisfactory vegetable. By growing them in a temperature of 55° at night, with a rise of 10° during the day, a good yield can be expected, providing air is given at every chance. In watering this crop I find it best to give a thorough soaking, and then to wait until the soil gets fairly dry before watering again; by this method the soil will be kept in good condition. When the soil gets sour, good vegetables are out of the question. As to varieties for forcing, *Ne Plus Ultra* and *Warwick* answer our purpose.

Lettuce.—Some people entertain the idea that a greenhouse is necessary in order to produce good lettuce during the winter months. Good lettuce can be grown in cold frames up till the first or second week in January. *Grand Rapids* is a good variety for frame work, especially in winter. A sowing of lettuce should be made now for setting in the frames in February. *Big Boston* is one of the best for that purpose. It is a good policy to have on hand young plants all the time, for it is an easy matter to throw away what are not needed.

W. TURNER.

The Vegetable Garden.

Good Seeds.—There is a vast amount of difference between reliable and tested seeds procured at a fair price from a responsible firm and those procured from irresponsible parties not conversant with the business. Without good seeds we cannot expect good crops. Cheap seeds are dear at any price, frequently resulting in disappointment and loss. Better buy from those who have a reputation, which gives a reasonable guarantee of purity and freshness.

Government Seeds.—These should be condemned. I have not found them reliable, and usually of varieties not suited to our needs. Most of those we received last year never germinated; it was only a waste of time and ground to plant them. It is better not to depend upon them.

Suitable Varieties.—The mistake is frequently made in the selection of the most suitable varieties of vegetables, usually the largest and coarsest are grown without any regard for quality, such as potatoes, celery, squash, cabbage, tomatoes. The medium sized varieties are more satisfactory for culinary use and for keeping qualities. There are old standards that should always be grown, as *White Plume* and *Sandringham* celery; *Danvers Yellow* onion; *Trophy* and *Perfection* tomatoes; *Thick-leaved*, for spring, and *New Zealand* spinach for the hot months; *Hollow Crown* parsnip; *Nott's Excelsior* and *Laxon's Fillbasket* peas are in my experience the most prolific. The *Banquet Melon*; the popular *Trianon Cos* and *Curled Simpson* lettuce; *Cory*, *Amber Cream*, *Stowell's Evergreen*, and *Country Gentleman* corn; *Early Snowball* cauliflower; *Early York* and *Jersey Wakefield* cabbage. *Brussels Sprouts* are not as well known as they deserve to be. They are the sweetest of all the cabbage family: *Egyptian* and *Dewing's* beets, *Large Pole Lima* and *Golden Wax* beans. *Swiss Chard* is handsome and useful. The *Whitloof* chicory makes a splendid salad for winter use, and is much appreciated by those who have used it. Some of the newer varieties should be tried yearly on a limited scale, until their merits or demerits are discovered, and any suitable ones added to our list from year to year.

The Ashleaf Potatoes.—A correspondent of *AMERICAN GARDENING* recently asked if any subscriber grow these English potatoes. A few years ago I had sent me a peck of *Myatt's Prolific*. They matured early, and proved to be of such fine flavor that I could not keep any for seed. They would prove very acceptable to the table here were they grown and introduced. The *Patterson's Victoria* was a potato highly valued in England for general crop, and was largely planted in many of the best gardens there. It is a potato with a peculiarly toothsome taste when properly cooked, that I well remember, many of the leading families there would use no other. I would like to know if any one has ever tried this potato here. I see it still listed in the English catalogues, thus showing its great popularity.

W. M. EDWARDS, R. I.

Intensive Orchard Cultivation.—An Improved Plan for Orchard, is advised by C. G. Patton, of Iowa. His method is to plant the trees in belts of three rows and about fourteen feet apart, the distance between belts to be from thirty to sixty feet. The open space between belts to be highly cultivated by planting some hoed crop, or after a few years may be sown to clover and cut for a mulch for the adjoining belts. The rows should be run north and south. After the trees are set, cultivation should continue until they are too large to permit it, and the heavy applications of barnyard manure should be spread over the ground occupied by the belts. Low-headed trees are the best.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1896.

PUBLISHED BY

A. T. DE LA MARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt. P. O. Box 1897.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Protection for the Horticulturist. THE position of the horticulturist, with reference to his place in the arena of commerce, is worthy more than a passing note at this time. His interests, as well as those of all who look to the tilling of the soil for a living, demand that there should be equitable legislation for all.

It matters not whether the political opinions and tendencies of the individual lean to free trade or to exclusive tariff; that might have been a question in the past, but the situation to-day is different, and the course must be shaped according to expediency. There seems to be no shadow of a doubt but that the coming year will see large alterations in the tariff schedules; manufacturers of textiles and other goods are looking forward to greatly advanced duty on imports, and so long as one section of persons engaged in catering to the wants of the multitude is to have its interests boosted up, so also in justice, in the name of common humanity, should the welfare of all be equally dealt with. To protect the interest of the man who manufactures in a factory of brick, by means of steam power and modern devices to lessen cost of production, and not, at the same time to render equal assistance to the man who literally manufactures the food for the people employed by the

other, is a manifest robbery from the tiller of the soil.

The horticulturist, unless he be protected on all points, not only in the ultimate products of his work, but also as regards stock, seed, etc., has to purchase other necessities of life, such as clothing, in a closed and highly taxed market, but has to offer in open market, in competition with the world, the products of his own labor, and on which he depends to exchange (in equivalents) for what he lacks.

Therefore, and under these conditions, we declare for protection for the horticulturist. The greatest good of the greatest number. Justice for all!

Growing for Sale. NEVER before was there a time when this subject was of more importance than at the present, and never before were skillful cultivators so exercised concerning the matter. Competition is keen, the markets are exacting, and too much attention cannot be put upon the methods of placing before the public in the best shape possible whatever is raised. To this end the series of articles on "Packing and Shipping" has been started. AMERICAN GARDENING is anxious for the welfare of the greatest number, and asks that the plainly spoken remarks in the series referred to be not misunderstood or taken hardly. The guiding light is the desire to bring home in the most emphatic manner possible, where the weakness rests, and to give readers the benefit of those special advantages it possesses in being able to watch the markets day by day, noting the disposal of all kinds of stock grown on the farm, in the garden, and the greenhouse or forcing house.

This will eventually lead us to speak more in detail about the methods of disposing of stock, but for the present there is much to be said about the preparation for market.

All has not been accomplished in this way that can be done, although daily we notice creditable efforts towards, and real improvement in, this direction. This is very noticeable in the shipping of flowers. While prices are falling lower and lower, greater care and expense are being given to their preparation and shipment.

Those who are not keeping in line with this march of progress will be big losers ultimately; and what is true of one branch of horticultural industry, applies with equal force to growers of fancy stock of all kinds.

Stock for Apples.—Let us hear the experience of some one who has had success in growing the apple worked on the Paradise stock.

A Large Tomato grown under glass was lately brought into this office by J. M. Stutzman, Edgewood Greenhouses, Westfield, N. J. It was a finely grown specimen of Lorillard, and turned the scale at twelve ounces. This variety is one of the most reliable for forcing purposes.

Choosing Varieties of Fruit.

Far too many start into fruit raising by ordering a number of varieties of strawberries, raspberries, blackberries, pears, and apples, only to find in later years, either that the fruit is inferior, or that the trees and bushes do not thrive in their localities. Many of these mistakes are made, in the case of small fruits especially, because of the injudicious "booming" which many small fruit and other growers give new varieties in their annual catalogues. It is often the case that a strawberry that is loudly proclaimed as having all excellencies and no "outs" in one season's catalogue is dropped entirely from the same dealer's next catalogue, because it has proved worthless, but I have yet to hear of such a dealer reimbursing his customers for having invested their money because of his glowing description! The beginner is especially likely to be bitten by these new and untried fruits, for, as a rule, he wants everything "up to date." These new varieties must be better than all that have gone before, according to the catalogues, and he will get in on the "ground floor" in the berry business by starting with them!

Mistakes in small fruits are not so serious as a mistaken selection of pears and apples, for it is unfortunate business to wait ten years for a crop, and then find it a failure. Now then, how shall the young fruit grower make a start in the selection of varieties? As a rule, let novelties alone. Let someone else test them, and cull out the small amount of good from the large amount of almost worthless new varieties. The good will live and you can invest later if it is found adapted to your locality; and this leads to an important point. A variety of fruit that may be of great excellence in one locality may be almost worthless in another, because of climatic or other conditions. One must make his selections, then, according to his location, and the very best plan that I know of for him to pursue is to send to his State Experiment Station and to his State Agricultural or Pomological Society for their lists of all kind of fruits that have been found best adapted to cultivation in the state. The wisdom of years of experience, and of years of careful experiment, will be embodied in these lists, and I know of no state where official attention has not been paid to this subject. The beginner in fruit growing thus has at his command the best experience of those who are able to profit by experience, and to arrive at the truth from experience, as to what fruits will give the best results and the best satisfaction in his own particular locality. The man who will ignore such assistance, and, self-sufficient, rely upon his own inexperience, and upon the glowing words of those who have plants and trees to sell, living, perhaps, under entirely different climatic conditions—the man who will ignore such wise assistance and take his chances, perhaps deserves all the disappointment he will be likely to get. But there are many who do not know of the help their own Experiment Stations and their own Boards of Agriculture and Pomology can afford them, and for such this article is written. WEBB DONNELL.

Against Free Seeds.—The New Jersey State Horticultural Society, at its recent annual meeting held in Trenton, after a full discussion, passed a resolution, by a vote of nearly two to one, that the Department of Agriculture discontinue sending out seeds, on the ground that "the seeds are a nuisance to the farmers, and not even good for chicken feed."

Packing and Shipping.—II.

It is often jokingly said that there is a law of gravity whereby the most rosy cheeked apples will find their way to the top of the basket or barrel; and perhaps it is well that this is so. But growers and packers must remember that the mere placing of a few "extras" or "fancies" on the top of a shipment does not constitute the art of packing; moreover, it would, indeed, be more to their ultimate advantage to allow the process referred to to work itself out in the retailer's store. It is the retailer's special mission to present the best side to the public, and the grower cannot deceive either him or his buyer. When these men attend the market to buy from the commission man they have positively no eye for the artistic merits of the goods; but they are keenly on the lookout for deficiencies, real or apparent, which may be used as levers to depress the prices they must pay. The retailer's buyer looks for the substantial and perfectly certain guarantee that the package contains honestly and squarely what its grade mark indicates, be it specials, fancies, extras, No. 1, No. 2, or culls. In turn there are demands for all of these, and they will be bought at their market value. Do not for one moment let it be thought that the use of slipshod packages is advocated when it is stated that the buyer is not on the lookout for the artistic; for, indeed, there is no one more quick to appreciate neat and thorough packing than this (shall we call him professional?) buyer. This, however, only when all other things are equal.

The agent or broker knows this, and he is not slow to act accordingly.

To be a grower is one thing; to be a successful packer and shipper is another; while to be a salesman is altogether distinct from either. Rarely, if ever, indeed, does a skillful grower combine in his capabilities those of a selling agent, nor is it necessary that he should do so; but the details of packing and shipping he should make his special study, for they concern his end of the problem of distribution at remunerative prices, and are, moreover, under his control solely. As a producer he should make himself conversant with the requirements of the market, and should work in close connection with his selling agent, be in perfect harmony and accord with him, and from time to time seek to know if there be any improvement that he can suggest, either in time, style or method of shipping. The tips and suggestions thus gained, together with observations and pointers gleaned elsewhere, will be greatly to the advantage of the up-to-date, wide-awake grower, and must eventually be of considerable profit to him as against the man who keeps in his shell.

Each succeeding season reveals sterner competition and a more exacting market, no matter what is the nature of the stock, and it is only the man who pays attention to this fact that will come through with satisfaction to himself and demonstrate the unwavering nature of the law here, as in the natural world, that the fittest only can survive.

The Barberry as a Hedge Plant for Iowa, is the recommendation of the N. E. Iowa Horticultural Society. Mr. C. G. Patton, of Charles City, said he had grown the plant for twenty or more years, and that he knew of nothing that would excel it for the purpose of turning stock and rude boys from the grounds; it was perfectly hardy. The fruit is valuable for making jelly.

The Agricultural Schedule.

On January 5, the hearing before the Ways and Means Committee the following presentments were made:

Representative Bowers, of California, in advocating a tariff on fruit, said that it was in the interest of all, the raiser and producer, to raise the present rates on fruit. The law now afforded no protection to the growers and did not yield any revenue to speak of. California could not touch cattle, the Mexican trade had killed that.

It was suggested by a member of the committee that an increase in duty would raise the price to consumers.

Mr. Bowers replied that it would not. On the contrary the fruit growers of his State would guarantee to increase production and decrease prices. On raisins, prunes, plums, and all dried fruits he asked a duty of three cents per pound. This would insure Americans a market and stimulate the industry. If given a chance California would flood the country with certain grades of fruit and furnish an excellent article at a reduced price. On oranges he requested a duty of 25 cents per cubic foot. If the fruit growers were given fair protection some \$16,000,000, which was yearly sent abroad for fruit, would be kept at home.

Senator Perkins, of California, presented the memorial of the fruit growers of California requesting the duties mentioned by Mr. Bowers.

P. B. Armstrong, of California, speaking for the almond growers, said that they had almost been ruined by the present law. He asked for an increase in the duty from 3 to 6 cents per pound, with 10 cents on shelled almonds. Some \$10,000,000 or \$15,000,000 were invested.

The president of the Fruit Buyers' Union of New York presented a memorial in which handlers of domestic produce, as well as dealers in foreign fruit, and nuts, asked that the existing tariff duties on fruit (green and dried), and nuts be left unchanged because:

"Any change in tariff duties will disturb business arrangements already perfected, and, besides entailing losses upon the trade, will deter merchants from embarking into enterprises looking to the extension of the business. * * *

"It may be easily shown that an increase in tariff duties will not benefit home producers. Indeed, an increase in such duties would ultimately work injury to the very interests which protective tariffs are designed to protect and foster.

"We desire also to direct your attention to the fact that the growers of oranges in California are not benefited by high tariff duties on foreign oranges, nor injured by low duties on them. The oranges grown in California are of superior quality and are so much more attractive in appearance than the oranges imported from foreign countries that the two products are scarcely competitive. In the West the California oranges, when obtainable, are used to the exclusion of all other oranges. In the East the fancy varieties of California oranges are in good demand and command high prices. But for this very reason they are regarded as the rich man's fruit and the cheaper oranges of foreign countries are looked upon as the fruit for the masses.

"The extent of the traffic in exporting apples is also worthy of your attention. From January 1, 1896, to October 1 of the same year, there were exported to England and Europe from the port of New York alone, 13,744,543 pounds of dried apples, and from all ports of the United States, 2,633,927 barrels of green apples. During the same period there were also exported from this port to England and Europe fruits other than apples of the value of \$1,700,000, and nuts of the value of \$79,000.

"This country at certain seasons of the year imports from Spain, by the way of England, considerable quantities of oranges and other products. Hence, the imposition of high tariff duties upon fruit and kindred products would affect not alone the business done with Italy and Spain, but as well that transacted with England, France, Germany, Belgium, and other European countries, and our immense export traffic with these countries would be disturbed and its growth retarded. * * *

David Lubin, of California, applied for an export bounty on all agricultural products.

Mr. Leonard Rhone, Master of the Pennsylvania State Grange, said that the agricultural schedule discriminated against the farmers, while the interests of the manufacturers were cared for. He advocated an export bounty on all agricultural products.

State Senator C. C. Brown, of Pennsylvania, also a member of the National Grange, presented resolutions adopted by the Grange, favoring the bounty system.

A. J. Wedderburn, representing the State Grange of Virginia, appealed for an export bounty on agricultural products.

Edward N. Loomis, of Creevey, Loomis & Rogers, representing the produce merchants of New York, presented a petition regarding the regulation of the tariff on imported vegetables, as follows:

"We, the undersigned, merchants engaged in the sale of vegetables, owners of farms in the Southern States, and (or) importers of vegetables from foreign countries, respectfully show:

"That the duty upon potatoes and onions, as in the Wilson bill, was fixed on potatoes 15 cents per bushel, on onions 20 cents per bushel.

"That such duty is almost prohibitive against the early potatoes and onions usually imported from Bermuda and Cuba, the first cost of such produce being on an average of recent years, \$4 per barrel of potatoes, and 60 cents per bushel of onions. The cause of such large value at place of growth, is the high price of labor, and the very small yield per acre, compared with the yield in northern countries.

"That the duty of 20 cents per bushel is equal to 33 per cent. of the first cost of onions.

"That such duties added to cost of production so increase the selling cost in the United States as to deprive the masses from the use of early vegetables.

"That many of your petitioners are owners of, or interested in, southern farms, and are regularly engaged in supplying the principal cities with green vegetables; and

"That such supplies of fresh vegetables from Bermuda will not interfere with vegetables from farms in the United States during the early spring months, and that for many years early potatoes and onions have been purchased in Bermuda, and imported by us into the United States.

"That, therefore, your petitioners respectfully request that the duty on potatoes and onions may be placed at not exceeding fifteen cents per bushel."—John Nix & Co., A. Bennett & Co., E. P. Loomis & Co., I. H. Bahrenburg, Bro. & Co., Wm. Gamble & Co., C. P. Woodworth's Son & Co., Titus Bros., Seaman Lichenstein & Co., Furman & Page, A. G. Hutcheson & Co., Henry Brinker & Co., Olivitt Bros., W. O'Brien & Son.

Mr. Loomis outlined the history of Bermuda trade under previous tariffs, and concluded by urging the placing of a low tariff on new potatoes, onions, and vegetables imported during March, April, and May, while a protective duty is placed on those products during the rest of the year when they enter into competition with home products.

He further said: "We, therefore, petition that the duty on potatoes, onions, and vegetables in their natural state may be as follows: Potatoes grown or harvested in the current year, imported during the months of March, April, and May, 15c. per bushel of 60 pounds. Onions grown or harvested during the current year and imported during the months of March, April, and May, 15c. per bushel. Vegetables in their natural state, other than potatoes or onions, 10 per centum ad valorem."

Representative Russell, of Connecticut, presented the petition of the seed farmers of southern New England, advocating a specific duty, according to the following schedule: Five cents per pound on all turnip, rape, spinach, parsley, beet, mangold. Ten cents per pound on carrot, leek, radish. Fifteen cents per pound on celery, lettuce, endive. Twenty cents per pound on cabbage, kale, onion, salsify, tomato. Twenty cents per bushel on peas and beans. Forty cents per pound on kohlrabi. Fifty cents per pound on cauliflower. All seeds not enumerated 60 per cent. ad valorem.

A committee composed of Burnet Landreth, W. F. Dreer, and W. A. Burpee, all of Philadelphia, appeared in behalf of the seed farmers, seed importers, and laborers. Mr. Landreth urged a specific duty levied on

the bushel or pound and an increase in the rates on garden seeds, claiming that unless the farmer was given practical protection he would in many lines be driven out of the business. Seed growing, he said, was the highest grade of agricultural labor and fully 80 per cent. of the cost of raising seed was expended in labor. There were 256 seed farms in the country, with a total of 169,931 acres, the value of which was about \$18,000,000. He suggested the following schedule: Five cents per pound on all seed of table beets, sugar beets, kale, leek, lettuce, mangel wurzel, parsley, radish, ruta бага, rape, spinach, turnip, and on all vegetable seeds not otherwise provided for. Ten cents per pound on all seeds of carrot, celery, onion, and salsify. Twenty cents per pound on all seeds of cabbage, cauliflower, and tomato. Fifteen cents per bushel of sixty pounds on potatoes. Forty cents per bushel of sixty pounds on all beans and peas. Twenty per cent. on all flower seeds. Five dollars per thousand packets on seeds of every kind in packets. The free list to include mushroom spawn, aromatic seeds, pot herbs, medicinal seeds, castor beans, cotton, canary, clover, hemp, tree, tobacco, mustard, flax, poppy, sorghum, and grass and oil seeds and vetches.

F. W. Kelsey, of New York City, advocated a duty of 10 per cent. ad valorem on all trees, shrubs, vines, and bulbs.

At a later hearing W. C. Barry, of Rochester, N. Y., appeared before the committee urging a duty on fruit trees and nursery stock.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

English Potato.—Replying to H. P., Maiton, Man., I have tried the growing of "Myatt's Ashleaf" potato in this country; some good tubers were brought from England by a friend about seven years ago, at which time I was living at Falmouth, Mass. They grew splendidly, and produced a great crop of extra large tubers, much larger on the average than they grow in England. We thought we were right in it, so far as eating real English potatoes went, but alas, when cooked they were very unpalatable, so soapy and soggy that we soon gave them up, and did not make any attempt to try them a second year. We tried them both as an early and late potato, but with same results. I would very much like H. P. to describe the method of culture, as, under proper conditions, I quite agree that no other "can touch it for an early potato."—JESSE ROBBINS, Carlisle, Pa.

Tobacco as a Window Plant.—Not all flower-lovers may be aware of the fact that the flowering tobacco, so-called, is a half hardy perennial, and that old clumps taken up and potted in the fall of the year, and placed in an ordinary bay window, will commence flowering about New Years, and keep the window gay with their pure white flowers all through the winter months. For several years I have made it a practice to pot up my tobacco plants, which were planted in the spring, and which have been in bloom through the summer, after the first killing frost. I remove the old flower stalks, and all decaying and yellow leaves, and place the pots (6 or 7-inch, as a rule) in a cold frame for two or three weeks, then they are taken to the bay window in the house, where they are kept at a night temperature of from 55° to 65°. In order to keep down the aphids they require a good syringing with tobacco water at least once a week.—L. WILD, Wilmington, Del.

The Mexican Strawberry in California.—After three seasons' trial of the Mexican strawberry, with all the other lead-

ing varieties, we must accord it with being the largest and most productive strawberry in cultivation; the Marshall is far behind it in size, and the Haverland is almost its equal in productiveness. The Mexican strawberry, after the plants get well established, will yield at the rate of three quart boxes of fruit to the single plant. This variety of strawberry should be set wider apart in the rows than most other varieties, on account of its forming such massive fruit crowns; the Mexican strawberry attains a height of from fourteen to eighteen inches; the leaves are quite large, of a dark vivid green; the blossoms are large and staminate. On old plants, the leaves entirely screen the blossoms, so that in early spring, when many other varieties are killed by frosts, the Mexican escapes unharmed, as the large leaves protect the bloom. The fruit is of a beautiful cherry red color, and most deliciously flavored. In our locality, a very heavy crop of berries is always harvested from the Mexican strawberry in November. Young plants yield quite a crop the first season after being set out. At four years of age, the plant has reached its full bearing maturity; it ripens its fruits from medium season to extreme late. For a home market, the Mexican cannot be excelled. It is not a very good shipper; still, it would probably carry well to at least a distance of 500 miles.—S. L. WATKINS, Grizzly Flats, Cal.

The Casabanana.—This new fruit, known botanically as *Sicania odorifera*, is one of great value. It is one of the handsomest climbing vines ever introduced, as well as a most superior fruit-yielding plant. It can be counted upon as a success wherever the melon will flourish, and belongs to that family; it will climb to a height of fifty feet in one season. The fruit is about eighteen inches long, and about three inches in diameter, and is of a brilliant red color when ripe, and possessing a strong pineapple fragrance. This fruit is very superior for preserves, and in an unripe state, it enters into the composition of many kinds of curry. For cold climates, seed should be started in boxes in the house, and afterwards transplanted to the open ground; but in warm climates, the seed can be planted in the open ground in early spring.—S. L. WATKINS, Grizzly Flats, Cal.

Staminate Flower Wanted for Haverland.—Is there a variety of strawberry the same shape and color as Haverland, but with perfect blossoms? I find the Lovett a good variety with which to fertilize Haverland, but wish to find a variety which bears a fruit of the same shape and color as Haverland, only with blossoms strongly staminate. My soil is a clay loam.—C. W. A., South Granby, N. Y.

Old Asparagus Roots.—For the information of A. T. G. (page 7), I give my experience. About ten years ago a neighbor plowed up an old asparagus bed, and as the old roots could be had for the hauling, I concluded to do what I thought a very smart thing, and have a full-bearing asparagus bed at once. So I drove over and got two big wagon loads of these monstrous roots; next I prepared my ground and planted them very carefully. The following spring I was ready to harvest, but, alas! not a single mess of asparagus did I get that was fit to eat. Only a few spindly shoots appeared, and they were so tough as to be utterly worthless. The best way to start a bed is to use first-class one-year old roots. For my own part, I would never use any other.—C. ANSCHICKS.

I am very much pleased with AMERICAN GARDENING. It is one of the best journals of the class that I receive. I would not like to do without it.—DR. T. R. CLARK, Nebraska.

Good Hood's Sarsaparilla

Is Hood's Sarsaparilla, because it cures the severest cases of scrofula, salt rheum, dyspepsia and rheumatism. If you are a sufferer try

The best—in fact the One True Blood Purifier.

Hood's Pills cure Liver Ills; easy to take, easy to operate. 25c.

BUFF LEGHORNS.—Winners for five years. Circular free. GEORGE S. BARNES, Battle Creek, Mich.

SEEDS Early Minnesota Tomato—the earliest. New Wisconsin Golden Salsify—the best. Pkts. 10c. each. C. S. Bond, Geneva, N. Y.

GRAY HAIR MADE DARK By a harmless Home Wash. Also makes the hair grow. Full directions and recipe for 25c. Mrs. A. MUNTZ, 4212 Evans Ave., St. Louis, Mo.

Berkshire, Chester White, Jersey Red and Poland China Pigs. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs. Catalogue. S. W. SMITH, Cochranville, Chester Co., Penna.

BEEKEEPERS! SEND FOR sample copy of **CLEANING IN BEE CULTURE.** A Handsomely Illustrated Magazine and Catalogue of **BEE SUPPLIES.** Valuable book on Bees given FREE to each one who mentions this paper. **THE A. I. ROOT CO., Medina, O.**

OUR NURSERY STOCK is grown on the banks of the Hudson River. It is First-class. Prices are Low. 50 acres of **FRUIT TREES,** Plants, Vines and Ornamental Stock to sell. 1897 Catalogue free. **T. J. DWYER, Cornwall, N. Y.**

FLORA of JAPAN & CALIFORNIA Chinese Narcissus, over 100 varieties of Lily Bulbs, Camellias, Palms, etc. **HARDY PLANTS,** Japan Maples, Iris, Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan. Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above. **M. N. BERGER & CO., San Francisco, Cal.** (ESTABLISHED 1887).

Pea Growers!

Will some of our Canadian friends oblige us with names and addresses of reliable growers of this stock for seed. Information wanted on behalf of a foreign firm intending to place their future orders in that country. Address

Business Manager, American Gardening.

Maule's Seeds LEAD ALL Have done so for years, and are as far ahead in '97 as ever. If you want the Best Garden you have ever had, send address on a postal TO-DAY for New 1897 Seed and Plant Book. It is a wonder. Address **WM. HENRY MAULE, Philadelphia, Pa.**

Some Problems in Experimental Horticulture.*

By PROF. W. M. MUNSON, Maine State College.
[Concluded from page 24.]

As a corollary to the subject of plant breeding we may consider for a moment

Acclimatization.

Acclimatization may be briefly defined as the inuring of a plant to a climate at first injurious. From the time of Lindley (1799-1865) many of the best horticulturists have contended that acclimatization does not occur; that plants cannot be modified so as to prefer conditions other than the natural ones. "All plants," says Lindley, "demand a particular climate." * * * We have to accept these conditions as absolute and ultimate truths without explanation and without remedy. We have no power over the conditions of the plant itself.** Is this true? Is it impossible that any individual plant may become modified in constitution or in habit and thus adapted to different climates? Most records on this point are negative, and the general opinion is that a change in the individual plant is impossible. The truth can only be determined by growing the same plant in different climates. This may be done—has been done—by taking cuttings from the same plant and growing them in different regions. It is said that grape vines taken from France to the West Indies rarely succeed, while those imported from Madeira or the Canary Islands thrive well.** Now, since the vines in Madeira came originally from France, there must have been modification of the original plant to bring about this condition. To make the statement of general application we may say: If a plant be propagated by cuttings, and these cuttings be taken from the original home to two other countries, and thence after a period of years to a fourth locality, if marked variations are found to have arisen we must conclude that there has been a modification of the original plant.

Acclimatization not infrequently occurs by variation in the offspring of cultivated plants, and it is in this direction chiefly that we must work in adapting plants to new conditions. By observing a plantation of beans or corn or tomatoes after a frost a marked difference in the hardness of individuals will be noticed. Now, by selection from these plants as a basis, harder strains may be produced. The Russian fruits are very good illustrations of this point. They have been bred in a cold climate so long that they are much harder than other individuals of the same species grown elsewhere. The Russian apricot is simply a hardy race of the common apricot—*prunus Armeniaca*—yet it will often stand a temperature of 30 below zero.

Without further illustration we may conclude that acclimatization does occur. In other words, that plants may be so changed under the hand of man as to become adapted to widely different conditions; and, further, that by applying the principles of selection locally or otherwise valuable races may be produced in trying climates.

*Read before the Vermont State Horticultural Society at Burlington, Dec. 4, 1896, and communicated by the author.

**Cited by Crozier, Modification of Plants and Climate, 27.

**Darwin, Animals and Plants under Domestication, 11, 298, cited Labat in Card. n., 1863, 235.

The field is a specially important one for northern New England and for the Northwestern States.

Domestication.

Domestication, or the inuring of plants to cultivation, offers a field much wider than is commonly supposed. In fact, there is little doubt that there are more edible fruits and vegetables still in a wild state, but susceptible of improvement, than are now grown by man.

It is but few years since De Candolle wrote: "A noteworthy fact is the absence in some countries of indigenous cultivated plants. * * * The United States, in spite of its vast territory, which will soon support hundreds of millions of inhabitants, only yields as nutritious plants worth cultivating the Jerusalem artichoke and the gourds."** This statement is far from correct, since our woods and fields have already yielded us all our outdoor grapes, our blackberries, raspberries and cranberries, our best gooseberries, our hardest plums, some of which are very good, and many other fruits and vegetables; while there are probably fifty to seventy-five wild species which are worthy of cultivation. The difficulty, as stated by Dr. Masters, "is rather in overcoming the prejudices against new edibles and in getting them cultivated, than in discovering them."

"Practical Problems."

If the production of valuable types is important, care in rearing is not less so, and many of the questions concerning the treatment of fruits and vegetables are legitimate subjects for the most careful study at our experiment stations. But I would not include in this category such questions as, How shall we cut potatoes? Will plants grow if set upside down? etc. Such questions may best be answered by a single sentence: Use common sense!

Among the questions which may very properly receive attention, however, we may suggest, first of all, the treatment of orchards, with reference to feeding, culture and pruning. Little careful and accurate work has been done along any of these lines. True, in most of our manuals of pomology we have the accumulated traditions of years, but many of the statements made are based upon personal opinion rather than upon accurate data. One man is positive that the only proper treatment for an orchard is to practice clean culture—a position which is entirely untenable in many of the best orchard sections of New England. Another is sure that the best treatment is to turn in the sheep; while his neighbor is quite as positive that hogs will do better service. One man would never use stable manure; another would never use "chemicals." One man would prune severely; another regards pruning as unnatural, and would never use a knife. And so the problems multiply.

Small fruits offer problems of like importance. We know—or think that we know—that the character of the soil and the nature of the food have a marked influence on the quality and physical character of fruit, but little careful work has been done. About the only reliable data that we possess are the reports of Stone, of Indiana, and Goessman, of Massachusetts. The most widely different views are held as to time and methods of pruning, and the importance and best methods of winter protection. The origin, development and classification of varieties are

*Origin of Cult. Plts., 448.

Scott's Emulsion makes the blood richer and improves the circulation. It increases the digestion and nourishes the body. It corrects diseased action and strengthens the nervous system. In a word, it places the body in the best possible condition for preventing the germs of Consumption from beginning or continuing their work. In that one sentence is the whole secret. Book covering the subject very thoroughly sent free for the asking.

SCOTT & BOWNE, Chemists, New York.

Genuine Danish

* Cabbage and Cauliflower Seed

—FROM—

R. WIBOLTT.

Frøhandel in
Nakskov, Denmark.

Price list
on application.

ELLIOTT'S SEED

ANNUAL FOR 1897.

Now Ready. Mailed free on
application, by only mention-
ing AMERICAN GARDENING.

WM. ELLIOTT & SONS,

54 & 56 Dey Street, NEW YORK.

GREGORY'S HOME SEEDS GROWN SEEDS

are known the country over to be exceptionally reliable. They have a reputation of forty years back of them. They are sold under three warrants. It would not be wise to plant without consulting Gregory's Vegetable and Flower Seed Catalogue for it describes with engravings several new vegetables of great merit to be found in no other. Catalogue sent free to anyone anywhere.

J. J. H. GREGORY
& SON,
MARLBHEAD,
MASS.

GREGORY'S
SEEDS
CATALOGUE
FOR 1897

When ordering goods subscribers will confer a favor on the publishers by stating they saw the advertisement in AMERICAN GARDENING. We admit only responsible business houses in our advertising columns. Avoid delay and disappointment by giving name and address legibly.

also an important study—the problems concerned with which can only be made at an experiment station. The problems attending the forcing of fruits and vegetables under glass are by no means solved, and this is one of the important industries in many sections of New England. Studies of methods of construction; of methods of heating and ventilation; of the practice of sub-irrigation; of the influence of the electric light, and various other questions, have already received attention. Some of them, at least, have been considered with the double purpose of ascertaining facts which should be of immediate value, and of studying the physiological effect on the plants and thus deducing general principles. But there is still opportunity for valuable work in this line.

Propagation affords many lines of investigation that are of vital importance. For example, the mutual influence of stock and scion; the relative value of seedling stocks from different sources; the importance of top-working certain varieties, and many others. Vegetables and ornamental gardening also offer numerous important lines of investigation which, however, need not be considered at this time.

We have glanced but hastily at a very few of the problems which confront a horticulturist. The field, however, is limitless.

Central Illinois Horticultural Society held its annual meeting at Carthage, Ill., December 19 last. The program was enlivened with discussions of the following papers: "Why We Cultivate," by H. L. Dean, of Jacksonville, Ill.; "Advancement in Horticulture During the Year," by Prof. J. C. Whiten, Columbia, Mo. A revision was made of the fruit list for central Illinois. The following officers for the ensuing year were elected: H. H. Augustine, Normal, Ill., president; C. G. Winn, Griggsville, Ill., first vice-president; Sam'l Black, Clayton, Ill., second vice-president; H. L. Doan, Jacksonville, Ill., secretary; J. T. Johnson, treasurer. The time and place of the next meeting is to be decided on later.

Bright Prospects.—In a lecture on "Obstacles to Successful Farming, and How to Overcome Them," the Hon. William Sessions, secretary of the Massachusetts State Board of Agriculture, said: "Prices of farm produce now average low, because the production of staple products has been carried on to such an extent as to cause the supply to be beyond the demand. Labor saving machines, that have enabled a man to do the work of a number, have in a great measure brought about this state of things. The production of the population that uses farm products is now increasing faster than farmers, and whereas a few years ago it was 5 per cent. it has risen to 50 per cent., and the outlook at present is that soon the demand will be such as to increase prices, and then the farmer will be better remunerated for his labor. But these non-producers are not to be satisfied with inferior products, but they want the best, and the man who can supply that class with what is wanted, and when wanted, will be sure to obtain prices that will make his work successful."

The American Fertilizer.—The 1897 issue of the Manual of the Bradley Fertilizer Co., is to hand. It is a tastily gotten up book, and has photo representations of what the well known fertilizers do. There is also an article on the Army Worm.

Peanuts.—The Farmers' Bulletin, on the cultivation of Peanuts, which was issued by the U. S. Dept. of Agriculture, has been reprinted, and may be had on application.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Squashes as Climbers.

In a foreign print, under the heading of "Gourds for Ornaments," we find recommended the Ohio Squash, and "another equally good American type," the Hubbard Squash. This seems wholly funny to us on this side, especially when we find our prosaic culinary Hubbard referred to as "well adapted for covering buildings." But our amusement changes to amazement when in the same category appears a certain mammoth, which often weighs over a hundred pounds when well grown. We find, however, from the same article, that when trained up a building, the growth requires support. It is a little known fact that some of the gourds have most beautiful crimped blooms—blooms which, it may be ventured, not one person in fifty could give a name to, if shown them without the accompanying foliage. A bowl filled with palest canary-colored crimped and fluted blooms of good substance might well ornament the most aristocratic of dining tables.

The Minorca for Suburbanites.

The secretary of the London (Eng.) Minorca Club is evidently the right man in the right place, because he believes in the Minorca with a full-hearted belief, and is ready to give his reason, therefore. For the suburbanite, he thinks this fowl peculiarly well fitted, because, as he says, "the Minorca hen is the most silent of her kind." From a purely practical point of view he considers the Minorca unequalled. The waste he affirms to be the least in proportion to weight of carcass when dressed; the weight of eggs per year is probably the greatest given by any breed, and the breed is to be strongly recommended to those who want eggs in autumn when eggs are scarce. This is the testimony of a man who states himself to have had experience with nearly all breeds. It would seem that the black variety was the one he had most in mind, since he refers to it as the fowl par excellence for town fanciers possessed of small runs, on account of its color. In close quarters light plumaged fowls became unsightly through soiling.

Care of Roosting Platforms.

No poultry raiser of any consideration will in these days build a roost without its accompanying platform for the droppings. Among the things that may be purchased, lime and land plaster hold the first place in ordinary recommendation, as an absorbent and purifier for these boards. Cheaper and, in the opinion of many, quite as good, are sand, loam, and coal ashes. The last may be used just as dumped from the stove. They are not quite so easy to remove in this form, but as it means less work otherwise thus to use them, clean platforms may be more of a certainty than when some other absorbents are used. Clean, dry loam, when at hand, can hardly be bettered. Personally, we prefer either it or coal ashes to lime and plaster, even though the latter were not more expensive.

Location as a Factor in Success.

A very large—too large—proportion of men live where their fathers lived. Be it plot or farm, if in a bad location, it is well worth while to do some figuring to see if a change would not be for the better. A good market is the keynote to success. The best of work may often prove valueless, if the products of it are unsalable. Select a good location.

A Lost Voice.

Advertising will do a great many things, but it won't bring about the return of a lost voice. The best thing to do is to begin, at once, the use of the sovereign cure for all affections of the throat and lungs—Bronchitis, Asthma, Croup, Whooping Cough, etc. It has a reputation of fifty years of cures, and is known the world over as

AYER'S
Cherry Pectoral.

The Value of Cleanliness.

When all things are locked in ice, the neglect of the poultry house for a few days is scarcely noticed. But as the thaw comes, ah! our nostrils! What an offense those platforms left for a day uncleaned. At such time we are not so loth to agree with the authority who asserts that the fumes from filthy platforms may cause a greater drop in number of eggs than can be made up by the entire value of the droppings. Ammonia as steady diet cannot be recommended as an egg food.

HAVE you a garden? Do you know the best varieties of everything to plant in it? The best gardeners in the world are giving their experience every week in *The Rural New Yorker*. Is not their experience worth \$1 a year to you? We can send it and AMERICAN GARDENING both one year for \$1.80, and your money back for *The Rural*, if you want it.

GAME COCKERS? Send 50 cts. for a monthly journal devoted to Game fowls. Sample 5 cts. **GAME FANCIERS JOURNAL**, Battle Creek, Mich.



MONITOR-INCUBATOR

Illustrated Catalogue for stamp. Medal and Diploma awarded at the World's Fair. A. F. WILLIAMS, 76 Race St. Bristol, Ct.



BETTER THAN A DAIRY FARM

is a poultry farm. More money and less labor and expense. All proofs in our NEW POULTRY GUIDE FOR 1897, 100 pages printed in colors sent for 15 cents. Address JOHN BAUSCHER, Jr. Box 28, Freeport, Nl.



HATCH Chickens BY STEAM

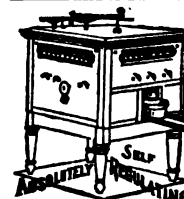
With the MODEL

EXCELSIOR Incubator

Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatchery made. GEO. H. STABLE, 114 to 122 N. 6th St. Quincy, Ill.

THE JOY OF SUCCESS

is sure to follow the use of the New Successful Incubator. Its just like making any other sure and good investment. Regulates its heating to a nicety; needs no watching; generates its own moisture. Hatches every egg that can be hatched. Sold under a positive guaranty. All about it in Book on Incubation and Poultry. Sent for 6c in stamps. Address DES MOINES INCUBATOR CO., Box 22, DES MOINES, IA.



INCUBATORS

The OLENTANGY Incubator has proved to be the best. Have taken prize after prize. Brooders only \$5.00. Before buying elsewhere, send for free description and testimonials. Also breeder of 40 varieties of high-class poultry. 110 yards. 110 houses. Address G. S. SINGER, Cardington, O.

When writing to advertisers please mention AMERICAN GARDENING.

N. Y. Wholesale Market Reports.

Business in hothouse and fancy stocks of all kinds is at a very low ebb; flowers of all kinds, whether in first or low grades, are selling more cheaply than ever before known. This may be some consolation to growers of hothouse vegetables, fruits, etc., although a poor one. It is very apparent that the pulse of the market in all divisions beats in unison so far as regards fancy stock, while the methods of distribution in each branch may differ widely.

Prices differ but slightly from those quoted last week, except that they are less firm.

Hothouse lettuce has been seriously interfered with by influx of Florida stock; dealers are wishing for a good freeze in that section.

Mushrooms are still in oversupply, and very low prices prevail even on high-class goods.

Cucumbers are in fair demand at from 75c. to \$1.50 per dozen. A few have realized \$1.75 per dozen.

Tomatoes, when in good condition and color move fairly well, but much of the stock is not up to standard.

Radishes moved freely at \$3 per 100 bunches.

The demand for hothouse strawberries shows a little improvement with prices stationary at \$4.50 per quart, for No. 1 grade.

Shipments of European grapes, light; Belgians seem to lack color, apparently the English grown article is the best taking it all round.


Apples.		
Spitzenburg, fancy, per bbl.	\$1 75	— \$3 25
Spitzenburg, common to fair, per bbl.	1 00	— 1 50
Northern Spy, State, per bbl.	1 25	— 1 50
Baldwin, w'n N. Y., fancy, per bbl.	1 25	— 1 37
Baldwin, w'n N. Y., p'me, per d-h. bbl.	1 12	—
Baldwin, up-river, prime, per bbl.	90	— 1 00
Greening, Vermont & n'th fancy, per bbl.	1 25	— 1 37
Greening, w'n N. Y., p'me, per d-h. bbl.	90	— 1 00
Greening, up-river, per bbl.	90	— 1 00
Greening and Baldwin, ordinary, per bbl.	65	— 85

Grapes.		
Catawba, w'n N. Y., gd to fcy, 4-lb. bask.	10	— 12
Concord, w'n N. Y., prime, 4-lb. bask.	9	— 10
Concord and Catawba, inferior, 4-lb. bsk.	6	— 8

Vegetables.		
Beets, Florida, new, per bush, crate.	50	— 75
— Florida, new, per 100 bunches.	2 00	— 4 00
— Charleston, new, per 100 bunches.	3 00	— 4 00
Brussels sprouts, per qt.	5	— 8
Cucumbers, Florida, per crate.	2 00	— 5 00
Cabbages, per 100.	3 00	— 4 00
Cauliflowers, extra fancy, per bbl.	5 00	— 7 00
— fair to prime, per bbl.	2 00	— 4 00
— California, per crate.	3 00	— 4 00
Celery, flat bunches, per doz. bchs.	50	— 1 00
— fancy large, per doz. stalks.	40	— 50
— average best, per doz. stalks.	20	— 35
— small to medium, per doz. stalks.	10	— 20
Egg plants, Fla., per 1/2 bbl. box.	1 00	— 2 00
— Florida, per bbl.	2 00	— 4 00
Kale, Norfolk, per bbl.	40	— 50
Lettuce, Florida, per 1/2 lb. basket.	50	— 1 25
— Eastern, per dozen.	25	— 75
Onions, Eastern white, per bbl.	4 00	— 6 00
— Eastern red, per bbl.	3 25	— 3 50
— Eastern yellow, per bbl.	3 00	— 3 25
— State and w'n. yellow, per bbl.	2 50	— 2 75
— Western, white, per bbl.	2 50	— 6 00
— Western, red, per bbl.	2 50	— 2 75
— Orange Co., white, per bag.	2 50	— 4 50
— Orange Co., yellow, per bag.	2 50	— 3 00
— Orange Co., red, per bag.	2 50	— 3 25
— Bermuda, per crate.	1 75	— 2 00
Peas, Florida, per crate.	1 50	— 2 25
— Florida, per basket.	1 50	— 2 50
Peppers, Florida, per crate or carrier.	75	— 1 25
Squash, Florida, white, per crate.	50	— 75
String beans, Florida, wax per crate.	1 50	— 2 50
— Florida, express, basket or crate.	2 00	— 2 75
— Florida, green, freight, per crate.	1 50	— 2 50
Spinach, Norfolk, per bbl.	40	— 1 12
Turnips, Canada, Russia, per bb.	60	— 70
— J'y and L. L. Russia, per bbl.	60	— 75
Tomatoes, Southern Florida, per carrier	1 50	— 3 50

Some Facts About an Incubator.—The Improved Monitor Incubator is a thoroughly and honestly built machine. The heat regulator is accurate, and obviates all necessity of watching the incubator. A. F. Williams, of Bristol, Conn., the manufacturer, will mail a large book of valuable information for poultry raisers, to any one who will cut out and send him the advertisement of the Monitor Incubator that appears in this issue.

Columbia Calendar for 1897.—The twelfth annual issue of the Columbia Pad Calendar has made its appearance. Among the topics treated are bicycling, outdoor life, and good roads. The cycling fraternity, to say nothing of the general public, has acquired a decidedly friendly feeling for the Columbia Calendar, and its annual advent is always looked forward to with interest and pleasure. One feature of the calendar is its neat stand, so arranged that the block can either be used upon the desk or hung upon the wall. The calendar can be obtained for five two-cent stamps by addressing the Calendar Department of the Pope Manufacturing Company at Hartford, Conn.



IN THE COUNTRY HOME

you need constantly on hand a safe, sure and effectual remedy for the ordinary ills of life; one which will meet the requirements of all emergency cases and work a permanent cure.

Warranted Safe Cure

has done this for many years on four continents.

CURES....
Bright's Disease,
Urinary Troubles,
Female Complaints,
General Debility,
Malaria,
and all diseases arising from disordered Kidneys and Liver.

Ever ready to hand.
Large bottle or new style smaller bottle at your nearest store. Be honest with yourself and try a bottle.



NEW PLUMS

TATGE
The Best.
MILTON
The Earliest.
CHAS. DOWNING
Most Beautiful.
Send for catalogue.
Silas Wilson Co.,
Atlantic, Ia.

HARDY SHRUBS AND CLIMBERS.

Ghent Azaleas, Azaleas Mollis, Hardy Roses, Ampelopsis Veitchii, Clematis Panchulata, RAMS, CONIFERS, IRIS KAMPFERI, EULALIA JAPONICA, with all hardy herbaceous plants and Grasses suitable for fall planting. Catalogues on application. High-class Plants for the conservatory, greenhouse, lawn and grounds of country places a specialty.

F. R. PIERSON CO., Tarrytown-on-Hudson, N. Y.



We have the largest and finest Collection of **PALMS, ORCHIDS, FERNS** and **FOLIAGE PLANTS** for Conservatories, Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting. Places and furnishing stock (free).

SIEBRECHT & SON'S,
New Rochelle, N. Y.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.
Ventura-by-the-Sea, - California.

When answering advertisements please mention American Gardening.

FOR \$4 we will send *Leslie's Weekly* (formerly *Frank Leslie's Illustrated Weekly*) and *AMERICAN GARDENING* to any address, one year. *Leslie's* is one of the most attractive of New York's numerous illustrated weeklies, and its subscription price alone is \$4 a year; therefore, it will be seen that our offer is a very liberal one. Address your orders to *AMERICAN GARDENING*. Sample copies of *Leslie's* on application.

ONE YEAR FOR 10 CENTS
We send our monthly 16-page, 40 col. paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents, if you send the names and addresses of six friends.
WOMAN'S FARM JOURNAL, 4215 Evans Ave., Saint Louis, Mo.

POULTRY BREEDERS! Send 50 cts. for a 30-paged monthly devoted to Poultry, etc. Sample 6 cts. **MICHIGAN POULTRY BREEDER**, Battle Creek, Mich.

The American Kitchen Magazine

A magazine for every up-to-date house-keeper. The suggestions contained in a single number are worth more than a year's subscription. Price, \$1.00 a year. Sample copies free. **SPECIAL.**—We will send *AMERICAN GARDENING* and *AMERICAN KITCHEN MAGAZINE*, both one year, to any address, for \$1.50.

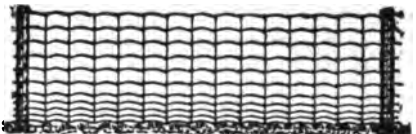
AMERICAN GARDENING, P.O. Box 1697, N.Y.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.60.

THE OHIO FARMER is a large, 30 page weekly, 41 per year. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for Illustrations, Correspondence and Market Reports than any other of its class. It is the Best and Costs no more than others. Send for a **SAMPLE COPY** to **THE OHIO FARMER**, Cleveland, O.

THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1898—14 months, if ordered at once. Address all orders to **AMERICAN GARDENING, P. O. Box 1697, New York.**



PALACE CAR OR HAND CAR.

If you were going on a journey and the P. W. W. F. Co., offered you a reasonable rate over their "Coiled Spring Route," splendid service, safety guaranteed—would you take it? Or to save expense, would you "pump" yourself over the road on a hand car? If you choose the latter, be sure the hand car has the right of way.

PAGE WOVEN WIRE FENCE CO., Adrian Mich.

EXTRAORDINARY OFFER!

The Youth's Companion

to 1898, including the Christmas, New Year's and Easter Double Numbers for two years, the Twelve-Color Companion Calendar for 1897 (the most costly gift of its kind *THE COMPANION* has ever offered), and

American Gardening,

Both papers to Jan. 1, 1898, for only \$2.00 in advance.

Above offer is for new subscribers only to both papers.

YOUTH'S COMPANION (new) and **AMERICAN GARDENING** (renewal), including all the above to Jan. 1, 1898, \$2.25.

YOUTH'S COMPANION (renewal) and **AMERICAN GARDENING** (renewal), including all the above to Jan. 1, 1898, \$2.75.

Address your orders to

AMERICAN GARDENING P.O. Box 1697 NEW YORK.

When ordering goods subscribers will confer a favor on the publishers by stating they saw the advertisement in *AMERICAN GARDENING*. We admit only responsible business houses in our advertising columns. Avoid delay and disappointment by giving name and address legibly.

SURE CROP! MUSHROOM SPAWN

LILIUM HARRISII. DUTCH BULBS.

Illustrated Bulb Catalogues on application.

WEBER & DON, Seed Merchants and Growers,
114 Chambers St., New York City.

Business Cards.

Cards will be inserted under this heading at **TWO CENTS PER WORD** each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1937, New York City.

Situations Wanted.

Advertisements will be inserted under this heading at **ONE CENT PER WORD** each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

WANTED.

[Rates, etc., same as in "For Sale" column.]

BY women, each with an infant or young child; situations in the country (general housework, plain cooking, etc.) in New York and adjacent States. Small wages expected. Railroad fare paid by Association. Apply State Charities Aid Association, 106 East Twenty-second St., New York City.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at **TWO CENTS PER WORD** each insertion, payable in advance.

The address will be charged as part of the advertisement, and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

STRAWBERRY PLANTS for sale. Catalogue free. Charles Howard, 3 Johns, Md.

FRUIT RANCH, 13 acres choice fruit, 2 years old; two miles from town of 2000. \$1500. Albert Jacobs, Delta, Colo.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedsman, Rochester, N. Y.

STRAWBERRIES, Potatoes, Seeds. Send to the Rocky Comfort Gardens for the brightest little catalogue published, with up-to-date prices. Wm. A. Olds, Okemos, Mich.

STRAWBERRY PLANTS, Clyde, best early perfect flowering variety ever introduced. Sixty varieties, best plants at lowest prices. Catalogue free. Enos W. Dunham, Stevensville, Mich.

FOR SALE. Country place about three acres, 85 miles from New York; house large, arranged for two families, heated by steam; new greenhouse 20x30, poultry houses and yards, fruits, large and productive garden, very convenient and accessible, very desirable for gardener and flower grower; a gentlemen's residence. Address Henry S. Concklin, 36 Court St., Brooklyn, N. Y.

WHITE FLEET CELERY; paper tubes; how to make and use them. Photo-engraving 5x7 inches, of first prize celery at State and County fairs and the two girls who grew it. Price, 10 cents. Sample tube, 10 cents. First prize celery seed, 10 cents per packet. Red cabbage seed, first over all comers at Rochester, State and County, 10 cents per packet. Richard Branson, Market Gardener, Syracuse, N. Y.

GLADIOLI, CANNAS, OLIVIAS, Souchet and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings, Cannas, Italica, Austria, and best standards. New Hybrid Clivia. Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.

Colorado Springs, Col.

HANDSOME GREENHOUSE FOR SALE.

Situated in the center of the city of Colorado Springs, where the climate is adapted to the growing of all species of flowers. Land 100 by 150, with 12,000 square feet of glass; steam-heat, electric light, first-class boiler and machinery, thoroughly equipped and in running order. The most complete establishment of the kind west of the Mississippi River.

Price, \$30,000.

Address Messrs. **VARNUM and HARRISON,** Counselors-at-law, 62 William Street, New York City.

PRIVATE GARDENERS.

Appointment.

P. E. Franken has been engaged to take charge of the gardens, etc., of C. W. Hyde, Greenwich, Conn.

American Horticultural Society.

This is the new title which has been bestowed upon the recently formed "American Gardeners' Society." The Executive Committee of that body recommended the change of name, and at a meeting of delegates from outside societies called by the secretary of the National Society, held in the Mott Memorial Hall, New York City, on Monday last, Jan. 11, the new title was unanimously adopted. President J. M. Hunter occupied the chair at the meeting referred to, and stated its objects. He pointed out the need of such a society in America and the elevating influence it would exert on the cause of horticulture generally; he addressed himself more particularly to the gardeners, who, he said, "had made but a sad mark in the world up to date," and urged them to assert their rightful position. The gardener was "the pulpit of the horticultural world." He charged the horticultural press with not having rendered that assistance to the endeavor to form a national society to which it was entitled. In his closing remarks he asked those interested to set aside petty jealousy and guard against self-aggrandizement in the carrying on of the work of the newly formed society.

The time of the meeting, which lasted over three hours, was taken up by a discussion of the constitution and bylaws, in which delegates from Pittsfield, Mass.; Monroe County, N. J.; Monmouth County, N. J.; Dutchess County, N. Y.; Westchester County and Floricultural Society of New Jersey, took part. About sixty persons were present.

The preamble sets forth the objects of the society as follows: "To provide a more perfect organization for the advancement of all branches of horticulture, to establish a national bureau of information and registration in all horticultural matters, to promote the interest of its members individually and collectively."

All interested in horticulture are eligible to membership.

The affiliation of auxiliary societies shall be by delegate. Each auxiliary shall be entitled to elect one delegate to every twelve members in good standing, and shall pay to the national treasurer an annual fee of \$5 for each delegate.

It shall be the duty of the National Board to furnish the auxiliaries, whenever possible, with lecturers and essayists and otherwise assist in disseminating useful information in horticultural matters, any reasonable cost to be borne by the society before which the essay is read.

The secretary shall keep a directory of all gardeners and an employment registry, whereby members may be able to procure assistants, and patrons and others provided with capable gardeners, and also conduct a bureau of information for the use of members of the society.

The national officers and Executive Board shall be elected by ballot at the annual meeting in November of each year.

The society shall hold an annual exhibition and public convention for the purpose of discussing and creating a greater interest in American horticulture, to which all members of auxiliaries of the society shall be invited.

The life membership fee was fixed at \$50. After adjournment the delegates attended the "smoker" tendered them by the New York Florists' Club, which was thoroughly enjoyed.

The official delegates from other societies were: J. G. McArthur, representing the Berkshire County Gardeners and Florists' Club, Pittsfield, Mass.; A. Herrington, Morris County Gardeners' and Florists' Club, Madison, N. J.; N. Butterbach and G. A. Steele, Monmouth County Horticultural Society, Oceanic, N. J.; Peter Duff, New Jersey Horticultural Society, Orange, N. J.; W. Gomersall, Dutchess County Horticultural Society, Poughkeepsie, N. Y.; A. L. Marshall and H. Spavins, Westchester County Horticultural Society, Mount Kisco, N. Y.; J. M. Hunter, Hempstead (L. I.) Gardeners' Club.

Other persons present included: J. I. Donlan, secretary, New York; John Shore, Harrison, N. Y.; A. A. Taaffe, Irvington, N. Y.; G. H. Hale, Bellport, L. I.; W. Duckham, Madison, N. J.; Joseph Manda, South Orange, N. J.; F. L. Atkins, Short Hills, N. J.; T. Harvey, Stamford, Conn.; Wellington Kennedy, Red Bank, N. J.; Herman Staye, Little Silver, N. J.; James Dowlen, Seabright, N. J.; Robert Millikan, Seabright, N. J.; Max Richter, Port Richmond, S. I.; R. Grigg, Coldspring, N. Y.; A. J. Manda, New York; H. Cotterell, Tarrytown, N. Y.; R. Richtes, Irvington, N. Y.; W. Anderson, Mamaroneck, N. Y.; Peter McDonald, New York; C. H. Atkins, Madison, N. Y.; E. J. Brown, 378 Forty-sixth street, Brooklyn, N. Y.; R. Jenkins, Jr., Rye, N. Y.; W. H. Harvey, Port Chester, N. Y.; A. Grierson, Rye, N. Y.; C. Elliott, 54 Day street, New York; R. Wright, Newport, R. I.; G. Caton, Tarrytown, N. Y.; T. Harrison, Rhinecliff, N. Y.; J. R. Fotheringham, Tarrytown, N. Y.; A. L. Don, New York; W. Bartholomae, Kings Bridge, N. Y.; W. G. Sage, Kings Bridge, N. Y.; Owen G. Owen, Monroe, N. Y.; J. H. Troy, New York; J. Fursie, Yonkers, N. Y.; C. W. Ward, Queens, L. I.; C. Webber, New York; R. Angus, Tarrytown, N. Y.; R. Brett, Yonkers, N. Y.; R. Mo-Innes, Montclair, N. J.; A. Wengert, Bay Ridge, N. Y., and C. Weising, Brooklyn, N. Y.

New York Gardeners' Society.

A very largely attended meeting was held on Monday last after the convention of the National Society. The essayist of the evening was Mr. W. Scott, Tarrytown, N. Y., who read a paper upon grape growing under glass. This proved to be a most valuable and practical treatise upon the whole subject, which was cleverly and skillfully handled by the lecturer. This paper will be published in full in next issue.

Considerable discussion followed, being taken part in by Messrs. Herrington, Shore, Hunter, Withers and Marshall. The points brought out were: It is possible to move established vines; preference should be given to inside and outside borders; don't make borders too deep, three feet six inches should be the extreme; leaves on young vines, ripening up too quickly are induced by excessive potash in the soil, too much bone meal and inability to take care of the sap flow; Gros Colmar grapes improve by keeping; there is no need to syringe vines after the bunches are set, sufficient moisture can be supplied by damp floors, etc.; give side ventilation in May, make the borders all at one time.

Oceanic, N. J.

The regular meeting of the Monmouth County Horticultural Society was held on Friday, Jan. 8. The most important business of the evening was the election of delegates to attend the convention of American gardeners. The delegates chosen were as follows: Robert Millikan, Seabright; James Dowlen, Rumsen Road; G. A. Steele, Little Silver, and Wellington Kennedy, Red Bank. The president, Mr. Butterbach, read a paper on "Propagating Carnations from Cuttings."

Poughkeepsie, N. Y.

The annual meeting of the Dutchess County Horticultural Society was held Jan. 6. The following are the officers elected for the ensuing year: President, Mr. George Salford; vice-president, Herman Asher; treasurer, James Sloan; secretary, Wallace G. Gomersall; assistant secretary, William Salford. Sixteen new members were elected, making an addition for the year of forty-seven. The number of members on the roll is now ninety-nine. The treasurer's report showed a good credit balance. During the year a beautiful inlaid gavel and marble slab was presented to the society by Mr. John C. Galvin. The secretary's report showed the chrysanthemum exhibition had been most successful. There were 157 exhibits staged for competition, besides a number of splendid exhibits for exhibition only. It was suggested that more classes should be made for private gardeners; that a challenge trophy should be offered for competition among regularly constituted societies, to be the property of the

society winning it three times in succession; also that where chrysanthemums were exhibited six to one vase, that ferns and foliage be used in arranging the blooms. The vases of twenty-five blooms, arranged for effect with foliage, was considered the most attractive exhibit in the last exhibition. It was suggested that a private gardeners' class, as well as open class, be made of this exhibit.

Mount Kisco, N. Y.

A number of florists and gardeners met at Odd Fellows' Hall on Tuesday, Jan. 6, for the purpose of organizing a gardeners' society. Judge J. H. Crane occupied the chair and J. I. Donlan acted as secretary pro tem. After considerable discussion it was decided to establish a horticultural society in preference to a close gardeners' club. The title chosen was the Westchester County Horticultural Society. The question of by-laws was gone into, and after reading over those governing the Dutchess County Horticultural Society they were found to practically meet the requirements of the new association, and were adopted with slight changes. The meetings will be held every fourth Friday. Permanent officers were elected to serve for one year, as follows: President, A. L. Marshall, gardener to Mr. J. B. Dutcher, Pawling, N. Y.; vice-president, W. Stevenson, gardener to Mr. J. D. Layng, Mount Kisco; treasurer, M. J. Green, gardener to the Hon. James Wood; secretary, H. Spavins, florist, Mount Kisco. Three honorary presidents were elected, the Hon. James Wood, Dr. Curry and Mr. T. Ellwood Carpenter.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

R. M. COLE, Pella, Iowa.—Garden Annual for 1897, list of flower and vegetable seeds, novelties, etc.

T. J. DWYER, Cornwall, N. Y.—Strawberries, other berries and small fruits, and fruit trees specially; also seeds and shrubs.

D. LANDRETH & SONS, Philadelphia, Pa.—This is the 113th annual issue of the seed list. General list of flower and vegetable seeds, with photo illustrations of various varieties of vegetables on one plate.

ALFRED BRIDGEMAN, 37 East Nineteenth st., New York City, N. Y.—Vegetable and flower seeds, implements, etc.

GOULD NURSERY, Beaver Dam, Wis.—Concise descriptive list of fruits, plants, bulbs, seeds, implements, etc., for the garden or farm. Has hints on transplanting.

A. MCINNIS, 383 and 383½ Talbot st., London, Ont.—A general list of garden and agricultural seeds, flower seeds, plants, seed grain, and potatoes. Offers for a melon premium competition a watch to the guesser of the number of seeds the melon has.

M. J. HENRY, 604 Westminster Road, Vancouver, B. C.—A very comprehensive classified list of plants for various purposes, including street and shade trees, herbs, vegetable plants, Roses, and general stock; also Bees and Bee-hives.

THEO. KOSS, 261 Reed st., Milwaukee, Wis.—Seed Catalogue in German and English; general garden supplies and tools, etc.

WM. A. OLDS, Okemos, Mich.—Price list of berry and vegetable plants, seed potatoes and seeds.

BATEMAN MFG. CO., Grenloch, N. J.—The annual list of the celebrated Iron Age farm and garden implements will be of interest to any who are engaged in soil cultivation. The immense advance in labor saving machinery is easily realized by a perusal of this well illustrated and handsome list. The light tools for small gardens are the latest and welcome advance.

K MP & BURPEE MFG. CO., Syracuse, N. Y.—Has some illustrated catalogue of manure spreaders. This machine is being used more and more by market gardeners with whom a saving in both time and labor is an important consideration. It delivers the manure evenly and in excellent condition for fertilizing the crops. It is a mistake to suppose that this spreader can only be used to advantage on large farms. It is equally valuable to the truck farmer, market gardener, or fruit grower. It handles either manure or ashes equally well.

In digestion is the ingratitude of a pampered stomach, and the consequences of it go beyond the stomach. They are found in torpidity and congestion of the liver, in weakness and inefficiency of the kidneys. You cannot hope to be well while your blood is thick with dead matter. Cleanse and invigorate yourself with Warner's Safe Cure.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*We cannot undertake to reply by mail.

Starting Begonia Tubers.

[Will you kindly inform me how to treat tuberous Begonias. The tubers came from Germany about six weeks ago. I planted them in 6-inch pots, using light loam, one-third fine rotted manure, and covered them 2 inch. They were placed in the greenhouse with a temperature of 55° to 60° at night.—W. G., West Park, N. Y.]

—Great care must be exercised in watering; by keeping the plants on the dry side till they are well established they may pull through. A better plan would have been to have put the tubers into the smallest sized pot possible in light soil, potting on when required; or, perhaps, even better still, to have placed them in very shallow boxes, and just sprinkled them over with light soil or leaf mold.

Violet Treatment.

[I have about 200 Violets in a cold frame; the soil used is sandy loam, sod, and rotted manure; spotted leaves have always been picked off. The plants look healthy, but have small leaves, and, though they show buds, do not make any flowers. If I put some sheep manure in a barrel, put water over it, and water the plants with this once or twice, will it help any?—J. G., West Park, N. Y.]

—With longer and brighter days the leaves will soon develop, and at the same time the flower buds. Caution is necessary in watering at this early season, and should only be

done if the soil be really dry. Should it be decided to give water, choose a very bright morning for the work. Later on a little sheep manure water may be applied.

Greenhouse Management.

[I have charge of a small greenhouse in which I have Carnations and Violets. The boiler is at the east end of the house, and on both sides, about half way up the beds, the Violets die off, and then shoot up again, and on the other half, or western end, they are nice and healthy. Would be pleased to know the cause of this.—George L. S. Buck.]

—In the absence of further details, we surmise that the boiler keeps the one end too warm and that as a consequence the soil has been drying up too rapidly.

Cocoanut for Seed.

(To J. W. B.)—We have had but very little to do with cocoanuts as seed. The nuts offered for sale by the fruiterer are not possessed of germinating power. All nuts that have grown have been with the outer husk still attached.

Begonias from Seed.

[What is the best way of raising Tuberous Begonias from seed?—F. A. J., Brookline, Mass.]

—Seed should be sown at once. The best receptacles for the seed are square earthenware pans, ordinary flower pots, and even very shallow boxes will do when pans are not obtainable. Get ready a good supply of broken crocks, bricks or ballast, being careful that all dust is removed; half fill the pans with this, having the pans, or whatever be used, not more than two inches deep. Use a compost made up principally of leaf-soil, old, sweet and flaky, a little loam, plenty of coarse-grained sand, and one part of crushed charcoal. Mix

Mother and Son.

Both Sorely Afflicted, but Relief is Found in Dr. Williams' Pink Pills for Pale People.

From the Call, Lafayette, Ind.

The Call has known the Byers family, of Talbot, Ind., for a long time, and J. W. Byers is one of those deliberate men who say little, but read and observe much. Mr. Byers has been suffering for the past three years with grip and kindred troubles. His mother has ever been a sufferer, resulting later in the most aggravating form of rheumatism. Some time ago Mr. Byers was persuaded by a neighbor to try Dr. Williams' Pink Pills. It didn't take long to set Mr. Byers to talking about this remedy, and the Call sent a special representative to his home to ascertain the exact facts. The subjoined sworn statement of Mr. Byers is sufficient. It tells the facts simply and briefly:

"I know positively that I was cured by Dr. Williams' Pink Pills. I was persuaded by one of my neighbors, Maxen Williams, to try them, as he claimed to have been cured by them. I had the grip three times, and was taken down with rheumatism, and did not expect to live. The doctors said I would never get well. They advised me to take a change of climate. I was reduced from one hundred and thirty-five to one hundred and five pounds. As soon as I began taking the Dr. Williams' Pink Pills I began to gain strength and the use of my limbs was restored. I had been almost helpless for two years, the stiffness in my limbs had been painful in the extreme. But with the use of the pills the pain ceased, and now I am as limber and as active as when a boy.

"I was also troubled a great deal with my kidneys, but the ailment has entirely disappeared. I have been a subject for the doctors for a long time. Two reputable physicians had treated me for months, and I had spent a large amount of money for patent medi-

cines, but to no avail. As I said, I finally took Dr. Williams' Pink Pills for Pale People and here I am well. I believe that is the most wonderful remedy ever made. I need not extol this remedy, for all my neighbors know what my condition was and what cured me. They will all tell you that it was Dr. Williams' Pink Pills.

"My mother, who is seventy years old, was also troubled with rheumatism and could scarcely move. She was very wakeful at night and had no appetite. She took five boxes of Dr. Williams' Pink Pills, and now she is in perfect health, and does all her own work on a farm.

(Signed) "J. W. BYERS."

Subscribed and sworn to before me this 10th day of August, 1896.

JAMES GOODWIN, Notary Public.

Dr. Williams' Pink Pills for Pale People are considered an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effects of la grippe, palpitation of the heart, pale and sallow complexions, that tired feeling resulting from nervous prostration; all diseases resulting from vitiated humors in the blood, such as scrofula, chronic erysipelas, etc. They are also a specific for troubles peculiar to females, such as suppressions, irregularities, and all forms of weakness. In men they affect a radical cure in all cases arising from mental worry, overwork, or excesses of whatever nature. Dr. Williams' Pink Pills are sold by all dealers, or will be sent post-paid on receipt of price, 50 cents a box or six boxes for \$2.50 (they are never sold in bulk or by the doz.), by addressing Dr. Williams' Medicine Co., Schenectady, N. Y.

AMERICAN GARDENING CLUB LIST.

LET US FILL YOUR ORDERS FOR 1897.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

General.		General.	
	A. B.		A. B.
Advance (Cong'l) renewals.....	\$2 00 \$3 90	Scribner's.....	\$3 00 \$3 60
" new.....	2 00 2 60	St. Nicholas.....	3 00 3 60
American Field (new).....	4 00 4 25	Sunday School Times.....	1 50 2 10
" Renewals.....	4 00 4 60	Texas Siftings.....	4 00 4 25
" Kitchen Magazine.....	1 00 1 75	The Etude (new only).....	1 50 2 15
" Machinist.....	8 00 8 20	The Etude (renewals).....	1 50 2 35
Aquarium.....	1 00 1 75	The Outlook.....	3 00 3 60
Arena.....	3 00 3 60	Toledo Blade.....	1 00 1 85
Art Amateur.....	4 00 4 35	Turf, Field and Farm (new).....	4 00 4 25
Art Interchange (with plates).....	4 00 4 35	Renewal.....	4 00 4 60
Atlantic Monthly.....	4 00 4 80	Womankind.....	50 1 20
Ava Maria.....	2 00 2 70	Young Ladies' Journal.....	4 00 4 60
Babyhood.....	1 00 1 90	Youth's Companion (new only).....	1 75 2 85
Baptist Missionary Magazine.....	1 00 1 90	Renewals.....	1 75 2 75
Carpentry and Building.....	1 00 1 85		
Century.....	4 00 4 60	Agricultural, etc.	
Chicago Times-Herald (Weekly).....	1 00 1 85	American Agriculturist.....	1 00 1 85
Chicago Inter-Ocean.....	1 00 1 80	Breeders' Gazette.....	2 00 2 40
Christian Herald.....	1 50 2 15	Country Gentleman.....	2 50 2 75
Christian Register.....	3 00 3 85	Farmers' Advocate (Canada).....	1 00 1 75
Churchman.....	3 50 4 10	Farmers' Magazine.....	1 00 1 75
Colman's Rural World.....	1 00 1 85	Farmers' Review.....	1 00 1 90
Cosmopolitan.....	1 00 1 90	Farm, Field and Fireside.....	1 00 1 80
Delineator (Butterick's).....	1 00 1 90	Farm and Fireside.....	50 1 40
Demorest's Monthly Magazine.....	2 00 2 60	Farm and Home.....	50 1 40
Detroit Free Press (Weekly).....	1 00 1 90	Farm Journal.....	50 1 30
Domestic Monthly.....	1 50 2 15	Farm News.....	50 1 20
Donahoe's Magazine.....	2 00 2 60	Gleanings in Bee Culture.....	1 00 1 85
Eclectic Magazine.....	5 00 5 25	Home and Farm.....	50 1 45
Electrical Review.....	3 00 3 20	Indiana Farmer.....	1 00 1 85
Engineering Magazine.....	3 00 3 50	Mass Ploughman (new).....	2 00 2 60
Forest and Stream (new only).....	4 00 4 80	Renewals.....	2 00 2 90
Forum, The.....	3 00 3 60	Michigan Farmer.....	1 00 1 60
Frank Harrison's Magazine.....	50 1 40	National Stockman and Farmer.....	1 00 1 85
Frank Leslie's Popular Monthly.....	3 00 3 50	Nebraska Farmer.....	1 25 1 85
Godey's Magazine.....	1 00 1 90	New England Farmer.....	2 00 2 50
Golden Days.....	3 00 3 35	Ohio Farmer.....	1 00 1 60
Good Housekeeping.....	2 00 2 70	Orange Judd Farmer.....	1 00 1 85
Harper's Bazaar.....	4 00 4 25	Pacific Rural Press.....	2 40 3 00
Harper's Magazine.....	4 00 4 25	Practical Dairyman.....	50 1 85
Harper's Weekly.....	4 00 4 25	Practical Farmer.....	1 00 1 85
Harper's Round Table.....	2 00 2 50	Prairie Farmer.....	1 00 1 85
Home Queen.....	50 1 35	Rural New Yorker.....	1 00 1 80
Illustrated American.....	4 00 4 30	Southern Cultivator.....	1 00 1 85
Independent.....	3 00 3 60	Southern Farm.....	1 00 1 85
Jenness Miller's Illus. Mag.....	1 00 1 75	" Florist and Gardener.....	1 00 1 75
Judge.....	5 00 5 20	Strawberry Cultivator.....	50 1 85
Judge's Library.....	1 00 1 85	Texas Farmer.....	1 00 1 75
Ladies' Home Journal, The.....	1 00 1 90	Texas Farm and Ranch.....	1 00 1 85
Ladies Home Companion.....	50 1 45		
Ladies' World.....	35 1 30	Poultry.	
Leelle's Illustrated.....	4 00 4 40	American Poultry Advocate.....	25 1 15
Life.....	5 00 5 40	Fancier's Review.....	50 1 35
Lippincott's.....	3 00 3 25	Farm Poultry.....	1 00 1 50
Macmillan's.....	3 00 3 60	Ohio Poultry Journal.....	65 1 50
McClure's Magazine.....	1 00 1 90	Poultry Herald.....	50 1 40
Munsey's Magazine.....	1 00 1 90	Poultry Keeper.....	50 1 40
Nation, The.....	3 00 3 80	Poultry Monthly.....	1 00 1 85
New England Magazine.....	3 00 3 50	Reliable Poultry Journal.....	50 1 40
New York Ledger.....	2 00 2 50		
" Tribune (Weekly).....	1 00 1 90	Horticultural, etc.	
" World (Tri-Weekly).....	1 00 1 75	Canadian Horticulturist.....	1 00 1 90
North American Review, The.....	5 00 5 50	Garden and Forest.....	4 00 4 25
Notes and Queries.....	5 00 5 50	Gardening (Chicago).....	2 00 2 50
Observer (new only).....	3 00 3 25	Green's Fruit Grower.....	50 1 35
Observer (Renewal).....	3 00 4 00	Meehan's Monthly.....	2 00 2 50
Outing.....	3 00 3 85		
Peterson's Magazine.....	1 00 1 85	Foreign.	
Philadelphia Press (Weekly).....	1 00 1 85	Farm and Home.....	2 25 3 25
Phrenological Journal.....	1 50 2 25	Field.....	10 50 11 00
Popular Science Monthly.....	5 00 5 65	Garden.....	4 50 5 25
Popular Science News.....	1 60 2 50	Garden Work.....	2 50 3 25
Puck.....	5 00 5 10	Gardener's Chronicle.....	4 50 5 25
Puck's Library.....	1 20 1 95	Gardener's Magazine.....	4 50 5 25
Review of Reviews.....	2 50 3 25	Gardening, Illustrated.....	2 25 3 00
Scientific American.....	3 00 3 60	Gardening World.....	2 50 3 25
" Supplement.....	5 00 5 25	Journal of Botany.....	4 75 5 25
" " with.....	7 00 7 25	Journal of Horticulture.....	4 00 4 85
" " Builders' edition.....	2 50 3 10	Kew Gardens Bulletin.....	1 50 2 25
" " inc. B'l'ds' edit.....	5 50 5 75		
" " All 3 editions.....	9 00 9 25		

well together but don't screen it, merely picking out by hand any bits of sticks, lumps or stones. Press evenly in the pans, leaving room for half an inch of prepared soil for seed bed. For this purpose use good decayed leaf-soil; sieve it very fine (if no sieve be fine enough, use mosquito netting); mix with a sixth of clean sand, silver sand being preferable. It will be necessary to dry the soil first to get it to go through so fine a mesh; some growers burn their leaf-soil first; that is good in its way, as it also kills insects and fungi.

Fill the pans up to a quarter inch of top, making the surface perfectly smooth. Now make sure that the whole is properly moistened through. To do this, it is best to hold the pan partly submerged in a tub of water, until the whole is soaked through; this will prevent breaking the surface, and it is sometimes difficult to get a watering pot with a rose fine enough. After a thorough soaking, wait half an hour or so until surplus water is drained away, then sow the seed. The seed being so small, it is best to use very smooth white paper in the work, placing the seed on the paper and then scattering it evenly over the prepared surface. In order to secure the seed in its place, it is well to sprinkle the smallest possible quantity of the fine soil over it, but not by any means burying the seed.

Now set the pans in some kind of plunging material, covering nearly up to the rim. Plunging material must have no heat in itself; cocoanut fibre, if obtainable, would be best. Cover with sheets of glass, then with sheets of paper, to exclude the sun and strong light. Care must be taken that the glass does not lie too close, otherwise there is considerable danger of damp or fungous growth. Wipe the glass dry every day. In ten to fourteen days the seedlings should appear, when the paper must be removed, except when the sun is shining.

A steady bottom heat of from 65° to 70° should be maintained, and the general temperature of the house about 70°, never below 60°. The house should be kept moderately moist, but avoid hot water tanks under the seed pans. Plain pipes are best, with some kind of plunging material over them kept moist.

The main thing after germination is to keep the soil regularly moist, for if at any time it become dry, the seedlings will drop off wholesale; instead of overhead watering, dip the pans in water heated to the temperature of the house. The pans should be dipped to within an inch of the rim, holding them in water till the whole contents are soaked through. Keep the tops comparatively dry, and avoid wetting the foliage at this stage of growth. Gradually inure the seedlings to the light, and keep the atmosphere of the house on the move. In very fine weather, open the ventilators slightly, as to change the air, care being taken to prevent cold winds from striking the seedlings.

As soon as the leaf is formed, prick out into pans, filled with exactly the same compost as for seed sowing. When the soil is right, make holes with a very finely pointed dibble, lift the seedlings carefully with a notched stick, and place in their new homes, pressing the soil gently around them with the dibble. The tender seedlings must not be touched with the fingers.

Begonia seed is somewhat irregular in germination. Water the newly filled pans very gently with the finest rose possible. This will settle the plants in their places. Do not water again till dryness appears. Keep the pans in conditions as prescribed for seed pans, except that more light and air will be given to encourage stronger growth.

Cabbage Maggot.

(To G. S. Wagerman.)—The cabbage maggot is the larva of a small fly which is destructive also to allied plants, such as turnip, radish, etc. As a remedial measure, burn all infected plants, and as a preventive, pour about a teaspoonful of carbon bisulphide into a hole made underneath the root of the plant. Do not let it come into contact with the wood itself. The substance is very highly inflammable.

Tulips Branching.

(To J. H.)—There is not anything very uncommon in a double Tulip branching, but, so far, the character is not a fixed one. It is due possibly to excessive vegetative growth, at the expense of the essential organs.

Bees and Beekeepers' Supplies.

(To C. H. G.)—You will be able to get all the appliances for entering into the work of bee-keeping by addressing any of the firms advertising such in our pages (see page 40).

Names of Plants. — (To C. M. C.) — *Euonymus japonicus aureus variegatus*. The Golden Japanese Spindle tree; one of the most useful shrubs where it will withstand the winter; specially suitable for seaside places.

(To Dr. T. R. Clark.)—Many thanks for information furnished.

ADDRESS CASH WITH ORDER, AMERICAN GARDENING, P. O. Box 1897, NEW YORK.

OUR PREMIUMS ARE OFFERED with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

LORD PENZANCE'S NEW HYBRID SWEET BRIARS.

Quite a New Feature in Roses.

The foliage of every one of them is as sweetly scented as the old-fashioned Sweet Briar that grew in our grandmothers' gardens.

The Sweet Briar or Egiantine, is acknowledged by all to possess one of the sweetest perfumes that nature has provided and its delicious scent is the object for which it is usually cultivated. These new varieties, now for the first time placed in commerce, are vast improvements upon the old sorts. They are hybrids (obtained by the Right Hon. Lord Penzance) between the common Sweet Briar and various old-fashioned garden Roses and are possessed of many advantages.

The flowers are borne in wondrous profusion, and vary in color from white, through several shades of pink, to very dark red or crimson.

The plants are perfectly hardy even in very bleak and exposed positions.

For vigor of growth there is scarcely anything in the rose world to equal them. Plants three years old have now many shoots on them that rise to the height of twelve feet. These, with a slightly outward bend, and clothed with flowers of exquisite tints, produce a gorgeous effect.

The buds are the most graceful, sweet and delicate objects imaginable.

The flowers are single or semi-double, and this adds lightness and elegance to their beauty.

After the flowers are over, they are followed by bright scarlet seed pods or "hips" in great numbers, which, nestling among the deep green, scented foliage, make the plant delightfully ornamental till quite late in the autumn.

No garden will be esteemed complete which does not possess a group of Hybrid Sweet Briars. They are so sweetly scented, so beautiful in color, so hardy and free from disease and the attacks of insects, as to make them eagerly sought after by all the knowing ones.

**This
is Our
Offer.**

For one NEW subscription to American Gardening at \$1.00, we will forward you, all charges prepaid, your choice of two of the three following varieties:
Meg Merrilies, Red.
Anne de Gelerstein, Pink.
Brenda, Blush White.

The above to be well-established plants out of 2½ inch pots.

The collection of Three above Plants for one NEW SUBSCRIPTION to American Gardening at \$1.25.

These plants will be forwarded to our subscribers direct from the growers, eminently responsible people, who guarantee them to be true to name and color.

Plants ready for shipment May 1. Orders be placed now, however, owing to the expected enormous demand.

OUR GREATEST 1897 PREMIUM

The Wonderful New Climbing Rose

Yellow Rambler (Aglaia)

A worthy COMPANION to the well-known Crimson Rambler.
The Hardest Yellow Climbing Rose Ever Introduced.

Yellow Rambler bears its flowers in immense clusters, often as many as one hundred and fifty blossoms in a bunch, the trusses being of handsome pyramidal shape.



THE YELLOW RAMBLER AS A CLIMBER.

Yellow Rambler holds its blooms from three to four weeks without fading; a large bush in full bloom is one of the most beautiful sights imaginable.

Yellow Rambler is a clear decided yellow, in marked contrast to many roses so described, but which have really only a yellow tinge.

Yellow Rambler is very vigorous; well-established plants often making shoots eight to ten feet in height in a single season.

Yellow Rambler represents the triumph of the century in the hybridizing art, and is the most valuable introduction in recent years.

Yellow Rambler is very sweetly scented.

Yellow Rambler combines the climbing habit and decided yellow color with hardiness.

Yellow Rambler will withstand, without protection, a zero temperature; with protection it will thrive where any other rose will.

Yellow Rambler is thus adapted to successful culture in nearly all of the northern parts of the United States.

Yellow Rambler is absolutely NEW on the market and will prove the sensation of 1897!

Yellow Rambler premiums will be shipped direct to our subscribers from the introducers, one of the largest and most reliable firms of nurserymen in the country.

All stock is guaranteed pure and will be shipped in good condition.

DON'T YOU WANT A YELLOW RAMBLER ROSE?

You Can Earn One in Ten Minutes!

READ OUR OFFER. We will forward, all charges prepaid, one well-established plant of Yellow Rambler Rose, from 2½ inch pot, for ONE NEW SUBSCRIPTION to American Gardening at \$1.00, or six plants for five NEW subscriptions at \$1.00 each.

The same plant will not be sold in 1897 for less than 50 cents. Plants will be shipped on and after March 15th. It is expected that the demand for this New Rose will be phenomenal, and we advise those of our readers who want a plant to be early with their order.

More Potash

in the fertilizers applied on the farm means larger and better yields of crops, permanent improvement of the soil and

More Money

in the farmer's pocket.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

OLD BOOKS SEND STAMP FOR LIST. Address
A. J. Crawford, 518 N. 7th Street, St. Louis, Mo.

DISCOVERED A free wash that will remove that greasy complexion and leave it soft and white in 10 minutes after washing, and in a week remove all pimples, blackheads and tan. Bleaches the skin without irritation. Perfectly harmless; contains no poisons. Costs but five cents to prepare enough to last six months. Recipe and full directions, 25 cts. Mrs. E. HUNTER, 6812 Evans Av., St. Louis, Mo.



TRY DREYER'S GARDEN SEEDS

Plants, Bulbs and Requisites. They are the best at the lowest prices. Calendar for 1896 mailed free. Address

HENRY A. DREYER,
714 Chestnut St., PHILA.

Plants Thrive

You can almost see them grow ON **ISSEX** Flower Food.
10 C. of your dealer will buy the package that feeds 10 plants 1 year. Or mail eight ac. stamps to
Russell Cement Co., Gloucester, Mass.

Are You Proud of Your Garden

Our varieties of both Vegetable and Flower SEEDS are strictly 'up-to-date.' Our beautiful Garden and Farm Manual for 1897 will help your selections.

We will send it together with a packet each of our beautiful New Branching Aspers and our New Sensation Lettuce, on receipt of only

10 Cts.

Our regular catalogue price of each of these exquisite novelties being 10 cents per packet.

Send at Once.

JOHNSON & STOKES, 217-19 Market St., Philadelphia, Pa.

Please mention American Gardening when answering advertisements.

ALL THE LATEST NOVELTIES
AND PLANTS THAT CAN'T BE SEEN ELSEWHERE.
Cannas, Italia and Austria, at \$1 each.
New Rains, New Fruits, New Shrubs, New Bulbs.
10 Cents for \$1.—\$ for 50 cts. Book on Cacti 115 pages, 125 cts, 15 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free.
A. BLANC & CO., - Philadelphia.

TRAWS
RASP
BLACK
GOOSE
DEW

ASK WM. O. BABCOCK, BRIDGEMAN, MICH.,
For prices of strong **STRAWBERRY PLANTS**, dug out in solid blocks, not from between the rows, true to name. Competition Defied. **QUALITY** considered. Complete Stock of **CURRENTS AND GRAPES**. (Mention this paper.)

BERRY PLANTS

BATTLES' TESTED SEEDS.

Market Gardeners, Truck Farmers, and all Seed Buyers get my prices before you buy. Write for 1897 Seed Annual and Special Wholesale Price List. Send for samples of any seeds you wish to test. **Salemen wanted everywhere. Write now.**
GROWER OF FARM AND GARDEN SEEDS. FRANK H. BATTLES, Rochester, N.Y.

GARDEN CROPS

of every kind may be greatly increased in quantity and improved in quality by liberal use of **NITRATE OF SODA**, either singly or in combination with other fertilizers. Best results from **EARLY VEGETABLES** are impossible without the use of nitrogen in soluble form. **NITRATE OF SODA** is the most soluble, cheapest and most reliable source of nitrogen. Your soil may contain all the other fertilizing elements in sufficient quantity and fail to yield good crops because it is deficient in nitrogen. Cover this deficiency by using **NITRATE OF SODA**. All about its source, use and the profits resulting therefrom in book on "FOOD FOR PLANTS." Sent FREE. Address..... **S. M. HARRIS, Moreton Farm, P. O., N.Y.**

*B. M. Watson, Jr., 1897
Bunsey Inst. South St.
Jamaica Plains*

RATES! LOW RATES!

THE CHEAPEST AND SWIFTEST, THE SAFEST AND BEST, THE GREATEST COMFORT
To be found on the broad Atlantic, is via one of the Magnificent Vessels of SAVANNAH LINE FLEET. Elegant Service. Speed unequalled by any other Steamship Line on the Atlantic Coast.

PASSENGERS VIA STEAMSHIP AND SAVANNAH TICKETED TO ANY POINT SOUTH AND SOUTHWEST.

STEAMERS FLY BETWEEN

NEW YORK AND SAVANNAH, (from New York Tuesdays, Thursdays and Saturdays.)

BOSTON AND SAVANNAH, (from Boston every four days as per published schedule.)

PHILADELPHIA AND SAVANNAH, (from Philadelphia every five days.)

NEW IMPROVEMENTS. Sea Spray Baths, Electric Lights, Re-Carpeted and Handsomely Furnished State-Rooms, Modern Sanitary Arrangements, are some of the new improvements which are to be observed aboard the Elegant Passenger Ships of the Savannah Line Fleet.

Send two cent stamp for copy of "Savannah Line News" and three colored map showing attractions of the Atlantic Coast.

G. M. SORREL, Manager, New Pier 35 N.R., New York.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897
Tells the plain truth about
The BEST SEEDS that Grow!

Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." **42 Mailed FREE to all.**

W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

SENT postpaid, for ONE NEW subscription at \$1.00

...TWELVE....

Beautiful Everblooming Roses

Grower's selection from the best varieties.

Of all premium offers this is decidedly one of the most tempting, and we fully guarantee its absolute reliability. Grower says:

"We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2 1/2 inch pots. This is our most popular collection and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

The Bride, Perle
Bridesmaid
Catherine Mermet

F. Kruger
Prince Hohenzollern
Flaman Cochet

Snowflake
Maurice Rouvier
Cornelia Cook

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, and subscribers in the North and West are advised to have their orders filled in March or later.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 109.
COMBINED SERIES VOL. LI.

NEW YORK, JANUARY 23, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Am. Hort. Soc'y.....	54	Fruit Garden.....	56	Market Reports;	57	Russian Fruits in Iowa.....	57	Illustrations.....	
Apple, Holland Pippin..	55	Fruits of Experience....	57	N. Y. and Philadelphia	59	Seakale.....	52	Elliott, Wm., The Late.....	60
Apiary.....	56	Grape, Cuttings Out-	50	Mushrooms.....	52, 62	Shallots.....	53	Grape Cuttings.....	50
Celery Rotting.....	62	doors.....	50	Orchids Becoming		Shrubs, Pruning.....	53	Grape Gros Colmar.....	49
Chestnut, Grafting Old..	63	Grape Gros Colmar.....	54	Scarce.....	55	Shutters.....	58	Hotbed, Making a.....	51
Dracenas in the Win-		Grapes Under Glass....	49	Plant Registration.....	54	Society Reports.....	52, 61	Shrub, To Protect.....	59
dow.....	63	Grass Edges to Preserve	53	Plums, Notes on.....	56	'Tree Planting.....	55	Straw Mat Making.....	53
Elliott, Wm. Death of..	58	Home Plot.....	58	Poultry Notes.....	58	Tree Stake, Simple.....	55	Tree Stakes, Simple.....	55
Flower Garden.....	53	Hotbed, The Complete..	51	Private Gardeners.....	58	Vegetable Garden.....	52	Wooden Hen, The.....	58
Foreign Correspondence	55	Hotbed Mats, Making ..	53	Readers' Notes.....	55	Window Plants.....	58		

Grape-Growing Under Glass.

Lecture before N. Y. Gardeners' Society by WILLIAM SCOTT.

The cultivation of indoor grapes is such an extensive subject that it is hardly possible to do it justice in a short essay. However, by confining myself to a few of the more important points, I hope to be able to give such information as may be of service to my fellows.

Houses.

The securing of suitable houses is, of course, the first step; of the several different builds I prefer the span-roofed, as it allows of equal justice being done to the vines on both sides of the house, whereas, in the lean-to, or three-quarter-span houses, only those planted in the front can have sufficient light and air. As to the dimensions, the houses may be of any length, but I consider those of such height and width as to allow of a rod of about 14 feet in length are in every way the most convenient. The foundations should consist of arches, to allow of an outside and inside border. Much diversity of opinion exists as to the necessity or expediency of having an outside border for the earliest house. Many contend that it is better not, as then the roots are under better control; my preference is inside and outside borders for both early, and late houses.

Borders.

The borders of the early graper that I have in charge at the present time are all

inside, and, although we gather good crops, I find that when the bunches have to hang for any length of time after being ripe shriveling takes place much sooner than it ought to do, and this is, no doubt, due to lack of moisture at the roots,

since water has to be withheld after coloring has commenced, and cannot again be given until the grapes are cut. This necessitates a long, dry season, whereas, if an outside border had been provided, the additional root space would have enabled the vines to carry their crop in good condition for a considerably longer space of time. Moreover, a border all inside must be much more easily exhausted, and, no matter how liberally manures may be applied to the surface, the soil will need renewing in about half the time it would otherwise do. Of course, it is absolutely necessary that the outside border be protected both against frost and against an oversupply of moisture; this can be done by a good covering of stable litter—just enough to give a gentle heat—covered over with shutters made to fit closely, so as to throw off the rain. This covering should, of course, be removed after the temperature has risen sufficiently high out of doors.

The borders should be excavated, so as to allow of a foot of drainage and three feet of soil. The soil will probably sink a few inches, which should be allowed for; this depth I consider amply sufficient for any graper border. In some cases it will be necessary to cement the bottom of the borders



FIG. 15.—HOT HOUSE GRAPE GROS COLMAR. (See page 54.)

and in most cases it will repay the extra outlay, as it both insures against stagnation and averts the danger of the roots getting down into the poor soil; where cementing is not done, the bottom of the border must be made as firm as possible. In either case a slope of at least six inches must be given from inside to outside of the border.

If the situation be high and dry no cementing will be needed; broken stone or brick mixed with old lime rubbish to a depth of one foot, with a drain running along the outside of the border, being all that is required. But in low-lying situations, even although the border be cemented, it may be necessary to have drains running across the border at intervals of from eight feet to ten feet, leading into a main drain, which should have sufficient fall to insure the carrying away of all surplus water. There is always a possibility of having too much of a good thing, and it is quite possible to have too much drainage. We want the borders to retain the moisture to a certain extent, but, at the same time, we must insure against stagnation.

Compost.

In preparing the compost for filling the borders much will depend on the quality of the sod procurable, which must constitute the main part of the compost. Both the physical properties and the chemical composition of the soil may have to be regulated. Should the soil be of a stiff, binding nature a liberal amount of charcoal and old lime rubbish must be added. If, on the other hand, the sod contains plenty of fiber and the nature of the soil be free and open, nothing but manure need be added. Light soils as a rule require more manure than do the heavier ones.

In adding the manure the main object should be to use only such as will make the compost as lasting as possible. For this purpose there is nothing better suited than half-inch bones; soft manures should always be avoided. The sod should be well chopped up and thoroughly incorporated with the other ingredients before being filled into the border. It is a bad plan to put in the sod and manure in layers. A layer of the sod, intact, green side down, should be placed over the drainage to keep it clean until the whole has settled.

Planting.

In regard to planting; I have always found the best results where the vines were planted in a young-growing state. The planting of two-year-old or so-called fruiting canes is undoubtedly a mistake, and when one can afford to wait the best ultimate success is insured by striking the eyes in January, growing them on and planting in the borders during the month of May. The best distance to plant is four feet apart; vines so planted will run to the top of an ordinary house the first year, and before starting again should be well cut back. In the succeeding year leave three feet of young growth, and the third year fruiting may be allowed to commence, but should in no case be overdone; two or three bunches will be a sufficient crop for vines of this age to carry.

Cultivation.

The general cultivation of established vines may now be considered. The time of starting into growth must, of course, be regulated according to the time the grapes are wanted. The first house, as a general rule, is started about the beginning of January, and in this latitude it is not advisable

to start much earlier. This will give ripe grapes about the last of May or the beginning of June.

In preparing for starting, the first step is pruning; in order to prevent the spurs from becoming long or unsightly they should be pruned as close as is possible without incurring danger of sacrificing the crop. One good, clear eye should always be left, and in the case of shy fruiting varieties it is safer to leave two.

Cleanliness is absolutely necessary to the successful production of good grapes; first have the woodwork, iron-work or brickwork well washed, or painted if necessary, but painting will not be required nearly so often provided the houses be kept clean by washing. Every corner and crevice must be gone into, to make sure that there are no insects or insect eggs left. Strong cleansing solutions need not be used, as they invariably injure the paint. Warm water, with soap and plenty of elbow grease, will do the work most satisfactorily.

In cleaning the rods themselves much will depend on the state they are in; the old custom of scraping the vines is undoubtedly a mistake and should never be done if it can possibly be avoided, but where meaty bug or red spider has got a hold there is no other way of getting clear of it. It will then be necessary to remove enough of the loose bark to get the pest rooted out, then thoroughly wash the rods with some insecticide, to kill any insects that may have been left. There are a number of different washes that may be used, but I have found the old English preparation, Gishurst Compound, one of the safest and most reliable; this is dissolved in warm water and applied with a paint brush (being made just strong enough so as to raise a lather when applied). To insure against all insects it will be well to remove about one-half inch of surface soil inside, replacing by fresh material.

It is a very general custom to tie down the rods when starting them, presumably to get them to break more evenly, and those practicing this custom will put forward numerous advantages to be gained by it, but I am inclined to think it is done more by force of habit than anything else. I never tie down my rods, but fasten them up in their places at once, and I find that I have always as even a break as any of my neighbors, and then there is no danger of my breaking the shoots by handling the rods after they have started.

If the borders are old a liberal application of artificial or farmyard manure had better be given and lightly forked in before the fresh soil just referred to is put on; then the whole should have a good watering. If the chill can be taken from the water, so much the better. The sprinkling of the rods with tepid water and the maintenance of a moist atmosphere are two of the most important factors toward the procuring a free start.

(To be continued.)

Treatment of Strawberries.—There are several methods of using commercial fertilizers for strawberries. Probably one of the best was used by J. G. Harrison & Sons, of Berlin, Md., the past season, a mixture of 15 tons to a 30-acre field of spring set plants, broadcast at two applications, 2 tons potash, 1½ tons nitrate soda, 7½ tons rock, and 4 tons of tunbrage, which gives them ten millions of fine plants to offer to their trade. The land was fresh cleared, some never in any other crop before. There are over 60 varieties.

Growing Grapes from Cuttings.

If possible, I prefer to take cuttings from young vines from two to six years old, but if from a vineyard, a number of years older, and the vines have always been healthy and vigorous, and now have a strong growth of wood, I consider it perfectly safe to use them. Cut early in the fall, or very soon after the vines become dormant, but the work can be done up to the last of February, and a large percentage of cuttings will grow.

Size and Length.

With regard to size, I do not like to bother with any much smaller than a common lead pencil, unless of some choice variety, of which the wood is scarce. Those of a uniform length are to be desired. When some varieties have shorter joints than others, I would cut, as shown in the accompanying sketch, at A, with three buds; but if of varieties like Concord or Worden, I prefer a cutting like at B, and measuring about 7 to 10 inches from top to lower bud. The oblique marks in the illustrations indicate place where the cut is made below the lower bud. Possibly some one may

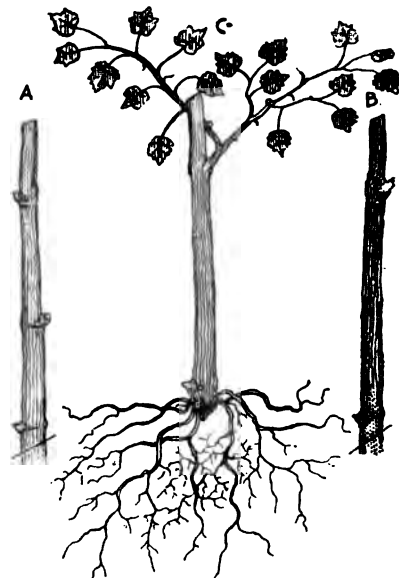


FIG. 16.—GRAPE CUTTINGS.

think a little closer would be better, but we have met with success this way.

Two or Three Buds, Which?

The plant at C is grown from the two-bud cutting (B), and is of much more convenient form to set than the one raised from the three-bud cutting, and as the roots can be spread out in every direction, and at an even depth, the plant is generally sure to grow. The objection to the three-bud cutting is there is an upper layer of roots, which do not seem to be of any particular use, but are in the way while the soil is being worked around the lower layer of roots. After making the cuttings as explained above, we get a small pile of them ready, and putting the lower buds all one way, tie them up in bundles of one hundred each, using willow or wire. Both top and bottom of the bunch is tied, to prevent any shifting around, and consequent injury to the buds while handling.

Storing.

If there be no cellar or pit in which to conveniently place the prepared bundles of cuttings, a trench can be dug large enough to take in all the

bundles, which should be placed with the lower ends of the cuttings up. Put in all the bundles snugly together, seeing to it that they are so arranged that the bundles will all be on a level; scatter fine sand in the spaces around the bundles, then throw two or three inches of the same evenly over the cuttings; finally fill in and "ridge" the top of the trench, to carry off water during rains.

Care should be taken to dig your trench where it is high and dry, allowing good drainage.

To make all the more secure, it is a good plan to put a heavy covering of old straw or marsh hay over the ridge of the trench. Frost must be kept out, so that the cuttings may callous thoroughly.

Planting.

When the cuttings are taken out for planting, be careful not to take out, and thus expose to the air, too many bunches at a time; and those that are put in the basket should immediately have damp moss placed over the butts, to protect them from sun and wind. Plow a furrow with a one-horse garden plow, plowing six to seven inches deep. The cuttings can be rapidly laid along the landside of the furrow, with the tops at a slight angle toward either end of the row. Let the upper bud come even with the surface; some growers desire to have it a little above. The cuttings can be placed in position with the left hand, while the right one turns over a good handful of soil and puts it against the cutting, to fasten it in position until the row is finished. Then turn in about one-half the furrow turned out, and thoroughly firm with the feet, packing the ground hard as possible and close up to the bottom part of the cutting, especially that soil which was thrown loosely back into the furrow. Then again go over the row, and hoe in the balance of the soil to bring it even with the surface; firm with the feet as before (some use a tamper, as in setting posts). Finish off by running the garden rake lightly where the feet packed the soil, and the setting of the cuttings is done.

Cultivation and Soil.

To get the best results, the rows should be cultivated at least once each week during the growing season, and every weed kept out from between the plants in the row. The crust, if soil be heavy, should also be broken between the plants. The Planet Junior, with small teeth, as used among strawberries, is the best cultivator we ever used for the purpose. Rich loam, with a clayish subsoil, with a slight mixture of sand, is to be desired. Sandy land, with a leachy subsoil, we have tried, only to find that the roots made a second class growth. I will not describe other methods, as single eye cuttings, mallet cuttings, etc., as by the methods described above as fine one year plants have been grown here this season as a person would desire to ask for, and it serves all practical purposes.

CHARLES C. NASH, Michigan.

Mild Weather.—There is considerable danger to all sorts of garden stock lurking in the unusually mild weather experienced in many sections this season. Growth is reacherously lured on; the buds become soft, and fall easily before a subsequent freeze. Happy, then, is the man who has properly protected his shrubs, etc., wherever they have been possible. 'Tis not now too late to do the work either!

The Complete Hotbed.

We many times use the term hotbed as if it applied generally to one and the same thing. There are hotbeds, and hotbeds. There is the illy-made and badly equipped one that disappoints the maker by being constantly cold; an experience not uncommon to the amateur. There is the poorly set up hotbed that gets out of shape as soon as the manure settles, and if the soil within the bed be not a succession of humps and hollows, the maker may be considered fortunate. There is the complete, well-made hotbed which, whether set up soon after midwinter or a month later, proves a success in its heating powers, in keeping its shape, and in yielding profitable returns to the market or other grower, large in proportion to its cost; the construction of such a hotbed is the subject of this article.

The cost of its construction is hardly above that of the cheapest bed that can be made; its superiority depends on things that are mere matters of planning and of labor at a season when labor is cheap.

Location.

The early hotbed is made in February in the North. The location should be one that will admit of drainage from the excavation that is made to hold the manure; to have a bed that acts as a catch basin for water in case of a heavy thaw or a rainfall, is too risky. If the bed be also sheltered by an evergreen or

time in winter, some manure may be piled around the base of each.

Making the Bed.

In making the bed remove the sash and the board bottom; then fill in the manure evenly, over the entire excavation, tramping it uniformly and firmly. Under the frame itself the manure is to be brought up to the top of the strips that rest on the stakes. Indeed it may be brought several inches higher, counting on the boards and the soil to press it down to its proper place. Outside the frame the manure is to be piled to make a slope from the sash to the ground level. The slope of the hotbed itself should always be towards the south—that is, the sash exposed to the sun.

In order to preserve as much heat as possible, no better means can be employed than shutters covering the manure as shown in the engraving. These are made of $\frac{3}{4}$ -inch stuff secured with clinch nails to cross slats. They should be made of a size convenient to handle. If after the heat be somewhat spent any difficulty be found in keeping up the temperature desired, the shutters may be removed, some of the lining thrown out and fresh manure put in its place.

Covering the Sash.

Protection against cold must be given in the shape of sash covers. A large straw mat, which may be rolled up when not in use is a common and effective means; but some of our best gardeners prefer wooden shutters.

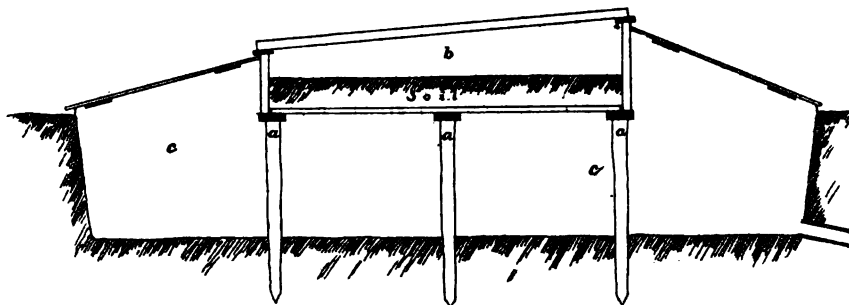


FIG. 17.—CROSS SECTION, END VIEW, OF HOTBED BUILT ON SUPPORTS.

other windbreak, it means much in retention of heat.

The first step is to provide sufficient space for the heating material. Referring to figure 17, *b* shows a hot bed 6 ft. wide, and the space around should not be less than 3 feet, and in the North even 4 feet would be no mistake; in depth, 2 feet below the surface is about right. This calls for a large stock of manure, but the manure not only gives a complete and paying bed, but it is afterwards on hand for enriching the garden.

Foundation.

This is a matter that may be new to many, but by proper attention to it the bed will retain an exact position without reference to the settling of the manure. In the case illustrated the foundation consists of oak stakes $3\frac{1}{2}$ feet in length, driven into the ground to a depth of about 2 feet. For a four sash bed I use twelve stakes (*a* in the sketch). These are driven home and capped by a plank ripped into three pieces, 5 or 6 inches wide, and as long as the bed is to be.

The Frame.

The frame is set upon these planks as shown. Within this frame is a bottom made of 1-inch rough boards which rest on the strips, and on this is placed the soil. Thus is the bed firm, and will last for at least ten years. To prevent heaving of the stakes previous to making-up

Heating Material.

The main reliance as heating material for a hotbed is strawy horse manure, or a mixture of this and other fresh manure. Forest leaves are excellent to mix with the manure, as they decay slowly, tending to prolong fermentation and also to make the heating more uniform. Preparation for the manure supply must be made some time ahead. If it can be had from livery stables matters will be facilitated much, as a quantity of almost fresh material can be secured within a few weeks. In accumulating manure for use in hotbeds it may be kept for some time, provided it is in the dry, and that it lies loosely enough to not excrete much heat. As new supplies are got, they may be added, and the entire pile turned and shaken up with a fork, about once a week.

ELIAS A. LONG.

The Biggest Eastern Fruit Meeting of the year will be that of the Connecticut Pomological Society at Jewell Hall, Hartford, Tuesday and Wednesday, February 9 and 10. Lovers of fruit culture from adjoining states are cordially invited. H. W. Collingwood, Professor Van Deman, N. S. Platt, S. D. Willard, Professors Gulley, Britton, and Sturges will be leading speakers. Full programmes can be had on application to Secretary G. S. Butler, Cromwell, Conn., or President J. H. Hale, South Glastonbury, Conn.

New Jersey Horticulturists.

There was one pessimist at the recent annual meeting of the New Jersey Horticultural Society. He launched a bolt as follows: "With asparagus selling at less than cost, apples at ten cents a bushel, sweet potatoes at eighteen cents, and other things in proportion, how long will it be before the Sheriff takes control of our affairs?" But the dire prospect created only a ripple of laughter, and, indeed, one man said, later, that New Jersey fruit growers of all men had little cause for complaint or fear, because so encompassed with good markets near at hand.

The death of W. R. Ward, brother of President J. B. Ward of the society, occurring just before the meeting, caused some confusion in the programme. The President's address was necessarily put over till the second day, and one of the first papers on the programme was a memorial biography of this honored horticulturist.

Among matters that came up late in the session, and were, therefore, merely mentioned, was the coming exposition at Hamburg, Germany, in May, 1897. It was stated that California had already taken 4,000 feet of space, and concerted action on the part of Eastern growers was urged, especially as the exhibits might lead to the opening of valuable markets for some of our products.

Asparagus Rust.

Professor Byron D. Halstead, of the Rutgers College Experiment Station, gave a somewhat emphatic warning concerning the evil results of neglect to combat the new asparagus rust. This has already been reported from all the Atlantic States north of Virginia, so much so that no other known rust has been so overwhelming in its attacks. It is a fungus growth, and as it develops the field turns prematurely brown, while the stalks themselves seem blistered, and are heavily covered with lines of brown. The spores germinate most quickly in the warm, moist weather of spring. These must be destroyed immediately after the season's cutting is over, and it is necessary to take the additional precaution to carefully burn all brush and remnants in the fall. Burning the fields may do some damage, but it is not to be mentioned beside that induced by the ravages of the rust. The variety Palmetto seems to be partially exempt from attack.

San Jose Scale.

Concerning the San Jose scale, Professor J. B. Smith, of Rutgers, said practically that Eastern growers must work out their own salvation therefrom. Professor Smith has lately made a tour of California, for the express purpose of studying this pest, going not into selected show orchards, but according to his own choice in the infected districts. The fact that no one pretends to grow fruit in California without insecticides is suggestive, and as, notwithstanding their assertions, no one was able to show Professor Smith a single specimen of *Rhizobius debilis*, it would seem certain that the claims to controlling the scale by means of this lady-bird were without basis of fact.

The pear blight and the root gall of the peach were referred to as creating considerable alarm through rapid increase.

New Fungicides to Come.

While Bordeaux mixture has been the first reliance in fighting the new rust, Professor Halstead's later experiments promise several new fungicides all free from the worst faults of the Bordeaux mixture. These will soon be made public in an official bulletin.

Insecticides.

Professor Smith recommended the use of bi-sulphide of carbon for the melon plant louse. The best grades of whale oil soap had been rather satisfactory in combating the San Jose scale, clearing young trees effectively; the formula is two pounds of the soap to one gallon of water. If the soap be good, this mixture remains liquid when cold. The use of pure kerosene has been noted by Professor Webster, but this is not as yet officially recommended.

Fruits on Exhibition.

These consisted of numerous plates of handsome apples and fine specimens of Japan Giant and Japan Mammoth chestnut. These last were shown by the Parrys of chestnut fame. Some of them measured

over two and a half inches in breadth. Prominent among the apples were Ben Davis, Lawver, Cooper's Market and Baldwin. The largest apples shown were of a handsome red sort, from Samuel Miller of Sussex County. He stated that the apple was commonly grown in his neighborhood, and a most excellent fruit it is, but no one was found who was able to give it a name.

Peaches.

Mr. Miller is an enthusiastic and successful peach grower; a young man, who may yet prove to New Jersey what the veteran Samuel Miller has to a sister State. In a most excellent address he spoke of peach growing as well adapted to men of small means, for the reason that peach lands, in New Jersey especially, are comparatively cheap, and the first investment of money need not, therefore, be heavy. He selects land thoroughly drained, at a good elevation, so as to be free from spring frosts, uses a moderate amount of stable manure with other fertilizers, plants 16 feet apart and prunes sharply for the first year or two. He spoke of high color as a key to high prices in the New York markets. His fruit last year was marketed in five grades, and he found that the use of small baskets added about 75 cents to the price of each carrier.

Apples.

Emmor Roberts, of Fellowship, knows apples from A to Z. He defined an orchard to be "As much as one can manage, and as many more as he chooses." His motto was: "Every tree under cultivation." Some of his words of wisdom were: "Leave out Duchess of Oldenburg; Williams will give twice as many apples in our State. Red Bletighelmer is good, but you don't want it; Gravenstein will outbear it ten to one. Leave out Northern Spy; it is not worth growing in our State (nearly every grower concurred); Yellow Transparent is good, but it must be handled like eggs, as it is so tender. Cornell's Fancy is a fine grower, a great bearer, large, splendid to sell; but it is very apt to die at maturity. Nero is very handsome, a magnificent apple to look at, but has the reputation of not being a good cooker; Lawver is handsome and keeps like a paving stone, but not every one likes paving stones; Ben Davis is good for nothing, but is rarely beautiful, and is the great apple to sell, after all."

Strawberries.

L. J. Farmer, Pulaski, N. Y., gave some of his methods and experiences. He thinks the great need now is a better quality and some systematic, official method of testing new varieties before pushing them on the market. His spring treatment of strawberries differs from that in general use. The plants are taken up very early and trenched closely in sloping trenches, about seven inches deep, twelve to fifteen plants to the linear foot, and crowns even with the surface. The roots are clipped before trenching. The whole surface is mulched, the beds (each consisting of three trenches eight inches apart), thoroughly soaked, and a week after, sprayed with Bordeaux mixture. The plants are kept in the beds, where they can be frequently sprayed for mildew (which in Oswego County is worse than rust) about six weeks. Ten thousand can thus be treated on a square rod of land. About May 20 the plants are set in the fields, and will ordinarily need no more spraying until after they have made a crop. Mr. Farmer puts the winter mulch on early, about as soon as the ground will bear a wagon. Horse manure is the preferred mulch. Varieties recommended for his section are Parker Earle (the best ever tested), William Belt, Brandywine and Marshall. Mr. Farmer referred to the fact that driving winds often waste the pollen and make the berries one-sided.

Ornamental Plants.

As a matter of business sense, W. A. Manda, of South Orange, put in a plea for a better display of plants by those who have them for sale. He asserted that people can seldom be induced to ask for, or to try anything they have never seen. A fine garden, he said, is prettier than anything you can buy for inside furnishing of the home. This last is always the same, while in the garden there is always something new. The best general indoor temperature for the house was named as 45 to 55 degrees. The best fertilizer, sheep manure or bone; the latter, if granulated, lasting at least

three years. The best palms for the house are the two Kentias, Belmoreana and Fosteriana; Araucaria excelsa is also a fine house plant.

Commission Men.

Horace Roberts, Fellowship, spoke some good words for the commission men. While considering retail markets much more stable than those at wholesale, he considered the commission men a necessity, but urged staying with one dealer long enough to become acquainted both ways. The commission man must be our friend, or he is worthless to us. These men usually prove careful and honest. Careless packing is the great drawback. California realizes this; her growers are no shrewder, no more conscientious than those of the East, but practical experience has taught them that they cannot afford to lay their fruits down in our markets other than nicely graded and finely packed, hence they have co-operated, almost universally, to secure this necessary end. That honesty is the best policy is considered ethical wisdom, but many seem to believe it to be business foolishness. It is not. It is good business sense.

Officers.

The list of officers stands the same as last year, the very few changes being made in the committees only. Charles Black, of Hightstown, was named as the society's delegate to the State Board of Agriculture meeting on the 12th inst.

The Vegetable Garden.

Mushrooms.—No garden is complete without mushrooms; they are the daintiest of all vegetables. They are easily grown if given reasonable care. Many articles on their culture having already appeared in these columns, I will offer only a few points in addition—points which appear to me to be overlooked by most writers. Care should be taken to procure fresh horse dung from stables where horses are fed hard grain and hay only; the dung of horses that are pastured, or are given rations of carrots, apples, or potatoes, or from animals that are not healthy and are doctored, is to be avoided. After growing successfully for a number of years, I was baffled with failure after failure, and after much loss of time, trouble, and experiment, I discovered I was using just such manure, and that such will not produce mushrooms. The beds should be located where there are no draughts, where temperature varies but little, and where a mean of 58° can be kept up without drying the beds. Good fresh live spawn is absolutely necessary, and should be procured from reliable houses. The spawn is a good deal of a mystery; we cannot see it germinate like any seeds, and I know no way of testing it. We may see the fine threads of the mycelium in it, yet it may be dead; frost will not hurt it, but dampness and dry heat will. I once made a bed in the fall in an unheated structure. Just as it came into bearing it froze up solid and remained so four months. I feared the results, but when the warm days of spring came we had the heaviest crop I ever experienced.

Mushroom House.—A mushroom house adjacent to the north side of the greenhouse and heated from the same boiler, is one of those conveniences that should be a part of every garden. A house 20x10 feet is ample for a private place.

Seakale is one of those neglected vegetables that are useful for winter, it may be easily forced in the mushroom house. Roots from two-year old plants from seed, or one year from cuttings, with a good crown, are best for the purpose if trimmed to about 6 inches in length. They should be planted close together every two or three weeks for succession. Seakale may also be grown under greenhouse benches; it must be excluded from the light.

Rhubarb.—By having a few good roots dug up, allowed to freeze a little, but covered with leaves or otherwise protected,

so that it can be had when needed, and treated as advised for seakale, this will succeed admirably and is very acceptable.

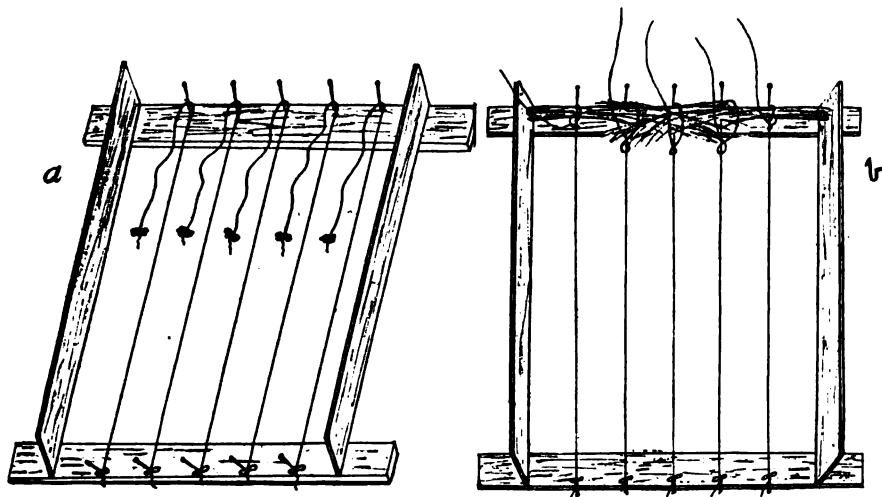
Shallots.—If planted in November in a sheltered situation and mulched, will be fit to use early in spring.

Hotbed Manure.—It will soon be time to look after the manure for this purpose; wherever possible have it collected and conveniently located.

How to Make Hotbed Mats.

RANDALL N. SAUNDERS.

A very serviceable and efficient mat for the protection of hotbeds and cold frames may be woven easily from rye straw by a method illustrated and described here with (figs. 18, 19). The work is one that may well be done at this season.



Frame With Strings Arranged.

First Course; Arrangement of Straw and Strings.

FIG. 18.—STRAW MAT MAKING FOR HOT-BED COVERS, ETC.

Broken Glass.—All broken sashes and other repairs should be promptly attended to.

Straw Mats and Shutters.—We manage to make a good supply of these during severe weather. Straw mats can easily be made by two handy men. W. M. EDWARDS.

Lawn and Flower Garden.

Trimming Up.—This is a good time to cut out all dead limbs, and indeed, there is no time to be lost if Maples are to be headed-in, for if the work be not done before the sun gets strong, the trees are apt to "bleed."

Pruning of Shrubs will also take up our attention. This is a subject sadly neglected, and I still note the broom system is the prevailing style. Everything is cut back indiscriminately, without regard to time of flowering. Spiræa, Forsythia and Weigela receive the same treatment as Hydrangea paniculata. By such practice, what should be a pleasure to look upon becomes an eye sore. Here is the rule: shrubs that flower in spring and early summer ought not to be pruned until after they have finished flowering; shrubs that flower in the fall may be close pruned in the spring.

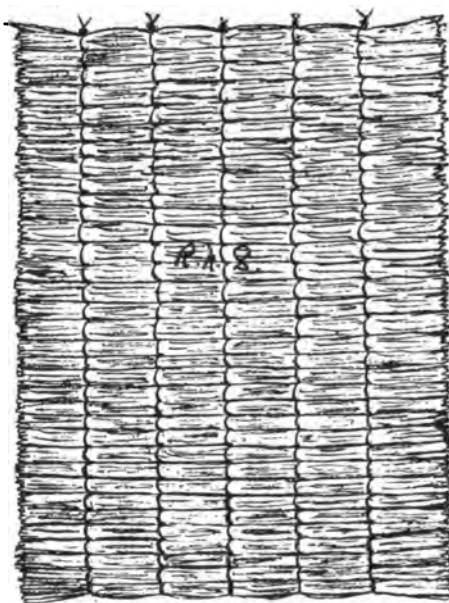
Preserve the Grass Edge.—Drive stout stakes on the corners of the carriage drives, so that when a snow storm comes, wagons will not cut the corners off the grass. Stakes should be driven at intervals all along the drive, so that no one can mistake where the drive is in a snow-storm such as we have already had this winter.

Look Out for Mice in your beds of Hyacinths and Tulips. They are also destructive to *Ampelopsis Veitchii* planted on old walls.

JOHN SHORE.

Southern Indiana as a fruit producing section is growing in importance, and although last year did not give much to encourage those already in the work, many growers are increasing their acreage. W. W. Stevens, of Salem, has coming into bearing 12,000 pear trees, all of one variety.

First make a frame of boards the length and width of the mat required, as at *a* (fig. 18). Place the side boards upright for guides in keeping the edges of the mat straight in weaving. Drive five strong nails in the bottom cross piece, and five in the top at apportioned distances from the sides and one another. To each of the nails at the bottom tie a strong, hard string, the size of sheep twine, and two and three-fourths the length of the mat to be made. Draw



The Mat Complete.

FIG. 19.—STRAW MAT MAKING FOR HOT-BED COVERS, ETC.

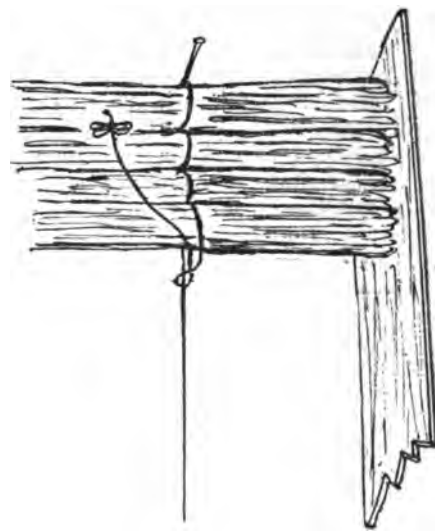
these strings taut around the nails at the top, but do not wind or tie them. Now take a long whisp of straw, divide it into halves, place heads together and butts out, reaching across the frame and touching the guide boards. Begin at one of the outside strings, draw it up tightly around its nail and over the whisp,

which you pinch hard and flat while making two half hitches around the tight string with the free end *b* (fig. 18). Take the other outside string next and repeat the process till all five strings are fastened, holding the first course firmly. In each case, with the first course or whisp, make a double half hitch to keep the taut string from slipping; one-half hitch for the other courses is all that is necessary (fig. 19). To finish the mat, loosen the strings at the bottom and tie several tight flat knots.

The experience gained in making one mat will suggest many minor things that might be confusing if brought into these directions. A little practice will enable one to turn off two or three mats an hour. The frame on which the mats are made may be fastened flat on a barn floor, or, better, firmly on saw horses, as this arrangement lessens the number of motions, and is not so hard on the weaver's back. Some sort of rack or frame should be added to hold the loose straw of which two bundles are required for a mat, and these should be within easy reaching distance. These mats can be used for a variety of purposes where some reliable protection from the cold is needed, and if well made and properly cared for will last several seasons. Their durability depends chiefly on the quality of the string and straw used in their construction. Select a hard tough quality of string and the very best, straight, bright rye straw.

"Roads are an index to civilization. The better the roads, the higher the civilization. Take any section in this country with good and poor roads and compare them, and you will see the truthfulness of this saying."—S. R. HUDSON.

Worcester, Mass.—At the last meeting of the Worcester County Horticultural Society, Adin A. Hixon was elected secretary, to succeed the late E. Lincoln. It was voted to hold a Chrysanthemum show each year, and an appropriation of \$300 was made, out of side of receipts.



Section Showing Half-hitch.

Export Apple Trade.—Reports from the transatlantic apple market show that, on account of the heavy exportation of American apples of inferior grade, they are lying on the piers in London, Liverpool and Glasgow, and decaying while awaiting purchasers at from 1s. to 4s. a barrel (25 cents to \$1.).

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1894.

PUBLISHED BY
A. T. DE LA MARE PTO. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.

Publishers' Announcements.

Cheques, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Plant Registration **S**INCE we first drew attention to the proposition to establish a bureau for the registration of new introductions of fruits, etc., there has been some correspondence upon the subject, and, so far, no decidedly favorable comment. No doubt the intention of the proposers has been misunderstood; it would not be practicable nor politic to endeavor to coerce the fruit grower into a submission to a prolonged testing of his novelty, nor could there be any hope for the success of the proposed bureau if it were to arrogate to itself anything approaching the duties which, by some of our fruit raisers, have been assumed to be the objects.

Fruit growers themselves suffer from the present methods of introduction, that is acknowledged by themselves, it was brought out before the New Jersey State Horticultural Society's meeting, by L. J. Farmer, of Pulaski, N. Y. The evil exists; how shall it be met, how remedied?

As was ably demonstrated by our correspondent, W. H. Ridgeway, in last week's issue, no reports, no tests, no opinions, can be relied upon by the commercial grower, as to whether a given variety will do well with him; the various factors which combine to make a variety a "good thing" for one man to grow are not the same as those sought

for by his neighbor; the two men may cater for different markets, perhaps their soils and methods are not identical, and that some one variety does well everywhere only proves its power of adaptation to varying conditions.

But what is wanted is the guarantee that a novelty offered to the public is distinct from others already in existence, and if the proposed bureau undertook merely to certify to that one fact we opine that it would be welcomed by the better class of fruit growers and novelty raisers. And this argument holds good not only of fruits but also of all other garden stock; the flowers, the vegetables, the trees and shrubs should be placed before the public with the guarantee of distinctness. Surely the public would be more ready then to invest money in a novelty. So far as the florists are concerned, the principle here advocated is already an accepted principle, then why not also for fruit raisers?

American **D**OES priority of title carry with Horticultural Society. it any weight? In this connection it is well to call attention to the action of those gentlemen who recently met in New York and formed an association entitled the "American Horticultural Society;" full details of the procedure on that occasion were given on page 44 of our last issue. The excuse of ignorance cannot be made with any justification, for due warning had been given to the organizers that the name they suggested already designated a body in existence, and possessed of a decidedly national character. It is not convenient to have two bodies with identical names, letting alone those considerations which surround the questions of expediency and of courtesy. As the American Gardeners' Society (the title originally assumed), there was a definition of the field of action, and an understandable basis of foundation, but as the American Horticultural Society one is at a loss to reconcile the tactics of the leaders, as displayed in action and in words, with the all-embracing, all comprehensive meaning of that designation.

The American Horticultural Society, which was organized some fifteen years ago, was, we believe, the outcome of the old Mississippi Valley Society, and worked much upon the lines of, and in conjunction with, the American Pomological Society, in so much as the meetings of each were held every two years, and alternating with each other. These meetings were held in various states and the published reports of the American Horticultural Society contain some by no means valueless contributions to horticultural knowledge. The president is Parker Earle, of Illinois, recently removed to New Mexico, and perhaps 'tis his removal that accounts for the failure to meet when last due. The treasurer is J. C. Evans, of Kansas City,

Mo. That the Society was a decidedly live one is well known; that to-day it is dead is by no means proven because no large gathering has recently taken place. If the body does intend to dissolve, however, there would be some reason for the assumption of its title by the new Society, but until that is known by a written communication, the advisability of the duplication of names must be questioned.

It has been stated by the president of the newly born Society that the horticultural press has treated the matter of its foundation with scant courtesy, whereas the facts are decidedly otherwise. AMERICAN GARDENING has given in the past, as it will give in the future, publicity to all progressive movement, but it always stands by its duty and right to criticise when such a course seems necessary for the benefit of the majority.

That a national organization is needed no one would question after witnessing the earnestness and goodwill of the gentlemen who met in New York lately; but so far as the matter has progressed the outlook is not as bright with promise as, in our opinion, it would have been had the organizers held to their logical aims, and had founded a Gardeners' National Society.

Gros Colmar Grape.

Our illustration on page 49 depicts faithfully a bunch (reduced one-half) and natural sized berries of this the most popular of all hothouse grapes for late crop. The chief claim that it has, and which tends to make it so popular, is its magnificent keeping and shipping qualities. In flavor it does not rank with some of the thinner skinned grapes, such as Black Hamburg, and other summer or fall grapes; but when they are only a memory, Gros Colmar begins to improve in flavor, and so continues to better the longer it is kept. Indeed, it is never fit to eat before November, although ripened in September. Its season then may be said to be from November to March, and it will keep even longer. Another desirable feature of this grape is the great size of the individual berry, which at once makes it the most showy grape possible to put on the market. It also colors fairly well. Its thick skin and firm flesh enable it to stand shipping remarkably well, which fact is amply attested by the superb specimens to be seen in the windows of our leading city fruiterers. It seems barely possible that they have traveled over 3000 miles from either the Channel Islands, Belgium, or England. They are packed 24 pounds in a box; each bunch being put into a paper bag, and the bunches hung on wooden strips; the whole box is then packed with cork dust and transported on fast steamers. In the course of a season's trade—that is, from November to March—there are shipped from 12,000 to 15,000 pounds. At wholesale the prices vary from 75c. to \$2.50 per pound.

Eastern N. Y. Horticultural Society.—A preliminary meeting for the organization of a society as above will be held at St. Thomas' Hall, Cornwall, N. Y., Monday, January 25, at 10.30 A. M.

FOREIGN CORRESPONDENCE.

Orchid Collector J. E. Lager Fears Extinction of the Plants—European Methods Criticized—The Coffee Industry Destroying Orchid Grounds.

Orchid collecting in these regions is getting more difficult and expensive every day for several reasons. In the first place the plants, without exception, are fast becoming scarce, on account of the constant drain upon them. Secondly, on account of the coffee industry, which is taking gigantic proportions here these last three or four years, for which purpose large tracts of forest are cut down, and as it happens that the coffee region is exactly the Orchid region, comprising as it does a belt of from 2000 to 7000 feet above sea level, the consequences are so much the more serious.

Below and above said elevations few useful species of Orchids are found, and if matters continue as they have commenced, we will very shortly have to pay high prices for Orchids, and then probably not be able to secure any in quantities.

Only four or five years ago I myself thought that the region where *Cattleya Trianae* occurs, and also that of *C. gigas* were inexhaustible; however, this has not proved to be correct, since now in the very best districts the plants are very much retired, causing heavy expenditures in order to extract them. Freights have increased 100 per cent. on account of scarcity of beasts to move the coffee crops.

The Department of Antioquia is still the best and most interesting to the collector, as a great number of species are found here, although getting scarcer every day. In the northwestern part of this Department we find *Cattleya gigas* and the beautiful *C. aurea*—the latter in very limited numbers—and also *C. Skinnerii*, besides a lot of miscellaneous plants, among which are: *Oncidium papilio*, *Houlletias*, *Anguloas*, *Pescatorias*, *Peristerias*, *Acinetas*, etc. *Miltonia vexillaria* still occurs plentifully in certain districts, also owing largely to the decrease in exporting this beautiful Orchid of late. In the Department of Tolima there are few things worth collecting except *Cattleya Trianae*.

Patche in Cundinamarca is still the center of *Odontoglossum crispum*, in the collecting of which great difficulties have arisen lately. Greed and overzeal practiced here by some European firms, is the principal reason for this state of affairs. Men are sent out with instructions to remain in one place three and four years or even more, the consequence of which is that the owners of the forests simply, and very naturally, think there are millions to be made in the business, and prohibit the extraction of the plants, unless the collector is willing to pay tribute or submit to the conditions imposed by the owners, which are very often excessive, though the principle is by no means unjust.

It is generally imagined that most of the forests here belong to the one that first comes, or at the best that they are owned by a lot of savages.

Nothing can be false; most of the accessible forests and mountains are, with but few exceptions, taken up, and a great many of the people here are well educated and of good standing financially. Another practice worth criticising here is that some parties solicit their plants through natives, who do not know the plants well enough, besides which they ignore how to treat and pack them.

The consequences are bad for all parties concerned, although I am sorry to say that the shipper is generally the loser in whatever state the plants arrive. However, this state of affairs is not the rule, but it is, unfortunately, too often practiced.

Cattleya Chocensis still occurs plentifully in the State of Cauca, though its district is comparatively limited. The forests here in the proper valley are on level land, and its destruction is progressing in the clearing of tracts for pasture lands.

In the Department of Santander, we find *Cattleya Mendelii* fast disappearing, while *Cattleya Schroderae* is comparatively abundant, but its extraction is expensive on account of the long distances the plants have to be transported.

In short, the day is not very far off when these beautiful plants will be extinct and things of the past.

JOHN E. LAGER.

U. S. Columbia, S. A.

READERS' NOTES AND COMMENTS.

Staking Trees.—It was with interest that I read Elias A. Long's article "Why Stake Trees," page 18, and I herewith submit sketch showing the method that I use,

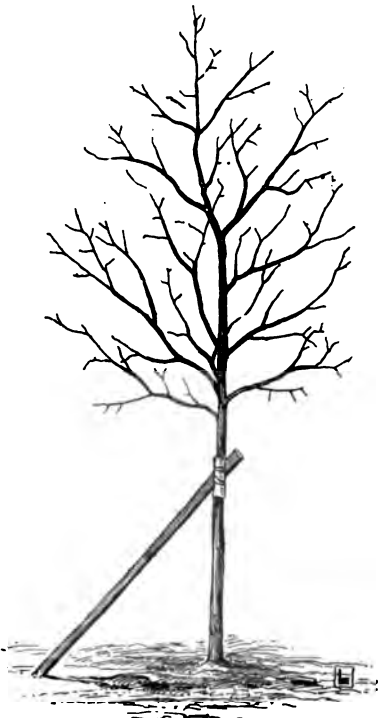


FIG. 20.—AN EASILY ADJUSTED TREE STAKE.

(fig. 20). I take 2-inch chestnut planks and have them ripped into strips 2 inches wide, sharpen one end, and, after starting a hole with a bar, merely to get the course, drive the stake home with a maul. Used as shown it answers every purpose that three stakes do, keeping the tree from swaying in either direction, takes but one-third of the material and labor, and when driven in line with the trees is not unsightly or in the way of the cultivator or hand hoe. I also wrap the tree with a piece of matting and make it fast to the stake with tarred cord. I think it advisable to remove the wrap at least once each season, as I have found borers at work under it in several cases. It takes a pretty good man and soil free from rocks to drive three stakes, as Mr. Long describes, and have the tops come where you want them.—J. E. PRIOR, Moosup, Ct.

Over Sanguine.—As regards those "wonderful successes," as stated by the writer of "Money Methods in the Market Garden," while I admit them to be possible, I am afraid such extravagant statements often lead the inexperienced into an undertaking only to meet with failure. And to those that have experience in the business, and compare their own results with such accounts, there is either a rather discouraging tendency, or they don't believe.—C. ANSCHICKS.

[By all means let us have both sides of a question. It is only by the bringing forward of evidence to show what may be done and how it is done by live workers that there can be any progress in the large mass of those not so advanced in their methods. It is our duty to lay before readers not only what is done, but what may be done by proper seizure of opportunity. Discussion of any topic treated upon is not only welcome, but eagerly sought. Let us have some more.—Ed.]

Cutting Strawberry Runners.—Replying to the question on page 13, a few years ago I made myself a device for cutting the runners on the edges of strawberry rows as follows: I procured two cutting discs, such as are used on sulky plows, and had a blacksmith fit to each an axle, about 18 inches long. These I fastened one on each side of an "Iron Age" cultivating harrow in such a way that they would cut a little deeper than the teeth on the cultivator, and the width could be regulated with the same. This appliance works all right enough, but during the last few years strawberries around here made such poor growths that there were not any runners to cut off.—C. ANSCHICK, Ill.

—Other correspondents are also thanked for information supplied.—Ed.

Holland Pippin.—I have been much interested in J. Holloway's fruit articles in AMERICAN GARDENING; I heartily approve of his idea that it is too apt to be the case that the older varieties are overlooked in the planting of orchards by reason of the glowing descriptions given to the newer varieties. The mention of the best of the older sorts on page 21, leads me to ask you where I can get the Holland Pippin, which is spoken of as among the best sorts. I formerly grew this variety, but the tree died, and I am now anxious to graft over some old trees with it, or set out young ones. I think it one of the best of its season, and the difficulty of finding it among the nurserymen shows that it is not appreciated as I think it should be.—HORACE EATON, Elmwood Ave., Cambridge, Mass.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

C. E. WHITTIER, Bridgman, Mich.—Catalogue of Strawberry and other fruit plants.

JAMES J. H. GREGORY & SONS, Marblehead, Mass.—A Comprehensive List of Home Grown Vegetable and Flower Seeds, also condensed list of Fruits and Appliances.

HENRY A. DREER, 714 Chestnut st., Philadelphia, Pa.—Annual Catalogue of Seeds of all sorts, Plants, Trees and Shrubs. Much space is devoted to Aquatic plants and the catalogue will be of much value to owners of water gardens. All sorts of tools, implements, pots, etc., are included. The cover has an illustration of the new white Cosmos "Dawn."

PETER HENDERSON & CO., 35 and 37 Cortlandt st., New York, issue their Jubilee Catalogue this year. It is a handsome book with colored plates of Pansies, and the new H. P. Rose Jubilee; also Japanese Morning Glories, Vegetables, etc.; a manual for the garden. A prize is offered for a name for new Pea. (Sent for 20c.)

The Fruit Garden.

Look Out for the Lackey Moth.—When pruning apples and pears, keep a sharp lookout for the eggs of *Bombyx neustria* (the lackey moth). The eggs are generally on twigs about the thickness of a lead pencil, and are easily noticed when you know that they look like a bracelet of 10 to 15 spiral rings of very small glass beads set in brown varnish. The eggs hatch in May, and then we wonder at the number of bunches we failed to see when pruning. We are very busy about the time they hatch, and may not notice the fine work the caterpillars are doing until they ruin a whole branch, then it means either loss of time, or the branch, which must be handled very carefully, or many of the caterpillars will drop to the ground on a very fine thread, and travel off at a surprising speed. Another species, *Eriogaster lanestris*, works in much the same way. The eggs look like a small patch of mouse-colored fur; a little carelessness now will make quite a difference in May, when the days are only half long enough for the work on hand.

Old Trees.—Look over the old trees; some of them will be the better by having a branch taken out here and there to let in the sunlight (not the full glare), to secure well-colored matured fruit. Don't forget to smooth and paint the cuts made. If the variety be good and the tree solid, but making very little wood, break in a heavy dressing of manure; apple trees should each season make 8 to 15 inches of wood on all the leading branches. Any trees showing rotten branches should be taken out and others planted, but not in the same place, unless that be absolutely necessary; when so however dig out and cart in ten or twelve loads of good soil.

Plums.—Are you growing any? If you have only room for one tree, plant the Japanese *ABUNDANCE*. The cuculio will try the fruit, but I note that it is almost proof against the attack. The amount of fruit the tree will carry is wonderful, and needs thinning severely. The fruit is a bright cherry red, and is covered with a delicate white bloom. It is in use here by August 1, finished August 18. *ORGAN* is a meaty, clean, attractive yellow fruit, almost round, in use July 25. Tree not quite so thrifty a grower as *ABUNDANCE*. *SIMONI*, another of the Japanese, looks like a peach tree; fruit brick red, with dark cheek; ripe August 8. It is really more ornamental than useful. It will set off a dish of *ABUNDANCE* and *ORGAN* to perfection, and the aroma will fill the room. I consider the flesh too firm and the flavor too peculiar to make it popular for general use. *KELSEY*, the tree is a little on the peach style of foliage, and is a good grower, and has any quantity of flowers, which, for some reason, do not set. The few fruits I have got were very fine in every respect, heart shaped, ripe September 16, coming in with *Coe's Golden Drop*. *WASHINGTON* is a handsome plum of good quality; in use August 19. *PURPLE FAVORITE* is also a fine-flavored plum, ripening with *REINE CLAUDE DE BAVAY*. The latter has not been very satisfactory here yet. *SHROPSHIRE DAMSON* is a great bearer, and is very satisfactory for cooking, lasting in season a long time; ripe September 10. Our plum season closed with *SCHUYLER'S GAGE* and *GERMAN PRUNE*, October 2. Plum trees with few exceptions are upright growers, and if cut back hard when young, we get three to five more shoots for our trouble, but if thinning is practiced, the spurs will form along the leaders, and bearing will soon stop the rank growth and bring the leaders down. The pruning is best done in early spring.

Black Knot.—Now is a good time to look for any black knot that may be around on

any plum or cherry trees. If the branch can be spared, cut it out; if it be not very badly affected cut the knot out as cleanly as possible with a knife, and then paint over the wound.

J. HOLLOWAY.

The Apiary.

Supplies.—There is a two-fold reason for at once laying in supplies needed for another season: 1st, They are then on hand when needed and may be put into shape for use at a time when work is not so pressing; 2d, prices are almost certain to be higher later on. Most dealers make a special discount on out of season orders, the usual scale being about 4 or 5 per cent. Besides, there is quite a tendency among manufacturers toward higher prices for 1897. This is particularly true of sections, on which several of the leading manufacturers have already announced an important advance. This is due to the fact that in competing for business during the hard times they overstepped the lines of a living profit, and are now obliged to hedge.

Color in Sections.—Most bee-keepers have been wedded for the last few years to "snow-white sections," and considered any other kind utterly impracticable in the production of the best white honey, cream sections being regarded as fit only for second grades or for home consumption. Recently some one has discovered that this has been carried to such an extreme that the sections are in many instances whiter than the whitest honey, and the latter, instead of being more tempting on the market, actually suffers by comparison. Just how much of a reaction this will cause, it is hard to say, but there is no question but that the white section has been overdone by bee and commission men.

The Honey Supply.—People who fear an over-supply of honey should remember that at present the annual honey yield in this country is not sufficient to allow each person one pound a year. Estimating that one-half the people do not care for honey and that one-half of the remainder are too poor to buy even a pound or two, there remain only four pounds to each person, rather a meager annual allowance for a lover of honey. This estimate makes no allowance for the amount consumed by bakers, tobacconists, confectioners, etc., who annually consume many tons. One Wisconsin biscuit and confectionary establishment alone is reported to use ten tons annually.

Commission Men.—Several new commission houses in Chicago and elsewhere have been entertaining bee keepers with their tales of better prices than the old concerns were getting. Look out for them. Some have already disbanded under pressure, but "there are others." It is pretty safe to make careful inquiries before consigning goods of any kind to any firm offering more than market prices, and the old houses experienced in the business are not likely to take less than market price.

WILDER GRAHME.

Bulbs in Storage.

Even though the bulbs were put away with care earlier in the season, it is wise to give them a look now and then. As the seasons pass, they vary much as to conditions of dryness, etc., and some bulbs may be gathering mold when we thought them all right. Dahlias and Cannas will need a look, to see that the first are not shriveling, nor the second rotting. Gladioli will like to be dry but cool; Tuberose must not occupy a station where the heat falls below 40°.

Get

Most for your money and save needless expenses now. It is true economy to build up your system and prevent sickness, by taking

Hood's

Sarsaparilla

The Best—in fact the One True Blood Purifier.

Hood's Pills are prompt, efficient and easy in effect. 25 cents.

OLD BOOKS SEND STAMP FOR LIST. Address A. J. Crawford, 618 N. 7th Street, St. Louis, Mo. Mention American Gardening when you write.

GAME COCKERS? Send 50 cts. for a monthly journal devoted to Game fowls. Sample 5 cts. **GAME FIGHTERS JOURNAL**, Battle Creek, Mich. Mention American Gardening when you write.

DISCOVERED A face wash that will remove that greasy complexion and leave it soft and white in 10 minutes after washing, and in a week remove all pimples, blackheads and tan. Blanches the skin without irritation. Perfectly harmless; contains no poison. Costs but five cents to prepare enough to last six months. Recipe and full directions, 25 cts. Mrs. B. HUNTER, 4818 Evans Av., St. Louis, Mo. Mention American Gardening when you write.

Second Crop Potato Seed—Surpass all others in yield. **ORRIS A. BROWNE**, Cape Charles, Va. Mention American Gardening when you write.

BEEKEEPERS!

SEND FOR sample copy of **CLEANINGS IN BEE CULTURE**. A Handsomely Illustrated Magazine and Catalogue of BEE SUPPLIES. Valuable book on Bee given FREE to each one who mentions this paper. **THE A. I. MOOT CO.** Medina, O. Mention American Gardening when you write.

HATCH Chickens BY STEAM—with the **MODEL EXCELSIOR Incubator**. Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made. **G. S. SINGER, 114 to 122 E. 4th St., Quincy, Ill.** Mention American Gardening when you write.

INCUBATORS
The **OLENTANGY Incubator** has proved to be the best. Have taken prize after prize. Brooders only \$5.00. Before buying elsewhere, send for free description and testimonials. Also breeder of 40 varieties of high-class poultry. 110 yards, 110 houses. Address **G. S. SINGER, Carlington, O.** Mention American Gardening when you write.

INCUBATION
is the first step in the poultry business and much of future success depends upon its completeness. There is no failure where **RELIABLE INCUBATOR** is used. It is fully warranted and is the product of twelve years of experience. It has never been beaten in a show. It is not like its competitors—it is better. We tell why in new book on poultry. Send for it. **RELIABLE INCUBATOR AND BROODER CO., QUINCY, ILL.** Mention American Gardening when you write.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.60.

THE OHIO FARMER is a large, 30 page weekly, 21 per year. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for illustrations, Correspondence and Market Reports than any other of its class. It is the Best and Costs no more than others. Send for a **SAMPLE COPY TO THE OHIO FARMER**, Cleveland, O.

THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1908—14 months, if ordered at once. Address all orders to **AMERICAN GARDENING, P. O. Box 1697, New York**

Russian Fruits in Iowa.

Ten to twelve Russian varieties could be classed as winter sorts in central Iowa, the balance are fall and summer sorts in that section; when grown further north there are a greater number of fall and winter sorts. Two experiment stations under the supervision of the State Horticultural Society are within 12 miles of the city of Des Moines, and the one reports adversely on every and all fruits of Russia, while the other brings annually to the great State Fair quantities of varieties of fine fruits of that type. The main experiment in the West as regards this line of fruits is within 33 miles of the city, and there are grown successfully 135 varieties. On general principles the south half of the State, and many sections of the central parts, have common sorts adopted out of the old list.

The Russians, as a rule, are not high in quality, but there can be found some fair to good fruit ranging as good as Ben Davis, Willow, Fall Orange, Coles Quince, and few better. Two that attracted considerable attention this season were True Good Peasant and English Pippin. As to their being of no use in south half of the State, we simply present the fact that the first award among 15 to 20 exhibitors went to Longfield and Tetofsky last season, fruits shown by southern Iowa exhibitors. Not many years ago the Walbridge and Pewaukee had a boom and many friends. These are both inferior to many Russian sorts, and were largely planted in some sections; if Russians had been planted in their stead it would have been far better for many sections, especially as regards such varieties as Longfield, Tetofsky, Good Peasant, and Zuzof's Winter.

There are personal antagonisms between Iowa horticulturists on the subject of Russian fruits, and extreme views are uttered on both sides of the questions. A large number of private experiments are made by farmers, and those not connected with the State societies' work, and we regard these sources of information the most reliable. To illustrate, there is an experiment station but a few miles from the State Fair grounds that reports every Russian variety of plums an absolute failure, and that it has been a necessity to dig up and destroy the trees. A farmer not far from this station last year brought two sorts of plums to the horticultural hall to be named, saying he got the trees with others from the introducer of Russian fruits, and had lost the labels, we compared them carefully with plates of a half dozen exhibitors of Russian fruits, and they proved Hungarian Prune, and Communia, which were grubbed out and reported a failure from the station. At three years four whip trees bore nearly a bushel per tree. On the other hand, we have the Moldavka, a yellow freestone variety, last season bearing fruit 2½ inches in circumference, and of good quality.

There is a part of the Russian work that is not so very amusing, but decidedly interesting to those who are opposing, and calling in question, the motives and all acts of the introducer of this class of fruits. It is that class of agents, dealers, and nurserymen who, during the boom of the Russian fruits, sold trees of American sorts with Russian labels on them to make the most money possible out of the boom while it was on. This class of agents, dealers, and nurserymen is now seeking to lay all the blame on the originator of the Russian fruit scheme.

There is a large amount of responsibility connected with the introduction and dissemination of any line of fruits; but if any line is well started and it creates a boom, and trees get into the nurseries and are sold as true to name and before they are tested, a mistake is a very natural consequence. If tree dealers and agents of nurseries, with or without authority, give out trees not true to name just to catch the prices the boom makes possible, while there may be some degree of responsibility for the origin of the work resting on the originator, the moral crookedness, and the odium of putting out trees not true to name, so as to reap the pecuniary advantages of the boom, is very conveniently shouldered onto the originator or introducer. There are some well planted orchards that now make a very bad showing against critics of Russian fruits.

W. M. BOMBERGER.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Do not set trees or plants too closely together.

The Evergreen Belt is a decided protection these cold winter days.

Colored Plates of fruits are mostly misleading.

House Plants require special care this cold weather.

Prentiss Grape.—This variety has proved disappointing to many.

Winesap Apple gave excellent satisfaction this year.

A Heavy Coat of fine rotted manure put on the flower beds now will be very beneficial.

North Star Currant is not much larger than Red Dutch when the latter is well cultivated.

Grapes for Home Plot.—A neighbor in selecting six grapes for the village garden, chose two Worden, one Brighton, one Agawam, (Rogers N. 5), one Niagara and one Moore's Diamond.

The Habit of Observation is worth much to the fruit grower.

Irrigation for Strawberries.—He who has a good irrigating plant on his strawberry grounds shall have fine luscious berries.

Glass for the new greenhouse, hothouse or hotbed, is it ordered yet? It is nearly time to use it.

Horticultural Literature.—How much of it are you reading this winter?

Cultivation.—If the orchards have been well cultivated and properly pruned for a few years, it has been found that it paid well.

One Good-Sized Crab apple tree is enough to supply one family.

Duchesse D'Angouleme pear proves to be very satisfactory as a dwarf on rich loam, with clay sub-soil.

The Industry of growing vegetables, as lettuce, radishes, etc., under glass, is proving profitable.

Osthelme Cherry.—If a good variety of sour cherry be wanted, try the Osthelme.

A Fair-Sized Hothouse for growing vegetables, etc., can be built at moderate cost.

Plant and Seed List.—Is it made out yet? First come first served is generally the rule with nurserymen and seedsmen.

Do Not Expect an orchard to bear year after year the first grade of fruit without liberal fertilizing.

Nemaha Black Raspberry.—I have tested this and do not consider it worth as much as the Gregg.

Carter's Seedling is a new strawberry which is a very heavy fruiter, beautiful color, and good size.

How to Set Out Orchards.—One gentleman wishes to know whether in setting out an orchard to use large or small trees. The answer is that a medium sized tree, with plenty of fibrous roots and a straight body, was to be preferred.

Salt for Potatoes.—A grower says that he has tried sowing one barrel of salt to the acre right after he had planted his potatoes, and considers it a good plan to ward against drought. He claims it held the moisture, and that his potatoes were perfectly free from scab.

Mistakes will sometimes be made. A short time ago I was talking with a fruit grower who had obtained, as he supposed, fifty Orange quince trees from a large nursery of established reputation for doing a square business. Only about a dozen trees proved (as they fruited this year), true to name out of the whole number.

CHAS. C. NASH.

Scrofula is a word you don't quite understand, but if you talk with your doctor, he will tell you that it is generally believed to be due to the same cause which gives rise to Consumption. It appears mostly in those who are fat-starved and thin, usually in early life. A course of treatment of Scott's Emulsion with the Hypophosphites wherever Scrofula manifests itself, will prevent the development of the disease. Let us send you a book. Free.

SCOTT & BOWNE, Chemists, New York.

POULTRY BREEDERS! Send 50 cts. for a 30-paged monthly devoted to Poultry, etc. Sample 6 cts. MICHIGAN POULTRY BREEDER, Battle Creek, Mich.

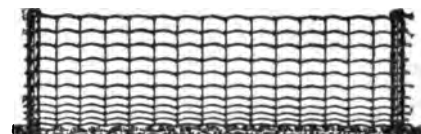
GRAY HAIR MADE DARK

By a harmless Home Wash. Also makes the hair grow. Full directions and recipe for 25 cts. Mrs. A. MUNTLEY, 4815 Evans Ave., St. Louis, Mo.

ALL THE LATEST NOVELTIES

AND PLANTS THAT CAN'T BE HAD ELSEWHERE. Cammas, Italia and Austria, at \$1 each. New Roses, New Fruits, New Shrubs, New Bulbs. 10 Cents for \$1.—5 for 50 cts. Book on Cacti 115 pages, 120 cuts, 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free. A. BLANC & CO., Philadelphia.

Mention American Gardening when you write.



A HORSE BUYER

He usually proceeds with caution. If a stranger should offer him a well known animal at a "cut rate" he would insist on a bill of sale from the former owner. Wise fence buyers who are offered the Coiled Spring article by other parties should ask to see a licence from

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

Offer No. 38.

Sent, postpaid, for ONE NEW subscription at \$1.

150 SUMMER BEDDING OXALIS BULBS



These bulbs make beautiful borders for summer flower beds, as well as attractive pot plants. The collection includes 150 Bulbs in equal proportions of the four following varieties, named, and in separate packets:

OXALIS DEPPEI ALBA.—White.
OXALIS DEPPEI ROSEA.—Old rose or salmon.
OXALIS ERYTHRA PURPUREA.—Purple.
OXALIS LASLANDRA.—Crimson. Tall, fine pal-
mate leaves.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Outside House Shutters.

In the interest of the plants, let all defects in the window blinds be carefully repaired. Many an old house must apologize with creaking, slamming shame for hinges gone, and catches worn past doing their rightful duty. If these catches cannot be replaced, a few hooks and staples may be so placed as to keep the blinds in position when open, and to render it an easy matter to close them when the plants require it. No man of ordinary temper will close the shutters for his Dulcinea if it is a matter of icy strings and cold blundering fingers. If the work is made easy, he may easily be persuaded to undertake it.

Too Many Eggs?

What is the bugaboo that frightens the great majority of actual poultry raisers? Is it not under-production? Every effort is put forth to gain more eggs during the two or three months of the moulting period, and the three to five months of winter cold. We of the home plots are fully satisfied only when we can bring our flocks up (by means of mashies, clovers and vegetables, nitrogenous grains, meat, bones, and every possible device) to, or above, the pointed averages. Yet, strange to say, the would-be poultry raiser finds his strongest deterrent in the year of over-production! I talked with one such last week—a woman who had many sound ideas, and who was looking the ground over thoroughly. Yet more than a fear of her own lack, stronger than any fears concerning her fowls, were her fears as to a permanent, steady demand for the products. Groundless fear, this, especially when, as in her case, the location can be chosen, not merely accepted because it is a fixed fact.

Window Carnations.

Marguerite Carnations are blooming right along in a sunny south window. The colors run very much to shades of a peculiar light red which is yet not pink. Still, from a dozen plants one may get nearly all the good colors, and some well-shaped, double blooms of good size. They are not, however, by any means equal in all points to the best of the greenhouse everblooming sorts; as the blooms of the Marguerite are usually of less substance, and last in perfection but a brief period, even in a cool room. But the fact remains that they have many claims to distinction as good plants for sunny winter windows in cool rooms. Garden-grown, they have been wholly free from red spider throughout the season to the present time, and this in a very dry atmosphere, and almost without showering.

A Test of Patience in the Flower Lover.

"When I am 65, or thereabouts, and feel that I no longer wish to work very hard, I think I shall like to spend my time largely in experimenting with and hybridizing plants," said a young woman editor last week. "I like that, too," eagerly rejoined the second woman. "What line would you take up?" "I think Tulips offer a fine field, as there is so much pleasure in watching them change their colors, as the years pass, and they develop." "But, oh! they are so slow!" protested the other. "They take so many years to show what they will do." "So many years? What, then, of Orchids, which take often 15 years or more to come into bloom from seed?" "Ah! me; I could

never wait for them!" said the impatient one. "Two or three years seem long enough to wait, even for the best things." Ah! the patience necessary to the hybridizer.

L. Candidum as Aphis Pasture.

Some may have wondered what especial traits in the Harrisii Lily have made it to be preferred over candidum for forcing. There is one point in connection with the latter which may well be considered, even though with careful treatment it may bloom as well in winter as Harrisii and longiflorum. This is the fact that aphides are so fond of it. Of all the plants in one miscellaneous collection, the most difficult to keep free from aphides is the Candidum Lily. The plant is thriving, unusually well, hence it cannot be weakness that draws the pests.

Seeds of Previous Years.

That we must buy some new seeds goes without saying, with all of us. But it is to be presumed that nearly every closet store has some home-saved or left-over stock. Sorting and listing these is a sensible preliminary to making out the new lists. Receptacles not mice-proof may indeed be found to be like comb without honey. Even if the seeds be all intact, let them be listed. Seeds like cabbage and its class retain their germinating power many years; others, like the umbel-flowered parsnip, parsley, and their relatives, fail quickly. Let us know what are the probabilities concerning the seeds on hand, lest we be left without some favorite herb or vegetable when its season comes on.

The Wooden Hen.

The little illustration shown herewith is small only in size, but large in power, when we consider that the "Wooden Hen" is no larger than a live hen, yet has double the capacity, viz.: 28 eggs. Owners of a home



plot should write to Geo. H. Stahl, Quincy, Ill., and ask him for a copy of his handsome little booklet describing the "Wooden Hen," and also for his catalogue. Tell him you write at the suggestion of AMERICAN GARDENING.

Re-arranging Plants.

If plants are kept chiefly for their decorative effect, it becomes a matter of necessity to re-arrange and replace rather often. Unless certain plants are especially selected for certain exposures, it is difficult to grow good plants. But by keeping those that must have sun next the glass in the sunny window, and those that require shade further back, or on the floor, one may do much toward good plants. Even this is not all, however, for as the plants grow they need to be moved to give better chance for others. In a miscellaneous collection, when one has placed each plant to receive the best that conditions may offer it, it is found that the effect from the room is anything but good. For this reason, a general collection fails often in a large portion of its mission. Flowers, of course, are beautiful wherever they may appear, but only special arrangement for effect can show all the beauty there is in them. After blooming, they need to be removed, others being substituted.

That Pleasing Paralyzing Pie!

How good it looks! How good it is! And how it hurts. Why not look into the question of **Pill after Pie?** Eat your pie and take Ayer's Pills after, and pie will please and not paralyze.

AYER'S
Cathartic Pills
CURE DYSPEPSIA.

Begonias and Sunshine.

"Begonias now in bloom like a sunny position and a temperature of about 55° to 60°." The quotation is from the December calendar of an expert. This runs directly counter to the common belief that Begonias require much heat and little or no sunshine. What has something to say upon this head?

MYRA V. NORRIS.

Do you raise small fruits? No? Don't know just how to get at it? *The Rural New Yorker* will give you information about it every week in the year for only \$1, and your money back in three months, if you are not satisfied. We can send it and AMERICAN GARDENING, both one year for \$1.80.

GOOSEBERRY AND CURRANT—50,000. Other Nursery Stock.
T. G. ASHMEAD, Nursery, Williamston, N. Y.
Mention American Gardening when you write.

"Strawberry Plants That Grow."

Standard sorts; \$1.50 to \$2.50 per M. Best Rasp. and Blackberry plants, \$3.50 to \$5.00 per M. My "1897" catalogue mailed free.
C. E. WHITTEN'S NURSERY, Bridgman, Mich.
Mention American Gardening when you write.

MY **STRAWBERRY** CATALOG
FREE of interest to progressive growers and careful buyers. SEND FOR IT.
C. N. FLANSBURGH, Lealie, Mich.
Mention American Gardening when you write.

Stark Fruit Book

contains new and copyright colored plates of over 100 rare fruits, etc.—write for particulars. Ask for list of Stark Trees—\$3 per 100 and up. STARK BRO'S, Stark, Mo.

STARK TREES
BEARFRUIT

Mention American Gardening when you write.



NEW PLUMS

TATGE
The Best.
MILTON
The Earliest.
CHAS. DOWNING
Most Beautiful.
Send for catalogue.
Silas Wilson Co.,
Atlantic, Ia.

Mention American Gardening when you write.

WHOLESALE MARKET REPORT

New York.

Business in hothouse and fancy stock remains in practically the same condition as reported in last issue; but these conditions it is hoped will very soon be altered. Society events are now beginning to be more numerous, and a larger number still are expected for the forthcoming weeks, between now and lent. Growers of fancy and forced stock are also likely to benefit from the fact that there has been a heavy frost in Florida. This should especially benefit hothouse lettuce.

At time of writing lettuce is realizing very low figures, but much of the stock is only equal with southern grown, and consequently makes only the same price; plenty of lots sold at 50c. per barrel. Strictly fancy made from 20c. to 50c. per dozen.

Mushrooms are still selling at unprecendently low figures, and there is no relief of the overstock in sight.

Cucumbers are in good demand, the supply being very light; prices run from 75c. to \$1.75 per dozen, and a few made \$2.

Tomatoes sell at 20c. to 35c. per pound. Radishes sell well, if quality is good, at from \$3 to \$3.50 per 100 bunches. These vary in count from eight to fourteen radishes.

Hothouse strawberries: No. 1, sell at \$4.50 per quart, No. 2 at 75c. per quart. Select fruit, Florida grown, 75c. per quart.

European grapes: 75c. to \$1.25 per pound. Apples show no change from last quotations.

Consignments of fresh vegetables from Bermuda arrived in excellent condition. These included some very fine new potatoes, realizing \$6 to \$8 per barrel.

Vegetables.

Beets, Florida, new, per bush. crate.	\$0 40	\$0 60
—Florida, new, per 100 bunches.	2 00	4 00
—Charleston, new, per 100 bunches.	3 00	4 00
—old, per bbl.	75	1 00
Brussels sprouts, per qt.	5	08
Cabbages, per 100.	3 00	4 00
—Danish, per 100.	6 00	7 00
Cauliflowers, fancy, per bbl.	6 00	7 00
—com. to prime, per bbl.	2 00	5 00
Celery, flat bunches, per doz. bunches.	50	1 00
—fancy large, per doz. stalks.	35	40
—average best, per doz. stalks.	20	30
—small to medium, per doz. stalks.	10	15
Egg plants, Florida, per 1/4-bbl. box.	1 00	2 00
—Florida, per bbl.	2 00	4 00
Kale, Norfolk, per bbl.	30	50
Lettuce, New Orleans, per bbl.	4 00	5 00
—Florida, per 1/4-bbl. basket.	75	1 50
—Eastern, per dozen.	25	75
Onions, Eastern white, per bbl.	4 00	6 00
—Eastern, red, per bbl.	3 25	3 50
—Eastern, yellow, per bbl.	3 00	3 25
—State & W'n. yellow, per bbl.	2 30	2 60
—Western, white, per bbl.	2 50	5 00
—Western, red, per bbl.	3 50	2 75
—Canadian, red, per bbl.	2 75	3 25
—Orange Co., white, per bag.	2 50	5 00
—Orange Co., yellow, per bag.	2 00	2 50
—Orange Co., red, per bag.	3 00	3 25
Peas, Florida, per crate.	1 50	3 50
Peppers, Florida, per crate or carrier.	1 00	1 50
—Marrow, per bbl.	1 00	1 25
—Habbard, per bbl.	1 00	1 00
—Florida, white, per crate.	50	75
String beans, Florida, wax, per crate.	2 00	4 00
—Florida, express, basket, per crate.	2 50	3 50
—Florida, green, freight, per crate.	2 00	3 50
Spinach, Norfolk, per bbl.	60	1 00
Turnips, Canada, Russia, per bb.	60	70
Tomatoes, Southern Florida, per carrier	1 50	3 50

Philadelphia.

Business in both the fruit and vegetable markets is very poor, and in many cases the commission men report that growers are not getting any returns, after expressage and commission are taken out. This condition of affairs has existed now for the past three weeks.

Apples have been moving fairly well this past week, Spitzenburg being probably the most sought after.

Grapes are very scarce, and what few are on sale are not of good quality.

Florida strawberries are in larger supply; some fairly good fruit is now coming in, which sells at 75c. to \$1.25 per quart box.

Tomatoes from nearby growers are of improved quality, and bring 25c. to 30c. per lb.; second grade, 15c. to 20c. per lb.

The glut of mushrooms continues, 20c. per pound is the best price obtained, but the best quality produce goes direct to the large hotels, and for that a better price is obtained.

The supply of lettuce is far above the

demand; some of the Florida stock is not up to standard, and will not pay for the expressage. At the present state of the market it is useless to ship poor stock.

Apples.

Spitzenburg, fancy, per bbl.	\$1 75	\$2 50
Spitzenburg, fair to good, per bbl.	1 00	1 50
Northern Spy, per bbl.	1 25	1 75
Baldwin, N. Y., fancy, per bbl.	1 25	1 50
Baldwin, fair to good.	1 00	1 40
Greenings, fancy, pr bbl.	1 25	1 50
Greenings, fair, per bbl.	80	1 00

Vegetables.

Beets, Florida, per 100 bunches.	5 00	7 00
Brussels sprouts, per qt.	5	10
Cucumbers, Florida, per crate.	3 00	5 00
Cabbages, per 100.	4 00	5 00
Cauliflowers, fancy, per bbl.	5 00	7 00
Celery, fancy, per doz. bunches.	50	60
—fair to good, doz. bunches.	30	50
Egg plants, per 1/4-bbl. box.	1 50	2 00
Lettuce, Florida, per basket.	75	1 50
Onions, Eastern white, per bbl.	4 00	6 00
—Eastern, red, per bbl.	3 25	3 50
—Eastern, yellow, per bbl.	3 00	3 25
—Western, white, per bbl.	3 00	4 75
—Western, red, per bbl.	2 25	3 50
—Bermuda, per crate.	2 00	2 50
Peas, Florida, per crate.	1 75	2 25
String beans, wax, Florida, per crate.	1 50	2 00
Spinach, Norfolk, per bbl.	50	1 25

One Way to Protect Small Shrubs.

Winding a bit of burlap tightly about the stalk and limbs of a shrub does not afford needed protection in winter—such a plan, in fact, affords very little, if any, protection. Straw or hay should first be put about the shrub in the manner shown in *a*, figure 22. Then wrap tightly with burlap and tie, as suggested at *b*. By this plan, the roots are well protected—often the very part of the shrub that most needs protection—and a body of heat kept inside the covering that is



FIG. 22—THE WAY TO PROTECT SHRUBS.
(See text.)

not easily dissipated. The form shown is also a protection against buffeting by the wind, as the big base makes the shrub immovable, and also keeps any weight of snow from resting upon the shrub. W. D.

NUTS FOR THE LARGE PLOT.

That nutting is a delightful recreation during glorious autumn days goes without saying. The same may be said of the fact that most of the delight often inheres, and must inhere, in the outing and not in the uncertain captures of nuts. Why not have the nuts on the home plot? Competent authorities tell us that we can have them in bearing at three years old; that we can have them to ripen nuts as early as the first week in September; that we can have them six inches in circumference, if we plant the right sorts. If it is worth while to plant whole farms to nuts (as some are now contemplating), may it not be well worth while to have a tier or two on the home plot? The chestnut is a noble tree, and one or two would in a few years furnish a full supply for a good-sized family, even to the famous "chestnut stuffing," which cooking school teachers are so popularizing.

San Jose Scale in Ohio.—The dreaded San Jose scale is reported as having invaded fruit orchards in Catawba Island and the Marblehead Peninsula. Prof. Webster, of the Wooster State Agricultural Experiment Station, has been examining trees in the vicinity, and has advised the destruction of all affected trees, to prevent its spread to other localities. In accordance with his decision, many orchards in the island and peninsula region are being bereft of valuable trees, and in some instances the greater portion of fruit farms are being cleared. The loss will fall heavily on many of the smaller growers.



This little picture will come home with telling force to many a tired and overworked farmer's wife, who has often felt that she could not longer stand the strain and who finally succumbed to disease. Poor woman! Do you not know that there is within your easy reach a remedy that will quickly restore you to health and happiness? A remedy that will positively cure

FEMALE COMPLAINTS
BRIGHT'S DISEASE
URINARY TROUBLES
GENERAL DEBILITY
AND MALARIA

and all diseases caused by disordered Kidneys and Liver. It is a purely vegetable compound which has cured thousands and will cure you. Its name is

Warranted
Safe Cure

Large sized bottle or new style smaller one at your nearest store.

2 1/2 cents per square foot for a good corrugated STEEL ROOFING, for farmers' houses and barns. Circulars explain all about it. THE BERLIN IRON BRIDGE CO., EAST BERLIN, Connecticut.

Mention American Gardening when you write.

BUY BERRY BOXES of THE PIERCE-WILLIAMS CO. SOUTH HAVEN, MICH.

32-page Illustrated Catalogue for 1896-7 mailed FREE.

THE STANDARD BERRY PACKAGE OF THE WORLD

Climax Baskets for Peaches, Grapes and Melons.

Mention American Gardening when you write.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.

CYPRESS SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.

GREENHOUSE
AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book "CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

SURE CROP!
MUSHROOM SPAWN
 LILIUM HARRISII. DUTCH BULBS.
 Illustrated Bulb Catalogues on application.
WEBER & DON, Seed Merchants
 and Growers,
 114 Chambers St., New York City.

Mention American Gardening when you write.

ONE YEAR FOR 10 CENTS
 We send our monthly 16-page, 48 col. paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents. If you send the names and addresses of six lady friends. **WOMAN'S FARM JOURNAL**, 4812 Evans Ave., Saint Louis, Mo.
 Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at **TWO CENTS PER WORD** each insertion, payable in advance. The address will be charged as part of the advt. and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

STRAWBERRY PLANTS for sale. Catalogue free. Charles Howard, 2 Johns, Md.

RADISH and **LETTUCE** Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedsman, Rochester, N. Y.

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

STRAWBERRIES, Potatoes, Seeds. Send to the Rocky Comfort Gardens for the brightest little catalogue published, with up-to-date prices. Wm. A. Olds, Okemos, Mich.

STRAWBERRY PLANTS, Clyde, best early perfect flowering variety ever introduced. Sixty varieties, best plants at lowest prices. Catalogue free. Enos W. Dunham, Stevensville, Mich.

SEED POTATOES for sale. I have Great Early, Thoroughbred, and new Early Excelsior seed potatoes for sale at 50 cents per lb., prepaid. Other varieties, 5 cents and up. Price list free. James O'Brien, Onslow, Iowa.

STRAWBERRY PLANTS. Try the Margaret Fountain, Michigan, Clyde, Glen Mary. Headquarters for Gan-ly, Brandywine, Marshall, Parker Earle and all choice standards. Catalogue free to all. C. N. Flansburgh, Leslie, Mich.

FOR SALE Country place, about three acres, 85 miles from New York; house large, arranged for two families, heated by steam; new greenhouse 20x30, poultry houses and yards, fruits, large and productive garden, very convenient and accessible, very desirable for gardener and flower grower, or gentleman's residence. Address Henry S. Concklin, 26 Court St., Brooklyn, N. Y.

GLADIOLI, CANNAS, CLIVIAS, Souchet and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings. Cannas, Italia, Austria, and best standards. New Hybrid Clivias. Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.

BOOKS.—We can furnish any book treating on horticulture printed in this or any other country. Send for our Select Catalogue of Horticultural Books, free. American Gardening, P. O. Box 1667, New York.

BINDERS—Every subscriber should have one. We offer the best to be had, sent, postpaid, for 65 cents, or given free for two new subscriptions and the renewal of your own. American Gardening P. O. Box 1667, New York.

Business Cards.

Cards will be inserted under this heading at **TWO CENTS PER WORD** each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1667, New York City.

Situations Wanted.

Advertisements will be inserted under this heading at **ONE CENT PER WORD** each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER wants situation on private place, thoroughly understands the care of a gentleman's place and the cultivation of grapes, roses, carnations, chrysanthemums, violets, also the growing of vegetables. English; single; good references; 10 years' practical experience. R. H. C., Tarrytown, N. Y.

Mention American Gardening when you write.

PRIVATE GARDENERS.

We solicit for publication under this heading notes on the work being done by private gardeners, changes in appointment, and all matters of interest to horticulturists generally.

Death of William Elliott.

On Saturday last, January 16, the head of the seed firm of Wm. Elliott & Sons, New York, died. He was in his 73d year.

For nearly half a century the name of William Elliott has been before the trade, and his death, which had been expected for some time past, will cause many a one to recall the pleasant moments well spent in the company of a

tion of better prices for the growers of the stock.

William Elliott was originally a gardener; born of a race of gardeners, on Oct. 10, 1824, at the village of Crailling, near Jedburgh, Scotland. Having served his apprenticeship in the Earl of Minto's gardens, near his home, he became gardener for Sir J. Trevelyan, near Newcastle, England; then at Ripley Castle, Yorks. After a few other changes he went to London and was for two years with the firm of J. & C. Lee in their then celebrated Hammersmith Nurseries. Returning to Scotland, he entered the wholesale fruit business, but soon again took up gardening at Sawley Hall, Ripon, Yorks; thence to Skirvings Nurseries, Liverpool.

Elliott arrived in the States, March 1851, and was variously florist and gardener, and eventually leased a place a

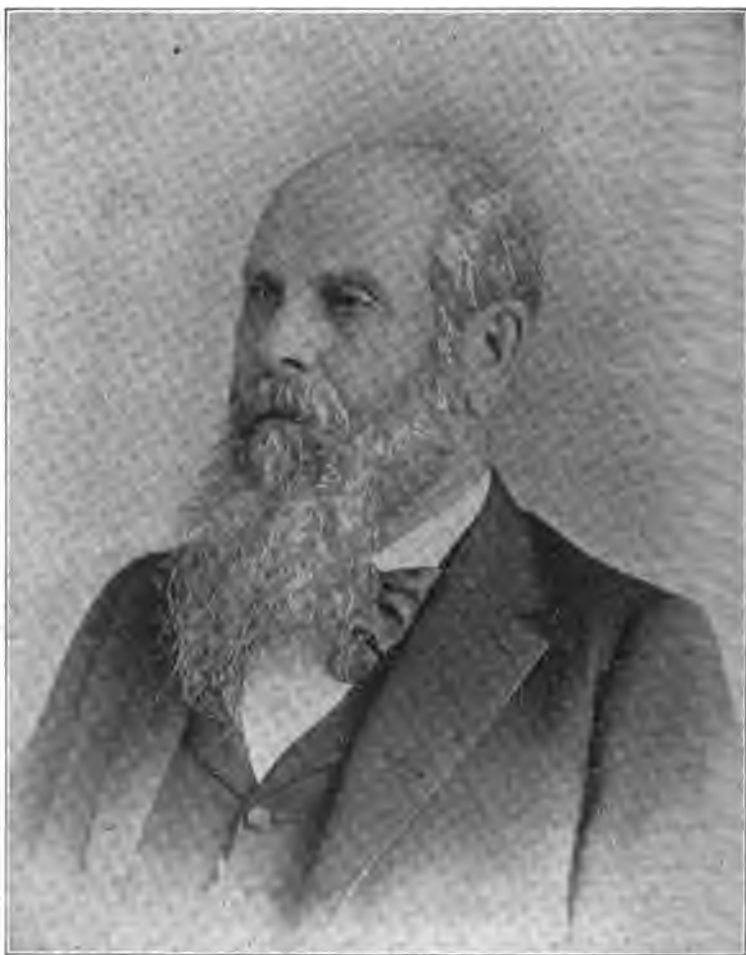


FIG. 23.—THE LATE WILLIAM ELLIOTT.

genial friend, and to linger with fond recollection over the past. William Elliott was the last survivor of that coterie of the seed trade, who, so far as New York is concerned, connected the present generation with the beginnings of the interest now so large, and he was never tired of recounting to those who knew him personally, a wonderful fund of anecdotes concerning himself and others with whom his varied and long experience had brought him into contact.

To many of our readers, perhaps, it is as an auctioneer that William Elliott will be most familiar. When on the rostrum, his keen powers of humorous conception, coupled with the characteristic dryness of method, which is in the blood of the Scot, endeared him to all frequenters of the Dey street salesrooms, and not infrequently aided to the realiza-

Bergen Hill, N. J., where he started in as a market gardener; this venture proving a failure, he went to Canada with the intention of farming, but hastened back to New York, entering into the employment of J. O. Sheldon, S. I., and later of that gentleman's father-in-law, James McCall.

In 1854, Elliott bought the seed business of Hugh Orr; being approached by Isaac H. Young, the firm of Young & Elliott became established at 9 John st. In 1858, Elliott held his first auction sale (for Andrew Dryburg, of Philadelphia, Pa.). In 1889, Young died and the firm became as it is to-day, Wm. Elliott & Sons.

Mr. Elliott married the daughter of Capt. Carroll, S. I., and leaves the widow and four children, the two sons carrying on the business.

Curator Dawson, of the Arnold Arboretum, on Tree Planting.

At the regular meeting of the Blackstone Improvement Society, of Providence, R. I., Jackson Dawson, Curator of the Arnold Arboretum, Boston, delivered an address on the subject of tree planting. Trees are rapidly disappearing from our cities, and few are replaced; in all the large cities and towns modern "improvements" are driving them out, and streets which two years ago were well shaded are now wholly treeless. It was time local associations saw to it that something was done either by municipal or legislative action to prevent the destruction of the trees; there are, of course, many laws for the protection of the trees, but they are rarely put into effect. Many trees are destroyed in the pruning so-called, by various companies which run wires along the streets, and many are ruined by being used as hitching posts. A house can be built in a few months, but it takes years of waiting and care to get a good shade tree. The study of botany has been introduced extensively into the schools, and the boys and girls should be interested in the care of the trees.

The work of beautifying country homes is being carried on to a large extent in all parts of the country. This cannot help but have a good influence in the surrounding towns. In the city of Washington there were few trees on the streets for many years, and what few there were on the thoroughfares were in poor condition. Nurseries were established, and a variety of trees planted and cared for, so that to-day there are many well-shaded streets.

In New York many of the streets are treeless, but this is to be expected in a city where so much business is carried on. Politics and trees do not go well together, but there is no reason why some provision should not be made for preventing the mutilation of trees in the streets. Attention was called to the organization of a tree planting society in Brooklyn, and to the well-shaded streets in Buffalo, N. Y.

Oceanic, N. J.

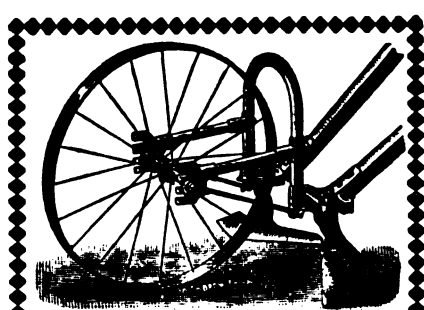
The regular semi-monthly meeting of the Monmouth County Horticultural Society was held on Friday, January 15. The delegates who attended the "smoker," given by the N. Y. Florists' Club, were very enthusiastic over the affair, and had nothing but the warmest praise for the Club and its members. A resolution was adopted tendering thanks. As evidence of the high esteem in which the president, Mr. Butterbach, is held by his fellow members, he was recently presented with a beautiful gold-headed cane by one. Arrangements for a public exhibition, to be held in the early fall, are going steadily forward. The committee in charge promises a great exhibition. The report of the delegates to the Convention of American Gardeners was listened to with attention, and at its conclusion the Society unanimously ratified their action, and resolved to affiliate with the American Horticultural Society. The Society will have no more loyal supporters than those of Monmouth County. The next meeting will be held in the Fireman's Hall, Oceanic, N. J., on February 5, at 7:30 P. M.

Lenox, Mass.

The regular meeting of the Lenox Horticultural Society, held on January 2, was the first of the nights for the programme of essays arranged by the Society. Mr. I. L. Powell, of Millbrook, N. Y., addressed the members on the subject of Herbaceous Plants and their Uses in Ornamental Gardening. On Saturday, 16th inst., Mr. P. O'Mara, of New York, spoke on "The Gardener's Mission in Horticulture." We hope to be able in a later issue, to refer at greater length to both these speakers' remarks.

Poughkeepsie, N. Y.

The annual dinner of the Dutchess County Horticultural Society has been arranged for Wednesday, February 3d, next, at The Nelson House, at 8 o'clock P. M. W. G. Saltford is chairman of the dinner committee.



The "IRON AGE" WHEEL HOES

Bicycle Construction.
Thoroughly Adjustable.
High Steel Wheels,
Tubular Frame,
Malleable Castings.
Light, strong and works "just right."
BATEMAN MFG. CO., Box 106, Grenloch, N. J.

Mention American Gardening when you write.

BUFF LEGHORNS.—Winners for five years.
Circular free. GEORGE S. BARNER, Battle Creek, Mich.

Mention American Gardening when you write.

Have you read about THE COMET \$2.50 to \$5.00.
Beats them all.
Don't buy till
you see them.
Send postal card for free cata. A harvest for agts, write today. H. B. RUSLER, Johnstown, O.

Mention American Gardening when you write.

STANDARD FLOWER POTS

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

The Savannah Line

FLORIDA THIS WINTER? THINK IT OVER!

Steamers leave Pier 35, N. R., N. Y., Tuesdays, Thursdays and Saturdays, at 3:00 P. M., for Savannah direct. Tickets sold at same rates from New York via rail to Philadelphia, thence Steamer to Savannah. Close connections made with rail lines.

FOR JACKSONVILLE and all Points South and Southwest.
QUICKEST, LARGEST, SAFEST AND BEST STEAMERS ON THE ATLANTIC COAST. TICKETS INCLUDE BERTH AND MEALS EN ROUTE ON BOARD SHIP, THUS AFFORDING THE CHEAPEST MODE OF TRAVEL BETWEEN THE NORTH AND SOUTH. UNSURPASSED CABIN ACCOMMODATIONS.

See Spray Baths, Electric Lights, and all conveniences. Send two-cent stamp for copy of Savannah Line News, and illustrated book, something new, to RICHARDSON & BARNARD, Agents, 20 Atlantic Ave., Boston, Mass.; M. C. HAMMOND, Agent, Pier 18, South Delaware Ave., Philadelphia, Pa., or to

G. M. SORREL, Manager, New Pier 35, N. R., New York.

Mention American Gardening when you write.

Offer No. 35.

SENT postpaid, for ONE NEW subscription at \$1.00

...BEAUTIFUL...

Twelve Everblooming Roses

Grower's selection from leading varieties.



Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Maman Cochet
Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Hermet

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

AMERICAN GARDENING CLUB LIST.

LET US FILL YOUR ORDERS FOR 1897.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

General.	A.	B.	General.	A.	B.
Advance (Cong'l) renewals.....	\$2 00	\$3 90	Scribner's.....	\$3 00	\$3 60
" " new.....	2 00	2 60	St. Nicholas.....	3 00	3 60
American Field (new).....	4 00	4 25	Sunday School Times.....	1 50	2 10
" " Renewals.....	4 00	4 60	Texas Siftings.....	4 00	4 25
" " Kitchen Magazine.....	1 00	1 75	The Etude (new only).....	1 50	2 15
" " Machinist.....	3 00	3 20	The Etude (renewals).....	1 50	2 35
Aquarium.....	1 00	1 75	The Outlook.....	3 00	3 60
Arena.....	3 00	3 60	Toledo Blade.....	1 00	1 85
Art Amateur.....	4 00	4 85	Turf, Field and Farm (new).....	4 00	4 25
Art Interchange (with plates).....	4 00	4 85	" " Renewal.....	4 00	4 60
Atlantic Monthly.....	4 00	4 30	Womankind.....	50	1 20
Ava Maria.....	3 00	3 70	Young Ladies' Journal.....	4 00	4 60
Babyhood.....	1 00	1 90	Youth's Companion (new only).....	1 75	2 35
Baptist Missionary Magazine.....	1 00	1 90	" " Renewals.....	1 75	2 75
Carpentry and Building.....	1 00	1 85			
Century.....	4 00	4 60	Agricultural, etc.		
Chicago Times-Herald (Weekly).....	1 00	1 85	American Agriculturist.....	1 00	1 85
Chicago Inter-Ocean.....	1 00	1 80	Breeders' Gazette.....	2 00	2 40
Christian Herald.....	1 50	2 15	Country Gentleman.....	2 50	2 75
Christian Register.....	3 00	3 85	Farmers' Advocate (Canada).....	1 00	1 75
Churchman.....	3 50	4 10	Farmers' Magazine.....	1 00	1 75
Colman's Rural World.....	1 00	1 85	Farmers' Review.....	1 00	1 90
Cosmopolitan.....	1 00	1 90	Farm, Field and Fireside.....	1 00	1 80
Delineator (Butterick's).....	1 00	1 90	Farm and Fireside.....	50	1 40
Demorest's Monthly Magazine.....	2 00	2 60	Farm and Home.....	50	1 40
Detroit Free Press (Weekly).....	1 00	1 90	Farm Journal.....	50	1 30
Domestic Monthly.....	1 50	2 15	Farm News.....	50	1 20
Donahoe's Magazine.....	2 00	2 60	Gleanings in Bee Culture.....	1 00	1 85
Eclectic Magazine.....	5 00	5 25	Home and Farm.....	50	1 45
Electrical Review.....	3 00	3 20	Indiana Farmer.....	1 00	1 85
Engineering Magazine.....	3 00	3 50	Mass Ploughman (new).....	2 00	2 60
Forest and Stream (new only).....	4 00	4 20	" " Renewals.....	2 00	2 90
Forum, The.....	3 00	3 60	Michigan Farmer.....	1 00	1 60
Frank Harrison's Magazine.....	50	1 40	National Stockman and Farmer.....	1 00	1 85
Frank Leslie's Popular Monthly.....	3 00	3 50	Nebraska Farmer.....	1 25	1 85
Godey's Magazine.....	1 00	1 90	New England Farmer.....	2 00	2 50
Golden Days.....	3 00	3 85	Ohio Farmer.....	1 00	1 60
Good Housekeeping.....	2 00	2 70	Orange Judd Farmer.....	1 00	1 85
Harper's Bazaar.....	4 00	4 25	Pacific Rural Press.....	2 40	3 00
Harper's Magazine.....	4 00	4 25	Practical Dairyman.....	50	1 85
Harper's Weekly.....	4 00	4 25	Practical Farmer.....	1 00	1 85
Harper's Round Table.....	2 00	2 50	Prairie Farmer.....	1 00	1 85
Home Queen.....	50	1 85	Rural New Yorker.....	1 00	1 80
Illustrated American.....	4 00	4 30	Southern Cultivator.....	1 00	1 85
Independent.....	3 00	3 60	Southern Farm.....	1 00	1 85
Jenness Miller's Illus. Mag.....	1 00	1 75	" " Florist and Gardener.....	1 00	1 75
Judge.....	5 00	5 20	Strawberry Cultivist.....	50	1 85
Judge's Library.....	1 00	1 85	Texas Farmer.....	1 00	1 75
Ladies' Home Journal, The.....	1 00	1 90	Texas Farm and Ranch.....	1 00	1 85
Ladies' Home Companion.....	50	1 45			
Ladies' World.....	35	1 80	Poultry.		
Leslie's Illustrated.....	4 00	4 40	American Poultry Advocate.....	25	1 15
Life.....	5 00	5 40	Fancier's Review.....	50	1 35
Lippincott's.....	3 00	3 25	Farm Poultry.....	1 00	1 50
Macmillan's.....	3 00	3 60	Ohio Poultry Journal.....	65	1 50
McClure's Magazine.....	1 00	1 90	Poultry Herald.....	50	1 40
Munsey's Magazine.....	1 00	1 90	Poultry Keeper.....	50	1 40
Nation, The.....	3 00	3 80	Poultry Monthly.....	1 00	1 85
New England Magazine.....	3 00	3 50	Reliable Poultry Journal.....	50	1 40
New York Ledger.....	2 00	2 50			
" " Tribune (Weekly).....	1 00	1 90	Horticultural, etc.		
" " World (Tri-Weekly).....	1 00	1 75	Canadian Horticulturist.....	1 00	1 90
North American Review, The.....	5 00	5 50	Garden and Forest.....	4 00	4 25
Notes and Queries.....	5 00	5 50	Gardening (Chicago).....	2 00	2 50
Observer (new only).....	3 00	3 25	Green's Fruit Grower.....	50	1 85
Observer (Renewal).....	3 00	4 00	Meehan's Monthly.....	2 00	2 50
Outing.....	3 00	3 35			
Peterson's Magazine.....	1 00	1 85	Foreign.		
Philadelphia Press (Weekly).....	1 00	1 85	Farm and Home.....	2 25	3 25
Phrenological Journal.....	1 50	2 25	Field.....	10 50	11 00
Popular Science Monthly.....	5 00	5 65	Garden.....	4 50	5 25
Popular Science News.....	1 60	2 50	Garden Work.....	2 50	3 25
Puck.....	5 00	5 10	Gardener's Chronicle.....	4 50	5 25
Puck's Library.....	1 20	1 95	Gardener's Magazine.....	4 50	5 25
Review of Reviews.....	2 50	3 25	Gardening, Illustrated.....	2 25	3 10
Scientific American.....	3 00	3 60	Gardening World.....	2 50	3 25
" " Supplement.....	5 00	5 25	Journal of Botany.....	4 75	5 25
" " with.....	7 00	7 25	Journal of Horticulture.....	4 00	4 85
" " Builders' edition.....	2 50	3 10	Kew Gardens Bulletin.....	1 50	2 25
" " inc. B'l'ds' edit.....	5 50	5 75			
" " All 3 editions.....	9 00	9 25			

ADDRESS CASH WITH ORDER, AMERICAN GARDENING, P. O. Box 1697, NEW YORK.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*. We cannot undertake to reply by mail.

Strawberries Under Glass.

[Strawberries transplanted from a nursery, a couple of months ago, and grown in pots in a conservatory since that time, are flowering now. What treatment should be given?—*Inquirer, N.J.*]

—Keep in gentle heat, watch out closely for red spider and green fly, and feed occasionally with liquid manure water.

Mushroom Beds. Making Spawn.

[How long should horse manure and loam mixed together remain in a heap, being turned every second day, before it is ready for Mushroom Spawn? How and with what would you top dress the beds. How is the spawn got not where it is sold, but how it is got? How long will beds put in now hold without being renewed?—*Inquirer, N.J.*]

—Manure is ready to be put into a bed at any time when you are sure the violent heat has passed away; the object of mixing loam with the manure is to modify the heat and enable the operator to get to work more quickly. We do not advise a very liberal use of loam in this way, for there is a danger of making the bed cold and soggy. The manure, when ready to make up into beds, should show no moisture when squeezed in the hand, and should be sufficiently elastic that it will rebound when the pressure of the hand is relaxed. In such condition it will generate a moderate and sufficient heat. After spawning topdress with a very light free soil, one that will not paste or bind when put on the beds; make the surface smooth with the back of a spade. When put on, the soil should be tolerably dry. How to make spawn? This is a subject outside our province, and we hardly care to enter into the details, not to guard trade secrets, but because such information will be of little service to our readers. The process is too tedious a one, and in a small way too expensive to be practicable to them. Speaking broadly, "spawn" can be made by mixing together two parts of cow dung, one part sheep, and one part horse droppings. The cows and horses from which the foregoing are obtained must be dry fed; they should not be fed with grass, nor yet with carrots. This mixture is well blended together, dried, beaten, and rubbed through a small meshed sieve; after that it is placed in a shed in a conical heap, and is either covered by stable manure or mats, whichever may be the best adapted to maintain a temperature ranging from 55° to 65° in the center of the heap. The time required to create the spawn at this stage will vary from four to twelve weeks. This is only the first part of the business; the next is to get it into brick form that use may be made of it. The material for making the brick is made up of various ingredients, but generally it may be said to consist of droppings from cows, sheep, and horses, with straw manure kept out; a fifth part may be made up with soil or road scrapings and a little coal ashes. This is all mixed together, with the addition of liquid manure water, and worked into the consistency of mortar. The mass is then laid on a smooth surface in a shed, and when dried to the consistency of plastic clay is cut out either by a spade or proper mold into the desired bricks. These are perforated with small holes. Then the drying process begins. The bricks are stacked in sheds adapted to the purpose in such a manner that there is a free circulation of air among them. When they reach the proper condition of dryness they are spawned. The temperature being warm, the spawn runs through the whole texture. Beds made up now should be exhausted by spring.

Celery Rotting.

[November 15 I stored my celery in the garden, in a pit one foot deep and six feet wide, and thoroughly protected it from frost snow, or rain, and also arranged for ventilation in favorable weather; yet despite these precautions the celery rotted. Previous seasons I stored it somewhat differently, inasmuch as it was not bleached so much, relying upon the bleaching being done while in storage, allowing ample soil for the purpose. This season we did differently, and had the celery

thoroughly bleached first, with the result that we have had very rotten celery.—*Hastings.*)

—The reason seems to be very apparent. Evidently the celery was overripe before storage was commenced, and consequently not in a condition to keep any length of time. In preparing celery for winter use, first select a good late variety—for instance, Giant Pascal. Grow the plants to as full a size as possible, have them in a vigorous growing stage, striking a happy medium in not having them too green nor yet very much blanched. Such stock as this buried properly, with the tops free, bleaches very rapidly when stored, and yet with care will keep for a considerable time when protected from the elements. A batch slightly more forward than the last named should be available for present use, and that could be stored in a frame or any convenient place; in fact, with celery, as with many other things, judgment must be used in keeping up a succession or rotation of crops.

Dracenas in the Window.

(Do Dracenas require sunlight? do they require frequent watering and spraying? I have one D. Lindenii which I have kept at a north window, giving it the same treatment as a Palm, but for some reason the tips of the leaves are turning brown.—*Enquirer*.)

Dracenas require sunshine and warmth, and a moderate supply of water, but this last only when really needed; the soil in the pot should become moderately dry, and then a thorough soaking should be given. A moist sponge run over the leaves now and again is good, improving the appearance of the plant, and helping to keep the pores of the leaves free from dust. The brown tips complained of may have been caused by a chill at some time, too cold a temperature or even too much water at the roots.

Soil for Alsophila.

(To J. M., Ohio.)—Fibrous loam, broken by hand in order to keep it lumpy, a little rough charcoal, and a small portion of leaf-mold, together with a sprinkling of sharp sand, will make a good mixture for all the Tree Ferns. *Alsophila australis* enjoys a warm, moist atmosphere.

Grafting an Old Chestnut.

[Will you kindly inform me what variety of chestnut (Japanese or other) would be the most desirable to use for grafting on native trees 20 years old. The present nuts are small and I desire a large sweet nut, free from the objections of the Spanish (bitter skin) if possible, and one that is hardy and good yielder.—*XXX.*]


The largest and most reliable Japan Chestnut is the Japan Giant, though it is not so early as Alpha, Reliance, Superb and others. We would suggest he use a few grafts of each of the earlier sorts as well as the later ones. The Paragon is one of the best Spanish sorts, being of good size, a heavy bearer and quite early. The Numbo, Ridgely and comfort are also valuable varieties, being of good size and quite sweet. All the above named varieties can be grafted in the 20-year old trees with good success if the grafter understands his business. Chestnuts are not so easy to graft as apples and pears, and more care should be taken in grafting them.—*PARRY'S' POMONA NURSERIES.*

Travel Via The Savannah Line.

A number of fine iron steamships ply between Boston, New York, Philadelphia and Savannah. They are staunch and commodious. The hulls and decks are of iron and steel. The compartments are water-tight. The saloons are beautifully furnished and upholstered. Each ship is arranged for a large number of first-class, second-class and steerage passengers, and lighted throughout by electricity.

If you will write "Savannah Line" at Boston, New York or Philadelphia, they will send you a handsome illustrated book—something new, and a copy of *Savannah Line News*.

CANTON GARDEN PLOW



THREE SHOVELS
AND RAKE
ATTACHMENT.

WEIGHT, 20 POUNDS
\$3.75 EACH.
CASH WITH ORDER.

PARLIN & ORENDORFF CO.

Largest and oldest permanently established Plow Factory in America.

CANTON, - - - - - ILLINOIS

Mention American Gardening when you write.

GLASS For Greenhouses, Grap-eries, Conservatories, Hothouses and Hotbeds. GLASS

VANHORNE, GRIFFEN & CO.

Importers of French Glass.

13, 15 & 17 LAIGHT ST., AND 52, 54 & 56 VARICK ST., NEW YORK.

LORD & BURNHAM CO.,

HORTICULTURAL ARCHITECTS AND BUILDERS.

STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York. Mention paper

\$1.00 THE CHAMPION OFFER \$1.00
OF THE SEASON.

ELLIOTT'S DOLLAR COMBINATION!

AS FOLLOWS:

Eighteen Full Packets Choice Flower Seeds, value \$1.50

And, by special arrangement with the publishers,

AM. GARDENING, one year, NEW names only, " 1.00 "

TOTAL VALUE, - - \$2.50 !

\$1.00 under this offer gives you **AMERICAN GARDENING**, the brightest gardening paper issued, one year, and sufficient seed to start a goodly sized garden with some to spare for your friends. This is a Bargain Offer, made solely to extend trade. The SEEDS offered are of the VERY BEST QUALITY, and we look for thousands of answers to this advertisement.

THE FOLLOWING IS A LIST OF THE PACKETS:

Alyssum, Sweet	Batchelor's Button	Pansies, assorted colors
Asters, fine mixed	(English Double Daisies)	Petunias, very choice
Balsam	Cosmos, mixed	Phlox Drummondii,
Calendula,	Larkspur	choicest strain
Candytuft, mixed	Margold	Poppy,
Carnation Marguerite,	Mignonette	double flowering, mixed
mixed, very desirable	Nasturtium,	Sweet Peas, all colors
	assorted colors	Ricinus, Castor Oil Plant

The above collection is all of choice, fresh seed, in full packets, such as retail at Ten Cents each, and is not made up of cheap, unreliable or worthless stock. Our reputation in the seed trade for the past Fifty years is our voucher.

If you are already a subscriber to **AMERICAN GARDENING**, but want the above collection, it will not take you ten minutes to obtain the subscription of some one interested in gardening. Send in this new name, together with \$1.00, money order preferred. Orders filled without delay. Paper and seeds sent to separate addresses when so requested. Address

WM. ELLIOTT & SONS, SEEDSMEN, 54 Dey St., New York.
Est. 1846.

THE BEST SEED POTATOES

And Farm Seeds are grown on . . .
Michigan New Muck Lands by
HARRY N. HAMMOND, ---SEEDSMAN---
Largest grower of seed potatoes in America.
Prices low. Write him for illustrated catalogue.
Free to all. Describes how he grew over
750 Bush. Maule's Thoroughbred per Acre.
Mention American Gardening when you write.

KOSS' SEEDS Always Give Satisfaction.
Our German and English Catalogue Free to all
who need Seeds, no matter how much. Wholesale
list for Market Gardeners and Truckers. Address
THEO. KOSS, 261 Reed St., Milwaukee, Wis.
Dealer, Grower and Importer.
Wanted, a few good salesmen.

Mention American Gardening when you write.

We Grow Seeds.

Our Specialties are:
Cabbage, Celery, Onions, Tomatoes,
Potatoes and Improved Farm Seeds.
Prices low. Please ask for Catalogue.

JOSEPH HARRIS CO.,
Moreton Farm (P. O.), Monroe Co., N. Y.

Mention American Gardening when you write.

**TRY DREER'S GARDEN SEEDS**

Plants, Bulbs and
Requisites. They are the
best at the lowest prices.
Calendar for 1896 mailed
free. Address

HENRY A. DREER,
714 Chestnut St., PHILA.

Mention American Gardening when you write.

ELLIOTT'S SEED**ANNUAL FOR 1897.**

Now Ready. Mailed free on
application, by only mention-
ing AMERICAN GARDENING.

WM. ELLIOTT & SONS,
54 & 56 Day Street, NEW YORK.

Mention American Gardening when you write.

**3 NEW AND POPULAR FLOWERS.**

New Star Petunia. An ex-
quisite variety for garden or pot culture,
each flower having distinct white
star-like stripes on rich purple-
red ground. The flowers, about
2 1/2 inches across, almost hide the
plant from view for months.

Double Calliopsis. Hand-
some

double variety. Flowers golden yellow color, wine-maroon spots.
Sweet Scented Pansies. Have the perfume of the Vio-
let; the beauty of the Pansy.

One packet each of these New and Popular Flower Seeds sent by
mail, postage prepaid, and three months' subscription to the
AGRICULTURAL EPITOMIST
ALL FOR 10 CTS.

The Agricultural Epitomist now goes regularly into the homes
of over 150,000 Practical, Prosperous and Progressive Farmers of
the United States and Canada, and is said by them to be the most
Practical, Timely and Interesting Farm, Garden and Household
Paper published. It treats intelligently upon General Farming
and Stock Raising; tells how to make the Garden pay; how to
raise Poultry; treats on Floriculture; and its Household De-
partment, known as "Chatter Corner," is alone worth a year's
subscription to any live household. This offer to furnish a
packet of each of the above described new and popular flower
seeds and three months' subscription to the Agricultural Epi-
tomist, all for 10 cents, is made for the purpose of introducing
the Epitomist into new homes, believing that where it is read for
three months, it will be found so valuable and interesting as to
secure for us in nearly every case a yearly subscription, the reg-
ular price of which is 25 cents. The money which we will receive
from this offer will not be sufficient to more than pay for the ad-
vertising, to say nothing of the Flower Seeds and three months
subscription. Send 10 cents in silver or postage stamps,
upon receipt of which the Flower Seeds and Epitomist will be
promptly forwarded. Address

EPITOMIST PUBLISHING CO., Indianapolis, Ind.

Mention American Gardening when you write.

FREE SEED DISTRIBUTION

(NOT BY THE U. S. GOVERNMENT.)

A Superb Collection of Beautiful Flowers—hundreds of popular varieties,
annuals, biennials and perennials in every conceivable shade, tint and color, is en-
closed, free of charge, with every copy of our beautiful NEW CATALOGUE OF
SEEDS, PLANTS and BULBS for 1897, to all applicants from this advertisement.
The book contains much information of value to all lovers of flowers, plants and
good vegetables. Postage 4 cts.

PITCHER & MANDA, Short Hills, N. J.

JOHN N. MAY, Receiver.

Mention American Gardening when you write.

STRAW
RASP
BLACK
GOOSE
DEW

ASK WM. C. BABCOCK, BRIDGMAN, MICH.,
For prices of strong STRAWBERRY PLANTS, dug
out in solid blocks, not from between the rows, true to name.
Competition Ordered. QUALITY considered. Complete Stock
of CURRANT AND GRAPE. (Mention this paper.)

**BERRY
PLANTS**

Mention American Gardening when you write.

BATTLES' TESTED SEEDS.

Market Gardeners, Truck Farmers, and all Seed Buyers get my prices before
you buy. Write for 1897 Seed Annual and Special Wholesale Price List.
Send for samples of any seeds you wish to test. Salesmen wanted everywhere. Write now

GROWER OF FARM AND GARDEN SEEDS. * FRANK H. BATTLES, Rochester, N.Y.

Mention American Gardening when you write.

SEEDS

Early Minnesota Tomato—the earliest.
New Wisconsin Golden Salad—the best.
Pkts. 10c. each. C. S. Bond, Geneva, N.Y.

Mention American Gardening when you write.

SEEDS. FREE

if you send 3
correct names and addresses
of gardeners or those intending to buy seeds, we will
mail FREE OUR NEW 1897 Seed and Gardeners' Guide;
tells how to MAKE MONEY on a small piece of land.
\$1.00 worth of Seeds for 25 Cents. 25 years experience.
JOHN BAUSCHER, Jr., box 902, Freeport, Ill.

Mention American Gardening when you write.



We have the largest and finest
Collection of
PALMS, ORCHIDS, FERNS
and **FOLIAGE PLANTS**
for Conservatories,
Hardy Herbaceous Plants,
Flowering, Shade and
Ornamental Trees, Vines.
Everything for a private place.
Estimates and Plans for Planting
Places and furnishing stock
(free).

SIEBRECHT & SON'S,

Rose Hill Nurseries, New Rochelle, N. Y.

Mention American Gardening when you write.

BURPEE'S FARM ANNUAL 1897

Tells the plain truth about
THE BEST SEEDS that Grow!
Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

1849 - VICK'S FLORAL GUIDE - 1897

Standard Seed and Plant Catalogue. Contains all that's New and
Good. Always Reliable.

THE GUIDE
and Your Choice

One packet either Wonderful Branch-
ing Aster, New Japan Morning
Glory or Pansy Choice mixed for
Two packets 25c., three packets 30c. Full
retail price 45 cts.

15c

Vick's Illustrated Monthly Magazine which tells
how to grow Plants, Flowers and Vegetables, and is up
to date on these subjects, for 3 months, the Guide and
One packet of Seeds (named above) for 25 cents.

Every Person sending an Order as above will receive a coupon
good for 50 cents' worth of Seeds.

When ordering state where you saw this adv. and we will send a packet of
Choice Flower Seeds free.

JAMES VICK'S SONS, ROCHESTER, N. Y.

VICK'S ILLUSTRATED MONTHLY MAGAZINE

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII NO 110.
CONTINUED SERIES VOL. LI.

NEW YORK, JANUARY 30, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Apples, Taking Out..... 68	Celery Blight and Cop- 72	Grounds for a Gardener 68	Potato Growing..... 72	Illustrations.
Asparagus, Decorative. 74	Celery, Early..... 68	Market Gardening. 71	Poultry Notes..... 74	Apples, Removing, from 68
Forcing..... 68	Cocunut Growing..... 72	Money in..... 71	Private Gardeners..... 76	Cellar..... 68
Bedding Plants..... 76	Cypripediums, Care of. 78	Markets:	Radishes, Forcing..... 72	Carnations, Propagat- 65
Bees and Grapes..... 67	Eastern N.Y. Society. 70, 71	N. Y. and Philadelphia 75	Readers' Notes..... 74	ing..... 65
Bignonia venusta..... 78	Forcing House..... 68	Peaches..... 67	Strawberries, Most Pro- 67	Pear, Manning's Eliza- 67
Cannas, Growing on..... 69	Fruit Garden..... 67	Pear, Manning's Eliza- 67	ductive..... 67	beth..... 67
Carnations..... 66	Fruit Notes, Some..... 67	Peas and Sparrows..... 72	Tomatoes..... 68	Plan for Gardener's 69
Propagating 65	Fruit Trees, Budding.. 78	Plum Trees..... 78	Forcing..... 68	Place..... 69
Casabana..... 72			Vegetable Garden..... 68	

Propagation of Carnations.

It is becoming to be more and more recognized by those who grow plants, that there is a large field for selection of stock, a principal that has been long accepted by the man who raises

just now how this matter bears relationship to the Carnation and to point out to those who are propagating from cuttings how to select their wood. The first matter is the selection of healthy vigorous stock plants from which to take the cuttings.



FIG. 23.—PROPAGATING CARNATIONS FROM CUTTINGS. (For references see text.)

animals. It is not only that a given portion of "wood" grows into a plant more quickly than does another from the same plant, but there is now opened up the large problem of constitution and vital force. It will then be not amiss to consider

If this be not attended to disease is more likely to get a foothold. Then, when planting out in spring, any diseased stock should be burnt, and so at all stages by selection of healthy stock a vigorous batch of plants will be the more easily secured.

There is a wide difference in the results from cuttings taken from different portions of the flowering stem, and this difference is not due to the location of the cutting upon any particular portion of the plants, but solely to the condition of the wood as to strength and vigor when put in the sand.

In the illustration (Fig. 23) these upper growth cuttings, as shown at 1 and 2, are well rooted and stronger than those at 3 and 4 on the same plate.

All these cuttings were placed in the sand at the same time. These cuts are most instructive, as here can plainly be seen that difference in vigor which marks the line between fine grown specimen flowers and poor ones. The vigorous, plump pipes have thrown out a generous bunch of strong fibrous roots and are ready to go right to work. Look at the thin threadlets dangling from the thin spindling cuttings. Is there any further need of argument in favor of the selection of strong cuttings for propagating? Those marked 1 show selected cuttings taken from a flat eight days after planting from the sand.

Now, having given examples of properly selected and properly rooted cuttings, let us get down to the details of how it is done.

Mr. C. W. Ward, the carnation grower of Queens, L. I., thus describes his method: I prefer to take the cuttings from the stem, either when the flower is picked or but a short time before, as the wood is then generally in the best condition to strike. By taking the cutting some time before the bloom opens a stronger stem and better flower is secured; but the cuttings are often soft and not as desirable as later on. If taken when the flower is picked it gives an opportunity to reject cuttings from flower stems that may show a disposition to sport or come ill-shaped or off color, and this affords an additional safeguard in selection of stock.

The points of the leaves are trimmed lightly, and the cuttings are benched in clean sand, being stuck in rows two inches apart and a half inch in the row, and thoroughly firmed in place. After this nothing is done save to keep an average temperature of 56 to 58 degrees day and night, and to give plenty of ventilation, keeping the sand just moderately moist. It usually takes twenty-one to twenty-six days for the cuttings to strike, though some varieties strike in twelve or fifteen days in February and March.

Bottom heat may or may not be used, but temperature under the bench should not exceed 60 degrees.

I do not care what sort of sand is used, provided it is clean sand (I have seen carnations rooted splendidly in a compound of loam and charcoal).

As soon as thoroughly rooted (as shown on the plate) the cuttings are immediately potted up or set out in flats. When potted, care is taken not to let them grow root-bound, and as soon as the first growth has filled the pots with roots the young plants are turned out and packed away in flats, with moss about the balls, and are then placed in cold frames till planting out time, which with us is from April 15 until June. We have planted out from sand bench in July with excellent results.

Canadian Cannons.—What to do with the overproduction was much discussed at a recent meeting at Toronto; some method of controlling output was advocated.

Concerning Carnations.*

(Concluded from page 35.)

In the matter of cultivation I would counsel everyone in actual practice to look after the small details which cannot now be touched upon, as the sum of ultimate success grows in direct ratio to the amount of attention given to what we are often prone to neglect as minor matters. Taking the more important details of culture in proper sequence we have first to consider the raising of a good plant, otherwise propagation.

Cuttings.

If you would have the highest grade flowers a year hence begin now with select cuttings for stock. Choose for cuttings only healthy shoots from healthy plants. If you observe a plant with flowers deficient in size or color avoid it, and you will then have no cause to complain of deterioration of varieties in cultivation. After the cuttings are taken don't leave them lying around till the next day but get them into the cutting bed which should be for preference composed of good sharp sand. The cuttings need little preparation, but it facilitates rooting to shorten back the leaves by cutting off their tips. I used to think that the only advantage derivable from this was a slight check on the evaporation of the cutting's moisture, but an experiment with two batches, one tipped, the other not, demonstrated that the cuttings that had their leaves shortened rooted four days in advance of those not so treated. After insertion give them a thorough watering, shade from strong sun, maintain a temperature of about 50°, and one's own judgment must suggest what other attention they need till they are ready to take out of the sand and prick into flats.

Seedlings

There is another fascinating method of raising Carnations, that is from seed. Here again, haphazard work is of no account. A law of nature shows the "like seeks to beget like," but in the Carnation there is a latent possibility of wonderful degeneration at one remove. A chart which shows the rocks and shoals enables the captain to navigate his ship through dangerous waters in safety. Let me indicate a rock upon which my Carnation raising efforts once foundered and were stranded for a whole year. I had a very fine collection of Carnations flowering in the garden, and there was not even a second-rate kind among them. A score of varieties in groups of from 50 to 100 plants of each represented a rigid selection from 100 kinds tried the previous year. I noticed many of them were forming seedpods, so I selected some, watched them daily unto the ripening, harvested good seed, sowed it the following spring, and in late summer planted out for next year's blooming 2000 as good plants as anyone would wish to see. I anticipated a grand series of seedlings but realized a tremendous setback of my hopes. Twenty-five per cent. of the progeny went right back and produced single flowers. Fifty per cent. of the remainder were double but not as good as their parents.

A few of the remaining plants were selected and grown the following year, but the Carnation world is none the richer for that attempt to increase its wealth. Profiting by this stern lesson I went to work again but resolved to trust to no chances; I carefully crossed the flowers chosen for seeding, hand fertilizing every one, and secured a number of fine pods of seed. The seeds were sown, good plants obtained, that ultimately came to the flowering stage. In this batch of 200 plants only two plants produced single flowers, the rest were as good as their parents, and reds predominating in the seed parents, there was in the progeny the finest series of red seedlings I have ever seen. Quite a number were selected for another year but I handled them no longer. I do know, however, that a few of them are still in cultivation, and one or two of the finest were named and distributed.

There is here ample proof that if you would raise fine kinds you must select the

parents and work with an object in view. The new kinds offered us each season by specialists are the outcome of the same careful crossing and systematic working on the part of their raisers. Even then, however, the blanks are many, the prizes few, for though one is apt to look kindly upon the results of one's own endeavors, when they come to be judged by the standard of existing things, there is often a very rude awakening, and you find some of your handsome swans are only ordinary geese after all.

Novelties.

The only justification for putting another kind on the market is either the possession of qualities superior to those of the variety it most resembles, or if unlike any on the market, it conforms with them in every other point that goes to constitute the existing standard of highest merit. One Carnation or one Rose has sufficed to bring fame to its raiser, and hand his name down to posterity in grateful remembrance.

General Treatment.

Getting back to the young plants that are raised from cuttings in the yearly routine, the aim of the cultivator in summer should be the growth of a strong plant, calculated to yield the fullest possible crop of winter bloom, and this is best accomplished by planting out the plants in the open ground at such time as the season and locality warrants. May usually being a favorable month. The summer site and soil for the plants are important matters to consider. I remarked at the commencement that the wild Carnation grows up high and open, where it never suffers from a superabundance of moisture, and enjoys a free circulation of air always. Just as much does the cultivated Carnation want an open, airy situation and a free, well worked soil of medium texture, neither too adhesive nor too gritty, well enriched but not with fresh rank manure, which is peculiarly distasteful to the plants. If Carnations can be planted in succession to some crop for which the soil was previously well manured, it will be found quite rich enough, all it needs being deep digging or plowing of the soil. If fresh food for the plants be absolutely essential at planting, give it in concentrated form, as for example, bone meal or wood ashes, separate or in mixture, both are first-rate Carnation manures.

After planting the chief details of summer treatment are keeping down weeds by frequent cultivation and pinching the main stems as they advance in length. The ideal plant to try and secure is one of low and tufted growth, with from 6 to 8 shoots as near the ground as possible.

If one have a large quantity of plants it may be desirable to spray them with sulphate of copper once a week, since prevention is better than cure, but in private establishments, with but a limited number of plants, due selection of cuttings and proper care for the infant plants bring their reward in a comparative immunity from fungous diseases. Soil that will grow good Roses will likewise grow Carnations, so it is needless to enlarge upon the preparation of the compost heap wherefrom to fill the benches.

Lifting from the ground and planting on the benches can begin with safety in August, indeed, I am informed by one of the best growers that he likes to get all his plants planted on the benches in that month. This grower further advises what I would have hesitated to practice, the shaking off entirely from the roots all the old soil in which the plants grew in the field, as they thus start the more readily in the fresh compost. The quality of his stock warrants me in concluding that his practice on this point is sound.

With bright hot weather prevailing in August, slight shade and free syringing will be important factors towards future good results; but when the plants show evidence of getting established less overhead moisture and abundance of light and air should be given. When flowers begin to push up the quality and quantity of them will be in proportion to the individual skill that supplements the initial work along the lines indicated. Given a light house that receives every possible ray of direct sunlight during the winter months, and an equable temperature of 50° to 55°, the chief winter items of labor are disbudding, watering, syringing.

* Paper by A. Herrington, Madison, N. J., read before the Morris Co. (N. J.) Horticultural Society, January 13, 1897.

Some Notes on Fruits.

MANNING'S ELIZABETH PEAR.—In one of my exchanges I find some favorable comment upon this exquisite little pear, the Manning's Elizabeth, and it reminds me of the fact that this variety seems to give us a crop even in most unfavorable seasons. Two years ago, when late frosts killed almost everything in the shape of pears in our orchards, so that we did not have Bartlett's enough for home use, and hardly Duchess enough for a taste, and when most of the pear orchards in the vicinity were almost entirely bare of fruit, our Elizabeth hung laden, so that limbs were bending down almost to the ground. This pear is described by J. J. Thomas as follows: "Small, obovate, Sockel form, smooth; surface yellow, with a lively blush; stalk one inch long; cavity round, shallow; flesh very melting, saccharine, sprightly, perfumed, excellent. End of summer. Shoots diverging, dark reddish brown; serratures of the leaves very slight, Belgian."

The accompanying illustration shows shape and size of the Elizabeth, which to me seems indispensable to a well calculated family orchard. It ripens here in August. Possibly it may prove to be a good pear for market also, but we have had no experience with it as a market fruit.

MOST PRODUCTIVE STRAWBERRIES.—At the recent meeting of the Ontario Experimental Union, held at the Agricultural College, Guelph, Ont. (Canada), Prof. H. L. Hutt, the experimenting horticulturist of the institution, gave a report on the results of the recent experiments with strawberries grown on the College grounds. He has observed an extra growth of plants as a result of the careful removal of the blossoms the first season. This only confirms our old experience, that in order to secure the heaviest crop the second year (which is the main and usually the only fruiting year, as strawberries are handled by good growers), we have to adopt the practice of preventing all fruit setting the same season that the bed is established. Then in order to have a full crop, we must have full matted rows. With varieties that are good plant-makers, like Wilson, Crescent, Haverland, Bubach, Warfield, etc., we have no difficulty in securing the full stand of plants, in an average fair season, even if in starting the bed we put the plants 2 feet apart. This is the distance which Prof. Hutt recommends for planting such sorts, while 18 inches is as much as poor plant makers should be spread apart in the row at the start.

Next, for a heavy yield, we want the heavy yielders. Among them, Warfield was found to be at the head. Afton is much like it. Warfield has a good leaf and a very firm berry. Haverland is one of the best for home cultivation. Bubach was the 18th, and Crescent the 20th, in the order of best yielders. Haverland was found at the head in general health and power to resist rust. Among the perfect flowering sorts (those named all being pistillates), Saunders was found first in productiveness and vigor. Prof. Hutt prefers to grow the imperfect and perfect bloomers in alternate rows, in order to insure full fruit setting and therefore best yield. The question is what varieties to plant together. Haverland was the first to show bloom. Van Deman, a perfect-flowering sort, is also an early bloomer, and might be used to furnish pollen for the other. Lovett's Early and Gandy bloom soon after these, and, in a pinch, might be used for the same purpose.

Haverland and Warfield are among the earliest to give ripe fruit. Rio stands second in the list, although it stands 43d in the order of yield. Michel's Early stands third for early, and gives a large yield for an early sort, but the fruit is small and soft. Warfield stands fourth for earliness, and is the great berry for the West, and for heavy land and plenty of moisture, but seems not so good for light, dry soils. Among the latest varieties, Prof. Hutt mentioned Edgar Queen, Equinox, and Mrs. Cleveland. T. GREINER.

Niagara County, N. Y.

Will Bees Destroy Grapes?

There has been in the past, and still is, and I suppose always will be, a difference of opinion among well informed fruit growers as to whether the honey bee actually destroys ripe grapes without any outside assistance. At almost every meeting of the State Horticultural Society this question comes up, and like the old notion of wheat turning to cheat, one man is positive that it will and another is equally certain that it will not. Neither has any positive information on the subject. In order that we might have some reliable data on this question

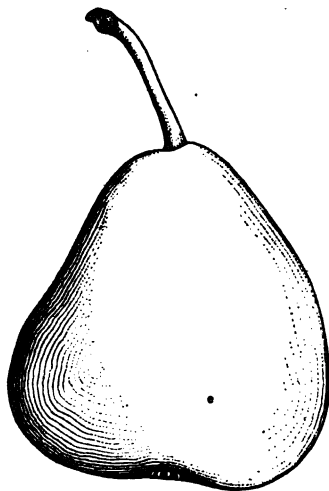


FIG. 24.—PEAR MANNING'S ELIZABETH.

some careful observations were made during the past season.

A Worden grape vine, well loaded with fruit, was selected, and when the fruit was ripe all defective berries and surplus leaves were removed, so as to allow of the free movements of the bees. A colony of Italian bees was then placed close to the vine, and the whole enclosed with mosquito netting, giving the bees about 300 cubic feet of space in which to work. They were kept confined with the grapes just 21 days, and in the meantime were not allowed to get any other food to eat except the grapes, and what they already had stored in the hive. At the end of the three weeks they were removed and the grapes carefully examined, but it could not be discovered that a single grape had been injured.

The natural inference is that if the bees could not be induced to eat the grapes when kept in close confinement with them, they are not liable to injure them when at liberty to seek such food as they like best.

We all know that certain wasps will cut the skin of grapes, and I have always held to the opinion that the wasp was the culprit which first opens the door for the bees to get in. This opinion

has been confirmed the past season by seeing two species of the genus *Polistes* light on the grapes and with their sharp jaws tear open the skin and suck the juice. After this was done the honey bees would usually finish the work. In fact it would be a very stupid bee that would not avail itself of such an opportunity. J. TROOP.

La Fayette, Ind.

The Fruit Garden.

Peaches.—Yes, everybody is glad to see them in the market, from the large fancy grades from California to the wee hard bits offered in the last days of the season. Everyone wants them, and will examine and compare the different grades with more interest than is shown about any other fruit in the market. There are grown and put on the market so many varieties that are so similar in appearance to the non-professional grower that I, for one, have wondered whether or not there had been a mistake made in the nursery, or whether there were some points of difference in the fruits which I could not see. I had Smock and Wonderful, but failed to see any difference between them. Another time, I bought Early York, Hale's Early, Crawford's Early, Crawford's Late, Yellow Rarieripe, and Late Red Rarieripe. In course of time I found there were more than six kinds, so I tried to find the kinds to suit the table, but failed. Then I tried to find the names from the catalogues, and without satisfaction; so to this day some of them are waiting to be named. Others I have which are very distinct and good: Mountain Rose, white flesh, medium size, of good quality and color; the fruit does not shake off easily. River's Early York, ripening directly after Mountain Rose, is a picture peach, ground color creamy white, with tracings of delicate red covering almost the entire fruit, deepening on the sunny side, flavor first-class, tree vigorous. Another good peach is Grosse Mignonne, not often heard of, but worthy a place in the fruit garden. After River's Early York, we get Old Mixon, Stump, and Red Rarieripe, the last a handsome fruit, white flesh, melting and sweet, of good flavor.

Everybody's Peach.—The Crawford's Early and Late come along and continue with Morris White until Wonderful is ready in early October. The trees are good growers; the fruits I do not consider of any special note, except for lateness. So far, I have not been successful in getting good fruits from Steven's Rarieripe or Susquehanna; perhaps younger trees in better situations will give different results this season. One may experiment quite some with peaches, without feeling at all sore if the trees do not turn out just what he expected, and when good trees can be bought at 10 to 12 cents each, I wonder that country people will not try to find room for a few trees of their own, instead of buying from the stores skin and pits with very little flavor. For in order to know what flavor a peach really has, it must ripen on the tree and be eaten shortly after. A Late Crawford, nine to ten inches in circumference, taken in such a way, will hold its own against any fruit in the garden. By the way, these are not fancy figures, but actual measurements, so reader go ahead and do likewise.

J. HOLLOWAY.

Money in Berries.—Experience teaches that, although prices may be low, if a person has a good practical understanding of the berry business (learned by actual practice), he had better stick to it, as it will pay as well or better than anything else.

The Vegetable Garden.

Roots in Cellars.—Whenever possible look these over, some may be decaying and should be thrown out.

Beet Roots.—If there are any small beets 1 inch in diameter, they should be sorted out, set apart in a cool place, covered with sand, and planted out in sheltered corner early in spring, the young leaves quickly grow and are fine for greens.

Brussels Sprouts.—The old stems and roots of Brussels sprouts and cabbages, if buried in soil before frost, are also useful for greens; if planted out early they will give dishes of greens before anything else.

Potatoes.—All the potatoes should be looked over now, those intended for seed should be selected, kept cool and dark.

Cabbage.—Make a sowing now for early, we prefer Early York for this purpose. The Jersey Wakefield is a general favorite.

Cauliflower.—Good heads of cauliflower grow only in cool, moist weather, in rich soil. A sowing of Early Snowball should now be made in flats in moderately rich soil.

Lettuce.—A sowing of Curled Simpson, or Golden Queen should be made every two or three weeks, to be ready to plant in hotbeds and in the garden later on.

Tomatoes.—By sowing now a strain of an early variety, as Perfection, Early Ruby, and growing on unchecked, and when a pair of true leaves are seen, transplanting 3 inches apart into flats, and later potting and kept growing as near the glass as possible, well aired at every opportunity to induce a stocky growth, an early crop will be secured. We allow only one stem to a plant, pinching back all laterals, staking as soon as needed, grown thus and kept at 55° night temperature, there will be fruit setting when planting out time comes. About June 1 we set out against a wall with southern aspect in unmanured soil, but use a sprinkling of bone dust and wood ashes, well incorporated with the soil before planting. In this way we generally pick tomatoes very early in July.

Early Celery.—Those who can command a few hotbed sashes can easily grow and blanch celery fit for the table by July 4; by making a sowing of the White Plume celery now in a flat, and as soon as they are fairly up, thinning out to 1 inch apart, and when 2 inches high transplanting direct into hotbed 3 inches apart each way. The hotbed should be at least 2 feet in depth. Procure enough fresh horse manure (not too much straw) to make the desired size bed, turn over a few times, breaking up any lumps, and throw in a heap to heat; when hot make the bed. The bed should be one foot deep after tamping it evenly and compactly; on this put 6 to 8 inches of good rich loam; if dry it may be lightly trodden down. In this bed the plants are set as directed, water of about 90° is best to water with during the cold weather, put on the sash, and protect from frost, ventilate judiciously whenever the temperature is above 45° outside. By May 15 the plants should be growing rapidly, after which the bed will practically require irrigating. As soon as the plants touch each other, they should be thinned out to 6 inches apart each way. The surplus plants should be planted out in the open ground for succession. When the weather in May is warm the sash may be taken off entirely. By this method plants grow so rapidly and shade each other when fully grown, that they blanch without further effort. It may sometimes be necessary to put an additional board on the outside of tops to aid blanching.

W. M. EDWARDS, R. I.

The Forcing House.

Asparagus.—It seems to me that this choice vegetable, being so easy and simple to force, should be grown in every garden where there is glass at command. Asparagus can be grown successfully under the benches; it is not necessary to take up valuable bench space. There are a few points of management worth noting: first, the bed or beds, intended to give the stock for forcing, should have strong crowns; second, cut lightly from the patch in the previous spring. An important item in forcing roots is to make sure they get some frost, if possible, before bringing them into the forcing house. Asparagus can be forced without freezing, although the results will not then be so good. It seems strange that one so seldom can find a place where asparagus is forced. The roots should never be allowed to suffer for want of water; without a liberal supply results would be poor.

Tomatoes.—The difficult part of our winter has passed in regards to this crop, and the fruits should set freely from this date on by just giving the vines a shake now and again. Any one who has plants in, say, 3 or 4-inch pots should set them out in the bench at once, and a useful spring crop will result. I have always had a good word for the old Lorillard tomato, and have yet. However, Lorillard must take a back seat against Sutton's Best of All. We have the two fruiting here side by side. In growing



FIG. 25.—HAULING APPLES FROM THE CELLAR.

tomatoes under glass, we want the very best variety for that purpose, as there is a great deal of expense attached to forcing. Sutton's Best of All is a free setting tomato, fruit of fine shape and good quality, and without a doubt a long way ahead of Lorillard. It is well named.

W. TURNER.

Taking Apples From a Cellar.

The usual storage place for apples is in the cellar. The barrels then have to be carried up the roll-way by two men—a matter of no little difficulty when the roll-way is narrow as is usually the case. A plan is shown in figure 25, by which the barrels of apples are carried to the surface with but little lifting, and without jarring the fruit. The diagram tells its own story, except that the triangular truck that is mounted on two rollers, is represented larger than need be, thus making it higher than is actually necessary. The rollers run on a wide plank that rests on the edges of the stair treads. The same arrangement will be found equally serviceable in putting apples into the cellar in the fall, and for use with vegetables, etc.

Stored Apples.—A Michigan fruit grower stored some apples in barrels lined with newspapers. Upon opening barrels that had been packed for a long time, he found that in those unlined, more or less of the fruit was decayed, while in the paper-lined barrels the apples were sound and in fine condition.

Grounds of a Florist and Gardener.

Scattered over our land are many small farms, the owners of which devote their land to the culture of fruit and vegetables more than to farm crops. In not a few instances the same men take a hand at raising produce under glass; it may be vegetables, flowers or plants or a combination of these. It is not difficult to understand why such cases are; in the first place, many a man derives a larger income from twenty or thirty acres conducted along horticultural lines than others, who pass for good farmers, do on areas five or ten times as large, but devoted strictly to farm crops.

It is easily seen how a man, having begun with fruit and vegetable raising, on a small farm, will, with good business qualifications, also tend toward the greenhouse business. Broadly speaking, it is because fruit and vegetables are growths of the summer; produce under glass growths of the winter. In other words, the active business brain prefers to be at producing and selling the whole year round. With good management he frequently finds that the winter crop is the more profitable one; it in a considerable measure utilizes capital and labor, in teams, tools, etc., that otherwise would be idle and unproductive.

The man who is thus thrifty in his ideas as regards managing a fruit, vegetable and, perhaps, greenhouse business, is a man usually who has an appreciation for a fine home and place of business—for this the home becomes in a sense. Such is, or should especially be, the case, when it is seen that by some attention to the appearance of the grounds ornamentally the plantings may likewise serve in a measure the end of utility. For example, evergreen trees, such as pines, spruces, hemlocks, etc., while, on the one hand, they may serve to impart a fine ornamental effect, yet their value in breaking the wind, and thus in conserving the heat of a home and of stables, greenhouses, etc., may be measured very distinctly by dollars and cents in fuel saved. This is a point that is not always recognized in favor of such planting as it should be. One reason why this is the case is because the same person cannot be in two places at the same time to note the actual difference in effect of the presence or the absence of masses of evergreens and other trees that are serving as wind-screens.

In the accompanying sketch I am able to show what one horticulturist has succeeded admirably in doing, in combining the ornamental with the useful on his farm garden of twenty-seven acres. If the plan of his grounds will not fit that of others who are similarly situated, at least the latter should be able to draw numerous helpful hints from his example.

The home referred to is on the east side of the street, the dwelling A facing west. The front drive B, after entering the place, makes a graceful curve first to the right, winding around the house as it were, to give it a fair setting of lawn; then turns to the left, reaching the carriage house C and the barn D beyond. At K the drive continues by a straight course down through the farm to its furthest point.

The most prominent feature in the way of buildings is the greenhouse range, consisting of four long houses and one shorter cross house at the further or south end. There is a

potting and furnace room at the north-east corner, in the direction of the carriage house C. At F is a well and tank tower, the latter containing a small kerosene engine that pumps water into the tank above. From the tank pipes lead not only to the greenhouses but to the frame yard II. The tank is elevated about twenty feet, giving sufficient head to water the entire glass and frame department therefrom. The terminal distribution is from hose and nozzle, which here is connected with stopcocks at suitable places in the piping. JJ are small plants into which lettuce and other early crops or greenhouse stock are

on the north line consist in the main of evergreens. The one mass nearest to the street is planted to Norway spruces principally; the larger one further back to pine trees, including the Scotch chiefly, with half a dozen each of the Austrian and white, the latter being toward the home end of the mass. This was well conceived, for, while the Scotch pine costs less as it comes from the nursery, and grows to an effective size as a wind-break sooner than the others, yet it is less pleasing to the eye than either the Austrian or the white species. The place for the latter, therefore, was in the direction of the home.

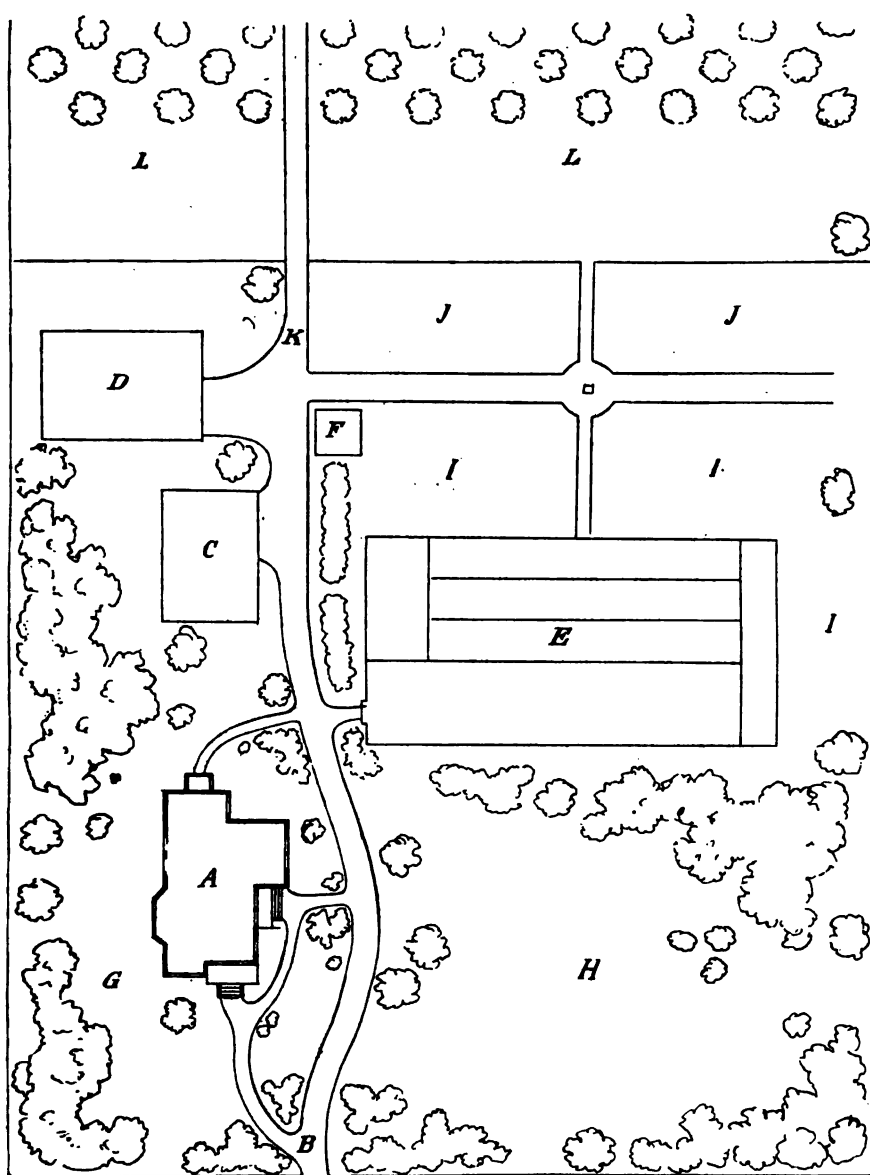


FIG. 26.—UTILITY AND ORNAMENT COMBINED. (See text.)

planted. LL and beyond represent the garden and orchard lands, the latter consisting of ten acres. Only about one-fourth of the farm is brought into the present map. The manure yard is beyond the barn D.

Leading from the entrance at B is the front walk of the house, which extends to the veranda steps and thence to the side steps. To the latter there comes a shorter walk from the drive also. A third walk leads from the rear door to the drive near the greenhouse.

The plat G to the left of the drive, and on which the home is seated, is embellished with the twofold purpose of ornament and protection. The two larger masses of growths lying next

Together these masses of evergreens are very effective to the eye, while they serve to break the north and northwest winds from the house and the greenhouses and give some protection to the barns. The two trees between the groups named likewise are Austrian pines. The remaining growths in this plat and between the house and the drive are chiefly deciduous trees and hardy flowering shrubs. The latter, comprising Weigelas, hardy panicle Hydrangeas, Spiraeas, Forsythias and others of the class, are placed in small groups, as shown. Some flowering shrubs and tender bedding plants were growing in the evergreen beds near their margins when the writer visited the grounds.

On the opposite side of the drive in plat H there is a large open lawn, and with trees and shrubs of numerous kinds situated toward the margins of the plat. Here the owner found the opportunity to introduce enough variety into the collection to give a constant display of bloom and other attractions the season through. The selection consists mainly of deciduous kinds—that is, such as drop their leaves in the fall. A few spruces are introduced, however, toward the outside of the larger mass, with elm, maple and other large growing deciduous trees interspersed.

The beds to the north of the greenhouses are occupied during the summer with stock plants from the greenhouses. The space marked I, beyond the opposite end of the greenhouses, is likewise devoted to tender plants during the summer.

Thus the place stands forth as a handsome, well-balanced garden, a source of both profit and delight to its owner. It is fitting that men who love horticulture and derive their profits therefrom should be leaders in showing what grounds in the country are capable of in the way of improvements as well in the ornamental line as any other.

ELIAS A. LONG.

Purchasing and Growing Cannas.

Which is the best way to purchase Cannas, dry roots or young potted plants? Give directions for starting dry roots, soil, size of pots, temperature, moisture, etc. Can they be safely sent by mail through the winter time? If you wanted to plant in open ground May 15, at what time would you begin to pot them so as to have good, strong plants?—MAUD.

Any one possessing a greenhouse would do better by buying dry roots and starting them for themselves; there is then the chance of multiplication. Roots can be started by being placed on the bench and lightly covered with very light soil. Or they may be kept in small flats and treated in the same way; but if potted up use only the smallest possible pots. Whichever way the roots may be started, care must be taken that the soil does not become sodden or sour, yet at the same time the roots must be kept in moist soil, hence the advisability of using very free soil, so that the drainage may be ample. A temperature of 60 to 65 degrees, with a little rise in the daytime, is the most suitable. A lower temperature will do, but the growth would not be so rapid. When growths start up take them off and pot up in ordinary potting soil, using a small pot, and when the plant needs it give a shift. Water freely as the plants require it. When in the final shift the pots, which should be four to six inches, are full of roots and the growths are nice and strong; then reduce the temperature in order to prepare them for outdoors. Planting cannot be done safely until there is absolutely no fear of frost and the weather has become fairly warm. The Canna is a heat-loving plant, and there is no advantage in early planting if there be any danger of cold weather. Roots sent by mail now are liable to injury if frost touches them, but if they can be so packed that that will not happen, they may be mailed or shipped any time. They are being shipped freely at this time among the dealers and are being started in the greenhouses right away for spring trade. But good results can be obtained by starting any time from now till May.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1906.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 3154 Cortlandt. P. O. Box 1697.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.
Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.
Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Eastern N. Y. **ORGANIZE!** was the watchword of Eastern New York fruit growers at their meeting at Cornwall on Monday last.

AMERICAN GARDENING hails with delight the true earnestness and business zeal which pervaded the meeting, and furthermore, extends its sympathy to the project, and stands ready to assist in every possible way. The necessity for such an organization is only too apparent when we look at the grand work being done in another part of the State by the Western New York Society.

The Hudson River Valley and adjacent parts teem with fruit growers, every branch of the industry is represented: small fruits, strawberries, peaches, grapes, apples, and pears, also ornamental horticulture; and behind all this are men whose intelligence and skill rank second to none, for from their section come some of the choicest grades offered for sale. With such conditions the reasons for organizing are obvious; the wonder indeed is that it has not been done years ago. However, on the lines of the old saw, "Better late than never," it will be accepted now.

Never before in the country's history were men so much inclined to get together; everywhere it is the same, and every line of business is doing it. Continued depression and low prices,

together with keener competition from outside, make it imperative that sections and districts get into close touch with each other, otherwise there is danger of the whole industry falling in disuetude and being wiped out. This being so, it demands not only the active interest and organization of the growers themselves, but of the whole community.

There is a great deal in a name in the New York market; and from time to time, owing to this fact, there is sometimes a transfer of trade from one section to another. We need mention but the two items of celery and lettuce in this connection. Then again, it is always found in markets, that the greater the supply and the cheaper the market, the more careful do packers and shippers need to be. And that is precisely the condition of our New York and other large markets to-day. Packing and shipping are most vital questions of the hour, and who can better deal with such a problem than a large well equipped, influential Society, such as the proposed body is likely to be?

As was mooted in the meeting, the day is passed for shipping twenty-five pounds of grapes in a forty pound crate, and before they are ripe, too; or apples with a few decent fruits on the top and nothing but culls below, and so it is with all other fruits. It is such tactics, followed by only a few growers perhaps, that give a district a bad name; and it is just such conditions that a live society will try to prevent. There are the questions of uniformity of packages, the commission man, the extent of the crops; the ever perplexing problems of freight and express rates, and delivery; all this and more can be treated with much better through organizations than through individuals.

Anything that will suggest any amelioration of the present distracting condition of many of our horticulturists and gardeners is heartily welcomed by us. Thus we again extend our best wishes for the future of the Eastern New York Horticultural Society.

W. F. TABER did well as temporary chairman.

THE SPIRIT of the meeting was good—just what was wanted.

T. J. DYER set the ball rolling in great shape, and so kept it going.

THE WEATHER was at the zero mark, but the delegates were, many of them, red hot with zeal.

THE COMMITTEE of thirty, appointed to meet at Poughkeepsie possibly next week, is a representative one, and good results are to be expected from its deliberations.

HINTS at THE PROBLEMS that will have to be worked out by the contemplated society; Mr. Passmore seeks information about fertilizers, also wants the package question ventilated. So do we.

THE YOUNGEST MEMBER present, B. D. Van Buren, Stockport, Columbia Co., N. Y., was the primary means of bringing so many fathers of the profession and wise heads together. All honor to his youthful ardor.

J. W. BINGHAM, Marlboro, N. Y., would have the Society take up the matter of

freights. He would also have it take a turn with the commission man, and settle with that gentleman such points as returning crates, etc.

H. W. COLLINGWOOD did wisely in publishing Mr. Van Buren's letter, calling for the meeting, also in his opening remarks setting forth the object for which all had met. He deserves credit for the good work he has already done.

THE SHORT HISTORY of the late Charles Downing by Mr. Westervelt was excellent, and accorded with the spirit of the meeting. If there be any communion of saints that noble soul must have been gratified to think that so near to the scene of his earthly labors such an organization as he had prayed for was being gotten into shape.

THERE WERE SIXTY-ONE present at the first meeting. This shows the interest taken and many of the gentlemen had journeyed long distances, and at great inconvenience to themselves; but apparently distances and intense cold are no obstacles to a Hudson River Valley or Eastern New York Fruit Grower when he makes up his mind to accomplish anything.

FULL OF ENTHUSIASM was E. G. Fowler, and made a grand speech encouraging those present to go on in the good work, so well and so auspiciously begun. His was a trite and pointed answer to a gentleman who wanted to know what he (Mr. Fowler) would do if he had to sell grapes below cost of raising, and apples below cost of picking and barrels. "Why, do just what we are trying to do now, organize, organize, try to better such a state of affairs, and endeavor to get growers together, that they may look after their end at least."

E. VAN ALESTYNE, Kinderhook, Columbia Co., N. Y. (secretary) spoke well and to the point. His advice to organize thoroughly and to make haste slowly was well timed. The subject, he said, had been broached years ago, but the fact that all concerned were so anxious for success was the reason it had not started. The times, he thought, were now propitious, and he welcomed the advent of such an organization; it could do a great deal; it would enable growers in the Hudson River Valley to get better posted on the possible crops to be put on the market, and members may be guided thereby in the disposing of them; they may also be better able to get in line with the commission man, and perhaps be able to avoid overstocking the market (instancing the results attained by Illinois men); they may be better able to deal with express rates; anyhow it would tend to bring out the district and make it of more commercial importance on the market and among the great fruit-growing centers. They must meet often if to be of service to each other; annual meetings only were no good.

LAST BUT NOT LEAST.—Those who had charge of the meeting knew how to properly recognize the press and treat it rightly. They displayed good judgment when they put representatives of the leading agricultural and horticultural papers on their committee.

The Tobacco Industry.—"It's an ill wind that blows nobody good." The Cuban difficulty is giving an enormous impetus to the cultivation of tobacco in this country. Florida is getting the bulk of the business for the Cuban leaf; North Carolina will produce the much desired yellow leaf. A fortunate discovery has been made in a district where the soil was considered sterile and of no value, that this grade of leaf can be produced in the choicest quality. The state of Connecticut will also receive its share of benefit in supplying the demand for wrappers.

Money Methods in the Market Garden.—IV.

Fly Irrigation Plant—Liquid Manure for the Garden.

Every gardener appreciates the value of having water available for irrigating at any time. If dependence be placed upon the usual rain, the best results will not always be obtained, for though he supplies to the plants all the food necessary, yet without water it remains in an insoluble condition in the soil.

For several years a drought in June has shortened my crop of strawberries by about one-half of what it should have been. I therefore looked to irrigation. My truck farm is well situated for the purpose, by having a large brook running through it, so as to divide it into two almost equal parts. The bed of this brook is from four to eight feet lower than the garden surface. The question arose as to the best means of elevating this water so as to be able to use it for irrigating purposes. A windmill was too uncertain and an engine too expensive, and it was finally decided that the hydraulic ram would most economically raise the water. One of the largest rams, with a fall in the drive-pipe of about six feet, was placed in the brook; near the ram and on the highest bank a large tank was built of pine planks, and at a height sufficient to supply force to carry the water over the whole garden. From this tank iron pipes were laid in different directions, on the surface of the ground. The pipe was put together by means of T couplings which had the third end fitted with iron plugs, which could be unscrewed to allow a hose attachment at any place where it was wanted to use the water. This ram will elevate several thousand barrels of water in twenty-four hours.

This water is usually distributed over the garden at night, and may be applied either through a sprayer or allowed to run in a stream as desired. I do not think this method of applying water with a hose is the best one, as with surface irrigation the surface of the ground will sometimes bake. Sub irrigation is better, and I intend to substitute the irrigating tiles as soon as possible.

One object which I had in view in building the water tank was to dissolve in the water there some fertilizer, and feed it to the plants through the pipes. So far there has not been time to try many experiments with this plan, but one with poultry manure gave very satisfactory results. One objection to putting manure directly into the tank is, that it may clog the distributing pipes; this, however, may be overcome by building a slatted box in the center of the tank to receive the manure, putting the slats close enough to hold in the manure while letting the water have free ingress and exit so as to carry out the food materials. Probably in using a fine manure, such as poultry manure, it would be necessary to cover the receptacle with wire cloth.

I think I see great possibilities in the use of the tank for the application of chemical fertilizers in solution. The plan I have in mind is to furnish the soil itself with the potash and phosphoric acid, in the forms of ashes, muriate of potash, and superphosphates; then having dissolved nitrate of soda in the water to feed it to the plants as they need it.

If the water for irrigation be taken from a tank, it should be made shallow and wide, so as to expose a large surface of water to the sun, by which means it will be warmed and can be used with

much better results. This does away with the objection against irrigating from wells, that the water is too cold to apply directly to the plants.

It is a great convenience to have water at hand for use when transplanting. I was formerly often obliged to delay this work because of dry weather, but now, with plenty of water for wetting the ground, I am not obliged to wait for a rainy day, but can do the transplanting at any time when ready. If after I have prepared the land and marked it for the plants, it be dry, a hose is attached to the pipe, and the water run on to thoroughly wet a few rows. The plants are then set, and a little dry soil drawn around them to keep the ground from baking; if dry weather continue they are again watered in a day or two. By this means I never fail to make nearly all the plants live when set in the driest of weather. If one has time it will pay to water plants every three or four days for from two to three weeks after they are transplanted, unless there is plenty of rain. This will help them to form new roots and forward their growth. As plants are often set they do not commence growing until several days after they are transplanted, and lose just so much of the best growing season.

My experiments in irrigating strawberries are most satisfactory. I commence to irrigate them as soon as they begin to blossom, putting some poultry manure into the water tank a day or two before. The color of the foliage was immediately changed to a dark green, and the growth that followed was very large, both of leaf and berry. The iron pipes are laid over the bed about at two feet apart. If only water is being used it is applied with a sprayer on the end of the hose, and it so placed as to throw the water over two or three square rods without moving it—a revolving sprinkler may be used if there is sufficient force to the water—when, after the ground has been thoroughly soaked, it is moved to another place, and so on until the whole bed is irrigated. If I am applying liquid fertilizers, which may injure the foliage, the sprayer is taken off and the water allowed to run on the ground under the leaves. At the time of the year when this is done there is usually a man at work in the field, cultivating and weeding, and he attends to the watering.

The varieties of strawberries which are the greatest yielders set so many berries that in a dry season they cannot grow to a good size without extra water, and it pays to put it on them if you can sell them for one quart. On gravelly soils in a dry season strawberries are almost an entire failure, but now I can grow good crops on any soil that will hold manure and water.

In growing vegetable plants for transplanting, I find that I can get them ready from one to two weeks earlier by having plenty of water at hand to irrigate them whenever necessary. With celery especially the great need is water from the time the seed is sown until the stalks are blanched for market. When the seed bed is given a good sprinkling every night I have no trouble in getting the seeds to germinate and make strong plants. After the vegetable plants have been transplanted to the field, the water pipe is laid across the highest part, a piece of hose attached, and the water started at the upper end of the row. After the water has run as far as it will more hose is added to carry it further along, irrigating every alternate row first, and then going over the field again, taking the others. W. H. JENKINS.

Eastern N. Y. Horticultural Soc'y.

A New Organization of Fruit Growers.

A preliminary meeting for the organization of a society to represent the horticultural interests of Eastern New York was held at Cornwall Monday, Jan. 25. Over sixty representative men gathered together and manifested considerable zeal in the matter. The morning meeting took place in St. Thomas' Hall, W. F. Taber, Poughkeepsie, presiding; E. Van Alestynne, Kinderhook, Columbia County, acting as secretary.

T. J. Dwyer of Cornwall welcomed the visitors in a neat speech, and introduced H. W. Collingwood, New York, who entered into the details as to how and for what purpose they had met. In part, he said that a short time ago he received a letter from Mr. B. D. Van Buren, Stockport, N. Y., suggesting that the Eastern men should get together. This was published in the "Rural New Yorker," and the matter was taken up with considerable interest. He then took upon himself to see Mr. Dwyer and Mr. Taber. The former, in his well-known generous spirit, undertook at once to procure and pay the rent of the St. Thomas' Hall if a meeting be held at Cornwall. This was agreed to, and this gathering was the result.

Messrs. Dwyer, Taber, Passmore, Bingham and Alestynne took part in the discussions which followed. Upon motion of Mr. Dwyer, a committee of seven was appointed to formulate a plan of action, and for this purpose they were to retire for deliberation and were ordered to report to the main body again at 1.30 P. M.

The meeting then adjourned, and the members betook themselves to the Grand View Hotel for luncheon. Owing to the severe cold weather prevailing, the afternoon meeting was held in the hotel parlors.

The committee at 2 P. M. reported that in order to do the proposed work properly and thoroughly, and to make the body truly representative, it was proper that the different counties be asked for assistance and advice, also the horticultural and agricultural press, and to that end recommended that the following gentlemen be elected as a committee to meet at Poughkeepsie at the earliest possible date to consider the matter and draw up rules, etc., which, in turn, should be presented to a general meeting to be held later at Poughkeepsie, Mr. Taber to secure the Court House for the purpose, and Mr. Collingwood to notify the committee of time and date of meeting, the committee to be as follows: E. Van Alestynne and L. L. Morel, Kinderhook, Columbia County; P. W. King and J. B. Carpenter, Athens, Green County; J. H. Lewis, Red Hook, and F. W. Taber, Poughkeepsie, Dutchess County; J. E. Rice, Yorktown, and the Hon. James Wood, Mount Kisco, Westchester County; J. Baker, Rensselaer County; A. W. Williams, Highland, and C. M. Halcinat, New Paltz, Ulster County; W. D. Barnes, Middlehope, and E. G. Fowler, Port Jervis, Orange County; S. B. Husted, Blauvelt, Rockland County. Also the following: Dr. W. H. Hale, Albany; Ira B. Kerr, Catskill; B. D. Van Buren, Stockport; W. H. Hart, Poughkeepsie; J. J. Hull, Clinton Dale; Sands Haviland, Marlboro; J. R. Cornell, Newburgh; C. W. Shaw, Mountainville; W. H. Underhill, Croton Point; T. J. Dwyer, Cornwall; J. Smith and E. B. Andrews, Cold Spring.

Also as representing the trade journals: H. W. Collingwood, "Rural New Yorker," New York city; Dr. F. M. Hexamer, "American Agriculturist," New York city; E. G. Fowler, "Orange County Farmer," Port Jervis; L. Tucker, "Country Gentleman," Albany, and James W. Withers, "American Gardening," New York city. The committee was agreed to unanimously and the meeting then adjourned.

Failures with Manures, either farmyard or chemical, are often due to a mistaken idea as to the proper time to use them. Some forms of manures act quickly, as for example, nitrate of soda or thoroughly rotted compost. As a general rule, some time must pass before the forces in the soil can act on the manures and change them into forms fit for plant food.—S. PEACOCK.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

The Casabanana.—On page 40 a California correspondent describes briefly the new plant "Casabanana" (*Licania odorifera*). I gave it a first trial the past season, and my experience justifies me in commending it for trial by all who find satisfaction in having luxuriant vines to cover arbors, unsightly places, etc. The fruits of the plant are very valuable for preserves; my wife has just finished preserving the few that I managed to save from the melon worm, which was unusually destructive the past summer. Of hundreds of fruits that set on my half dozen vines I succeeded in saving only six perfect. The fruit was so high up from the ground it was almost impossible to use preventive measures. There is no vine that I know of that will make the growth in 60 days' time from transplanting that the Casabanana will, as it will easily go up to the third or fourth story in that time, and I do not know how much further it would go if it had support. Like the ivy it will cover a chimney, and when covered with its reddish fruit (the size of a full grown cucumber) is a very pretty sight. The flowers are yellow but not specially attractive. The fruit assumes the color of a plantain or "red banana," and the odor when ripe is something like banana and pineapple; it makes a good (and cheap) preserve. Here we start the plant in a cold frame early in March, and set out in open early in April. In the North I suppose you would start and set out at the same time as you do tomato, or egg plant, and I have no doubt the fruit would then mature sufficiently. If gathered prematurely with a foot or so of stem attached it will ripen in the house or cellar. It will certainly make headway on trial.—SAM'L A. COOK, Milledgeville, Ga.

An Amateur's Progress—Peas and the Sparrows.—Amateur gardeners are all more or less favored with what is usually termed a hobby. While I do not say that my particularly hobby is gardening, I do find it a very pleasant diversion. Since boyhood days until the season of '96 I found no opportunity to follow my inclination to "garden," but then at every hour, when from my business, I could be found among the vegetables. Early in the season, as spring approached, I was rather impatient to begin planting, but after the first "bed" was made I found work enough to wear off all impatience, and when the young sprouts began breaking through the earth, then I felt that I was to be rewarded, to some extent at least, and suppose I ought to say that my success for the season was good. This year I shall endeavor to do even better, profiting by recent experience. Speaking of success, it is well to mention that my beans, corn, and potatoes were abundant—far beyond my expectations. Onions and beets a failure. Peas were fine for first crop, but my late ones came up well, and that was all. I soon found that the little nuisances, "English sparrows," were the sole cause of my having no late ones. I will mention here for the benefit of AMERICAN GARDENING readers that I have hit upon an original idea, by which I expect to forestall the "pest" this coming season. I have never seen or read of the plan, hence I call it original. I have purchased a few pounds of old discarded fish seine or net, and will stretch some over the rows or beds of peas on stakes, adjusted so that I can

cultivate; in this way the birds will be unable to reach the sprouts and young leaves, and after a couple of weeks' growth they will not care for them. I would be pleased to hear of a more simple and cheaper plan than the above.

I am very much pleased with AMERICAN GARDENING. I scan its pages very closely, and have during the past few months found many suggestions exactly applicable to my wants.—W. T. A., Melrose, Mass.

[The method of protection advocated by our correspondent is excellent, but is not new, though original with him.—Ed.]

The Free Seed Humbug.—Would not the public money give better results if expended in the distribution of expert knowledge in the agricultural department bulletins than by buying worthless seeds to give to people who cultivate nothing but a concrete sidewalk.—AMATEUR.

Cocconut Growing.—I notice on page 45 J. W. B. would like to know how to raise cocconuts from seed. *Cocos nucifera* can be germinated from fresh seeds as follows: Take light, well-drained soil, and a pot 10 to 12 inches in diameter; lay the nut on its side when planting, and cover it about two-thirds only; do not remove the outer husk. The pot should be plunged in bottom heat of at least 75° or 80°. It requires sometimes from two to three months to germinate.—N. BUTTERBACH.

Copper Salts for Celery Blight.—In the number of September 5 last, page 570, I find something about treatment of celery blight by using ammoniacal carbonate of copper. Please state how to mix it, and spray it on, and also when to commence, and how often it is necessary.—N. O. S., Galesburg, Ill.

—[Ammoniacal carbonate of copper (cupram) has proved of considerable value for the blights of the celery, but it will not keep them all away. The mixture is made by dissolving five ounces of carbonate of copper in three quarts of ammonia and diluting to thirty gallons of water. This is applied as a fine spray to the celery plants at occasional intervals during the growing season. It is well to begin in the seed bed before the plants are set out and follow it up once in about two weeks until the crop is made.—Ed.]

How I Grow Potatoes.

"Intensive cultivation" was the remark that impressed me very favorably in the editorial of the AMERICAN GARDENING of December 26, and I thought it might not come amiss for me to give my method of growing potatoes here in central Illinois.

Our soil here is black loam, and nearly or quite all of the land is thoroughly underdrained.

As we have very little sand in the soil we choose the very richest land we have, and if possible, somewhat elevated. We have no hills of very great dimensions, but try to keep out of the lowest places.

Fall plowing is very much preferred, and that as late in the fall as we dare wait, for fear of frozen ground. Nothing should be allowed on the field after it is plowed until work is begun in spring. This will sound very queer to some Illinois growers, but as the ground remains frozen it becomes dry, and stock running over it will knock the loose dry dirt into the cracks and holes in the plowed ground, thus preventing it from freezing so deep and "slacking" so well as it otherwise would do, so I say again, allow no stock to pass over the plowed ground.

Plow 8 inches deep, and as soon as the ground is in fit condition in the spring, start the cultivator. I prefer an ordinary

Experi-

ments are expensive. It is no experiment to take the medicine which thousands endorse as the best—which cures when others fail, namely

Hood's Sarsaparilla

The Best—in fact the One True Blood Purifier.

Hood's Pills cure nausea, indigestion, biliousness. 25 cents.

GAME COCKERS Send 50 cts. for a monthly journal devoted to Game fowls. Sample 5 cts. **GAME FANCIERS JOURNAL**, Battle Creek, Mich.

Mention American Gardening when you write.

ONE YEAR FOR 10 CENTS

We send our monthly 16-page, all set, paper devoted to Gardening, Flowering, Fowling, etc., one year for 10 cents, if you send the names and addresses of six lady friends. **WOMAN'S FARM JOURNAL**, 4815 Evans Ave., Saint Louis, Mo.

Mention American Gardening when you write.

The American Kitchen Magazine

A magazine for every up-to-date housekeeper. The suggestions contained in a single number are worth more than a year's subscription. Price, \$1.00 a year. Sample copies free. **SPECIAL.**—We will send AMERICAN GARDENING and AMERICAN KITCHEN MAGAZINE, both one year, to any address, for \$1.50.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

50 CENT Music Books

FOLIO OF ORGAN MUSIC

A new volume of 58 compositions for home or church use. The compiler has succeeded in gathering together in this book over fifty of the finest compositions for the organ ever issued. Postpaid.

SACRED SONG FOLIO

A new collection of nearly forty sacred songs for Soprano or Tenor voices. Within the pages of this book will be found many of the finest compositions ever written by the world's masters of melody. Postpaid.

SACRED SONG FOLIO

For Alto and Bass voices. A companion volume to Sacred Song Folio for High Voices. It contains nearly fifty of those beautiful solos which are enduring in their popularity. Postpaid.

SONG FOLIO VOL. III

This volume in the celebrated "Folio" series undoubtedly reached the climax in point of musical excellence. Nearly 80 song gems from the best writers. 15 cents extra for postage.

FOLIO OF BASS SONGS

The eighty-eight songs for Bass or Baritone voice which make up this book were written by the most talented composers of the world. Both old and new favorites are included. 15 cents extra for postage.

COLLEGE SONGS

A collection of over 100 new and popular songs of American Colleges. New and valuable additions. Indispensable for social gatherings and all places where merry song and laughter finds a place. Postpaid.

REMEMBER

That any book or sheet of music published in any part of the world can be procured of us at shortest notice.

OLIVER DITSON COMPANY

453-463 Washington Street
BOSTON

Mention American Gardening when you write.

eagle claw (commonly called) cultivator. Cultivate one way; then cultivate crosswise; then lengthwise; crosswise again, and keep on cultivating till the soil is as loose as an ash heap, and finally finish up by cultivating with a disk harrow once or twice, then with a common tooth harrow.

If a potato planter be used, it will make enough ridge so that the row can be seen; if a planter be not used, then ridge just a little in covering. Before the potatoes come up harrow them twice at one harrowing, and do this by lapping your harrow, and keep the horses off the rows. If weeds start quickly and early, the field may need harrowing again, and this time the rows cannot be seen, and the horses can't be kept off the rows; but it *must* be harrowed. As soon as the potatoes come up so that the rows can be seen, harrow once over, and again the third or fourth day after; or, better still, use a Breed Weeder. Let me repeat it, keep the horses off the rows. Do not in any way pack the ground in the row.

From this time onward, if you have a Breed Weeder, use it alternately with any other good cultivator with which you can cultivate shallow, keeping on at this work till the vines grow so large that you have to quit; but do not under any circumstances throw up any ridge.

If a ridge be thrown up, there will be a hard place between the rows, and it will help to dry out the ground; also, if it rain, the water will run off the ridge into the furrow, and not reach the roots of the plants as it should; while if level culture be practised, all capillary evaporation will be cut off and the moisture retained.

Plant early varieties 3 inches deep, and late ones 4 to 5 inches. If the ground be not rich, make so by heavy dressings of thoroughly rotted manure. If your potatoes have scab, treat them with corrosive sublimate before planting, using two ounces to fifteen gallons of water.

For early potatoes, I prefer Early Ohio, Early Market, Acme, and King of the Earlies; for late, Carman No. 3, Harvest King, State of Maine, Carman No. 1, and Champion. This section of Illinois is not considered a potato country, but under this intensive cultivation I have not failed to grow three times the usual yield, and hence I do not hesitate in giving it.

I usually grow eight or ten acres of potatoes, and from one-half to one acre is devoted to the testing of new varieties; and if the Editor deems this worthy of publication, I may write about these at another date.

L. S. SPENCER, Pesotum, Ill.

[We, and our readers too, will be glad to welcome the further communication suggested.—ED.]

Intensive Cultivation.—I believe I can safely say that when you find an orchardist who objects to small fruits in his orchard, you will discover, by cross-examination, that he expects good results with only ordinary farm cultivation. This will not do. You cannot expect to grow small fruits successfully in or out of the orchard without expending much money and labor. In a general way, I advise only those with small young orchards to grow small fruits between the rows during the first six or seven years, when the trees need the most active cultivation.—Ohio Farmer.

A Thermometer Free to Our Readers.

Recently we received from Warner's Safe Co., of Rochester, N. Y., a useful spirit thermometer, graduated from 25° below zero to above, and mounted on heavy 4x6-inch cardboard, in red and green. A duplicate will be sent by mail, free to any address on receipt of 5 cents in stamps to pay postage. To be sure this free distribution is intended to advertise the firm's goods (see advertising columns), but nevertheless the thermometer will be found as useful as well as an ornamental article, and well worth the little trouble and expense of sending for it.

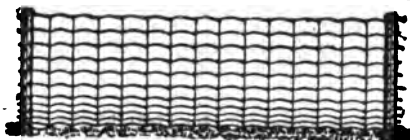
No other oil and no other medicine has ever been discovered which can take the place of Cod-liver Oil in all conditions of wasting. New remedies come, live their little day and die, but Cod-liver Oil remains the rock on which all hope for recovery must rest. When it is scientifically prepared, as in Scott's Emulsion, it checks the progress of the disease, the congestion and inflammation subside and the process of healing begins. There is the whole truth. Book about it free.

SCOTT & BOWNE, New York.

OLD BOOKS SEND STAMP FOR LIST. Address: A. J. Crawford, 518 N. 7th Street, St. Louis, Mo. Mention American Gardening when you write.

GRAY HAIR MADE DARK By a hairless Home Wash. Also makes the hair grow. Full directions and recipe for 25 cts. Mrs. A. HUNTLEY, 4815 Evans Ave., St. Louis, Mo. Mention American Gardening when you write.

Are You Interested in Horticulture in the SOUTH? THE GLEANER, Austin, Tex. ...WILL TELL YOU ALL ABOUT IT... Mention American Gardening when you write.



NO TRESPASS

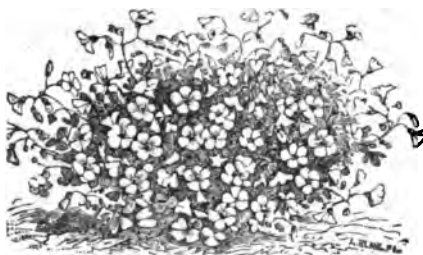
While duly grateful to other fence manufacturers for their strong endorsement of the Coiled Spring, we must decline with thanks all offers of assistance in supplying the demand. We created it and can take care of it.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich. Mention American Gardening when you write.

Offer No. 38.

Sent, postpaid, for ONE NEW subscription at \$1.

SUMMER BEDDING 150 OXALIS BULBS



These bulbs make beautiful borders for summer flower beds, as well as attractive pot plants. The collection includes 150 Bulbs in equal proportions of the four following varieties, named, and in separate packets:

OXALIS DEPPEI ALBA.—White.
OXALIS DEPPEI ROSEA.—Old rose or salmon.
OXALIS ERYTHILLA PURPUREA.—Purple.
OXALIS LASLANDRA.—Crimson. Tall, fine palmate leaves.

KOSS' SEEDS

Always Give Satisfaction. Our German and English Catalogue Free to all who need seeds, no matter how much. Wholesale list for Market Gardeners and Truckers. Address THEO. KOSS, 261 Reed St., Milwaukee, Wis. Dealer, Grower and Importer. *Wanted, a few good salesmen.*

Mention American Gardening when you write.

THE BEST SEED POTATOES

And Farm Seeds are grown on Michigan New Muck Lands by HARRY N. HAMMOND, SEEDSMAN, Decatur, Michigan. Largest grower of seed potatoes in America. Prices low. Write him for illustrated catalogue. Free to all. Describes how he grew over 750 Bush. Maule's Thoroughbred per Acre. Mention American Gardening when you write.

OLDS' NEW VIGOROSA POTATO. Emphatically VIGOROUS. Early, Handsome, of Best Quality, A VERY STRONG GROWER. We are headquarters for Seed Potatoes, 60 Varieties, An Immense Stock, At Low Prices. Also Garden Seeds and Field Seeds. Illustrated Catalogue FREE. L. L. OLDS, CLINTON, Rock Co., Wis.

Mention American Gardening when you write.

Seeds! Seeds!

73d Annual Priced Catalogue of VEGETABLE, FARM AND FLOWER SEEDS is now ready and mailed Free to all applicants. BRIDGEMAN'S SEED WAREHOUSE, 37 East 19th Street, - New York City. Mention American Gardening when you write.



TRY DREER'S GARDEN SEEDS

Plants, Bulbs and Requisites. They are the best at the lowest prices. Calendar for 1896 mailed free. Address

HENRY A. DREER, 714 Chestnut St., PHILA.

Mention American Gardening when you write.

ELLIOTT'S SEED

ANNUAL FOR 1897.

Now Ready. Mailed free on application, by only mentioning AMERICAN GARDENING.

WM. ELLIOTT & SONS, 54 & 56 Dey Street, NEW YORK.

Mention American Gardening when you write.

MAULE'S SEEDS

Prices Cut in Half for '97.

The most complete and most beautifully illustrated Seed and Plant Book of the year, free to all gardeners who mention this paper. Address

WM. HENRY MAULE, 1751 Filbert Street, Philadelphia, Pa.

Mention American Gardening when you write.

Forcing Radishes.

Cleanings From a New Jersey Establishment.

"Yes, these have paid first-class this season. I never knew them to do better. How many have I forced? Let me see: Seven one hundred-foot benches. Have they paid well? There, now, don't get asking questions; it isn't policy nowadays to say anything pays; if you do, everybody wants to grow that same thing next season, and then the 'snap' is gone, and against you come to size up everything—picking, bunching, and getting to market—there is not much in radishes, anyway."

"Looking at your houses and knowing what prices you have been getting, we are inclined to think you have been very successful, and I feel like telling the readers of AMERICAN GARDENING about you."

"Oh, please, don't do that; some other day you may, but not now, for I do not rank as a vegetable grower yet; I am a Carnationist, only seeing the red light, I switched off, and after Chrysanthemums, filled up with radishes."

"Do you mean by 'red light' that you foresaw the low prices that Carnations are making this season?" "Why, yes."

"When did you sow your first seed?" "November 14 and 19."

"When did you ship your first lot?" "On December 24 we shipped 75 bunches."

"You got 4 cents a bunch for them?" "Yes, but don't tell anyone."

"There were 12 in a bunch?"

"Yes; we got \$4 per hundred bunches for the next two hundred, then \$3.50 for some time, and now we are only getting \$3, and we are putting 14 to the bunch."

"What varieties do you like best, you have several on trial?" "Oh, give us Early Scarlet Globe, every time. That was the first by ten days. It is a pretty radish and bunches nicely, not very large but very choice in quality, small topped and light rooted. White-tipped makes so much more top and there is a larger percentage of waste—and so many that never form up—and with its larger top there is more danger of fungus, and beside there is at least ten days' difference in time, and that is an item, for we are needing room now for other crops. We have also tried Red Rose and Rapid Forcing, but Early Scarlet Globe beats them all."

"Have you tried Earliest Carmine, or Extra Early Deep Scarlet White-tipped Forcing, or what is cracked up by many to be the best of all for forcing, viz., Non Plus Ultra?" "No, we have not had any experience with those; we hear they are good, and Non Plus Ultra is said to have a very small top, and we will have to try it. I am thinking, on our light benches it would go well with Scarlet Globe; and there's a point for you: radishes want as much light as Roses. The better the house, the better the results."

Jersey market growers are hard to get information from, at times, but the foregoing, by a little engineering, was obtained from a very successful grower by a JERSEYMAN.

Birds and Crops.—A gentleman shot a magpie to save his cherries. In his craw he found a few cherry stones, and the rest crammed with large blue-bottle flies, who deposit their eggs in meat. Blackbirds do some harm in the cornfield while there on their errand for grub worms, caterpillars, and army worms, which, unless thus interrupted, would destroy more corn than the birds. So with thrushes, woodpeckers, and doves.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Heading Off Insect Enemies.

If one be not likely to give the plants the full due of time necessary to keep them free from insects, it is a desirable thing to have them home-grown so far as possible. No one item saves so much work along this line, as it is a fact that vicious insects are very largely introduced upon plants brought from the florist. The present writer grew window plants for years before ever seeing a red spider or any other troublesome insect, aside from the green aphid. This was when all were home-grown, either from seed or from cuttings. Now that greenhouse plants are frequently added to the collection, scale, mealy-bug, black aphid and red spider have often to be reckoned with. Tobacco dust is an excellent window insecticide, but it is far from attractive when dusted on the plants to remain for several days. Sprinkled on the surface of the pots, it serves its purpose as a discourager of insects after the plants are once clean, but some blooms are injured by the rising fumes. Many Rose growers, especially, give it the cold shoulder.

The White Wyandotte Gaining.

The all-around fowl must be the one for the all-around use; special needs can never refute this, no matter how hot the controversy. Among older, all-around breeds, none other has ever suited the general raiser like the Plymouth Rock; but none has increased in popularity during the last three years like the White Wyandotte. The Plymouth Rock is of good size, plump, and a fair layer, but with an evil tendency to sit long and hard, and to take on too much fat for continued good laying. The White Wyandotte has all the good qualities of the Plymouth Rock, with the two more prominent ill points much improved. Besides these good qualities, it dresses off clean and attractive. If any breed now known ever displaces the Plymouth Rock in the home yards, how can it be other than the good-natured, motherly, plump, sizable, prominent-breasted, well-laying White Wyandotte?

Asparagus for the Housewife.

The two classes of asparagus, that for the garden and for the window are both replete with interest for the housewife. None appreciates so well as she, surely, the value of garden asparagus; for she has not only the palate to be tickled, like the rest of the family, but she has a pleasing bill of fare to make out in the "betwixt and between" season. The ornamental sorts are a joy to her heart, too, with the one proviso, that they do not too much resemble the kitchen garden varieties. This fatal resemblance, alone, would make her give less heed of praise to Asparagus tenuissimus than to the lovely lace-like plumes of A. plumosus. Of half a dozen other sorts catalogued, she may never have heard, but her loss is little, since she has A. plumosus, the most desirable of all. There is a new sort, however, soon to be pushed at retail, but now just beginning to circulate among the florists, known as A. Sprengeri. This differs considerably from the better known forms, and is called one of the best novelties introduced in several years.

Frozen Combs.

This is a difficulty sure to meet the amateur. In cold climates, the best way, without question, is to keep the low or double-combed varieties. Frozen combs, however, are not a necessity if sufficient precautions be taken. One raiser states that the birds must be kept in whenever the thermometer touches 20°. We have found 10° above zero the danger line, but a sharp wind makes many degrees of difference, and the fowls should always be protected from the wind. Within fairly close buildings we have no trouble till zero point is reached, or even a few degrees below for a short time. A lantern hung low in the house during extreme cold, will often moderate the temperature sufficiently. Abolishing with vaseline is a good remedial procedure, but no remedy equals prevention.

IT'S CURES THAT COUNT.

Many so-called remedies are pressed on the public attention on account of their claimed large sales. But sales cannot determine values. Sales simply argue good salesmen, shrewd puffery, or enormous advertising. It's cures that count. It is cures that are counted on by Ayer's Sarsaparilla. Its sales might be boasted. It has the world for its market. But sales prove nothing. We point only to the record of Ayer's Sarsaparilla, as proof of its merit:

50 YEARS OF CURES.

The Indoor Daphnes.

Inquiry having been made concerning the Daphne lately mentioned in these notes, it may be said that the plant has just gone into retirement, after having given twenty-five clusters of fragrant bloom. These delightful Daphnes, though old, are very rare. Ordinary dealers in plants seldom offer them. They are to be obtained, as a rule, only from those who have unusually large collections of stove and greenhouse plants. There are two forms of the window Daphne known as Daphne indica alba (white), and Daphne indica rubra.

BUFF LEGHORNS.—Winners for five years Circular free. GEORGE S. BARNES, Battle Creek, Mich.

Mention American Gardening when you write.

MONITOR INCUBATOR
Illustrated Catalogue for stamp.
Medal and Diploma awarded at the World's Fair A. F. WILLIAMS, 76 Race St. Bristol, Ct.

Mention American Gardening when you write.

BETTER THAN A DAIRY FARM
is a poultry farm. More money and less labor and expense. All proofs in our NEW POULTRY GUIDE FOR 1897, 100 pages printed in colors sent for 15 cents. Address JOHN BAUSCHER, Jr. Box 85, Freeport, Ill.

Mention American Gardening when you write.

HATCH Chickens by STEAM
with the MODEL
EXCELSIOR Incubator
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatchery made. 625 N. ST. ANGELO, ILL. Circulars free. Send 6c. for 11-page Catalogue. 114 to 122 N. 6th St. Chicago, Ill.

Mention American Gardening when you write.

INCUBATORS
The OLENTANGY Incubator has proved to be the best. Have taken prize after prize. Brooders only \$5.00. Before buying elsewhere, send for free description and testimonials. Also brooder of 40 varieties of high-class poultry. 110 yards. 110 houses. Address G. S. SINGER, Cardington, O.

Mention American Gardening when you write.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.00.
THE OHIO FARMER is a large, 30 page weekly, \$1 per year. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for illustrations, correspondence and Market Reports than any other of its class. It is the Best and Cheapest no more than others. Send for a SAMPLE COPY to THE OHIO FARMER, Cleveland, O.
THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1898—14 months, if ordered at once. Address all orders to AMERICAN GARDENING, P. O. Box 1697, New York.

WHOLESALE MARKET REPORT

New York.

Business in cut flowers of nearly all kinds, especially roses and carnations, improved considerably at the latter part of last week and the early part of this. The supply lightened up very considerably and the market cleared out each day, something that has not happened in a very long time before.

Trade in hot-house vegetables and fruits stiffened a little on some lines, if stock was very fancy. Fancy lettuce did not do as well as expected, it would seem that the Florida and New Orleans stock has tired the buying public, which has switched off to something else. Strictly fancy are quoted at from 25c. to 60c., but much of that examined would not warrant being classed thus. Many growers seem to imagine that because a thing has been grown in a hothouse that it must be fancy.

Radishes are in good demand at from \$3.00 to \$4.00 per 100 bunches.

Tomatoes, when good and high colored, make 35c. per lb.

Cucumbers are still in light supply and meeting with brisk sales, and making as high as \$2.00 and \$2.50 per dozen for No. 1. There are quantities of No. 2, but even these have met with good sales at fair figures.

Mushrooms are more of a glut than ever, and positively will not move. One Long Island grower is reported to have disposed of 800 lbs. last week at 10c. per lb., average. Other growers have failed to realize on small quantities more than 20c. and 25c. per lb. Arch, Deacon & Co., who are very large dealers in these, report unusual stagnation and inability to quote any steady figure. The only thing left is to sell at whatever price possible. The plentiful crop and small growers peddling them around has practically killed the price for this season.

Strawberries, home grown, are still selling at \$4.50 per quart for No. 1; No. 2 50c. per quart; Florida stock is quoted at 50c., but drops.

European grapes are light in supply and sell at from 75c. to \$1.25 per lb.

California pears from storage selling slow; the quality of most stock is good, but the demand very poor.

APPLES.—The extreme cold weather prevailing is causing strong pressure to sell the stock unloading on the dock, and prices are weak and unsettled. On usual qualities any reasonable bids are being accepted which will move stock promptly. Most sales of Baldwin and Greenings are in range of 75c. to \$1.00 per bbl. Scarcely anything is doing in grapes.

Apples.

Spitzenburg, fancy, per bbl. \$1 75 @ 25
Baldwin, Vt. and Northern, fancy, 1 25 @ 1 50
Baldwin, w'n N. Y. pme, per d'n bbl 1 25 @ 1 50
Greening, Vermont and Northern
fancy, per bbl. 1 25 @ 1 50
Greening, w'n N. Y., prime to
fancy, per bbl. 90 @ 1 00

Grapes.

Catawba, w'n N. Y., good to fancy,
4-lb. basket. 10 @ 13
Catawba, inferior, 4-lb. basket. 7 @ 9

Vegetables.

White onions are nominally firm for fancy qualities under light offerings; reds are quiet and weaker; choice Orange County stock offering at \$3; yellows are dull, but stock in store is held unchanged. Local winter vegetables nominally unchanged. Norfolk steamer brought 1,900 bbls. of spinach and 1,200 bbls. of kale; some of the stock was almost worthless, and sold at merely nominal figures. An occasional lot of choice kale brought 60c., and one or two lots of spinach were placed above \$1, but most of the business was in range of former quotations. The Savannah steamer brought 1,845 crates and 123 bbls. of Florida vegetables.

Brussels sprouts, per qt. 4 @ 8
Cabbages, per 100. 3 00 @ 4 00
—red, per 100. 4 00 @ 6 00
—Danish, per 100. 6 00 @ 7 00
—Florida, per barrel crate. @ 1 50
Celery flat bunches, per doz. bchs. 50 @ 1 00
—California, large, per doz. stalks. 60 @ 75
—State, fancy large, per doz. stalks. 35 @ 50
—average best, per doz. stalks. 20 @ 30
—small to medium, per doz. stalks. 10 @ 15
Lettuce, Florida, per 1/4-bbl. basket. 50 @ 1 25
Onions, Eastern white, per bbl. 4 00 @ 4 00
—Eastern red, per bbl. 3 25 @ 3 50
—Eastern, yellow, per bbl. @ 3 00
—State and Western, yellow, per bbl. 2 30 @ 2 50
—Canadian, red, per bbl. 2 75 @ 3 00
—Orange County, white, per bag. 2 50 @ 5 00
—Orange County, yellow, per bag. 2 00 @ 2 50
—Orange County, red, per bag. 2 00 @ 3 00
—Havana, per box. 2 50 @ 3 00
Peas, Florida, per crate. 1 50 @ 3 50
String beans, Fla., wax, per crate. 2 00 @ 3 50
String beans, Fla., express, basket,
per crate. 2 50 @ 3 00
String beans, Fla., green, freight,
er crate. 1 50 @ 2 75

Spinach, Norfolk, per bbl. 50 @ 1 00
Turnips, Canada, Russia, per bbl. 60 @ 70
Tomatoes, southern Fla., per carrier 75 @ 1 50

Philadelphia.

The severe cold spell has greatly interfered with the market this past week, and there is very little produce moving. Had the mild weather of last week continued, no doubt prices would have advanced, as there is not so much stock coming from Florida growers; they have become disgusted with the poor returns and have evidently tried other markets.

Local growers are in hopes that the cold snap has gone well South, and will therefore cut off this strong competition and so help the local market.

Prices have not changed much from last week. Apples continued to sell fairly well as from \$1.50 to \$2.00 per bbl. Most of those coming in are New York State fruit, and arrive in good condition.

Mushrooms are becoming more plentiful, and prices will undoubtedly drop.

Florida strawberries are more plentiful, and are selling at 50 to 75c. per qt. baskets; the demand is slight.

Hothouse tomatoes are improving in quality, but unless of good color and substance sell slowly.

Hot house grapes imported are in fair supply, but the demand is light. White grapes (Spanish) are selling fairly well.

Vegetables.

Beets, Florida, per 100 bunches. \$4 00 @ 6 00
Brussel sprouts, per qt. 8 @ 12
Cucumbers, Florida, per crate. 1 50 @ 2 00
Cabbages, per 100. 3 00 @ 4 00
Cauliflowers, extra, per bbl. 4 00 @ 6 00
Celery, extra, per doz. stalks. 50 @ 75
—Fair to good. 35 @ 50
Egg plants, Florida, per 1/4 box. 80 @ 1 75
Kale, Norfolk, per bbl. 45 @ 60

Lettuce, Florida, per 1/4 basket. 1 00 @ 1 25
—Fair. 50 @ 75
Onions, Eastern, white, per bbl. 3 00 @ 5 50
—Red. 3 00 @ 4 50
—Yellow. 2 50 @ 3 50
—Western, red. 2 25 @ 3 00
—White. 2 50 @ 4 00
—Bermuda, per crate. 1 75 @ 2 00
Peas, Florida, per crate. 2 00 @ 2 50
—Florida, per basket. 1 50 @ 2 00
Peppers, Florida, per crate. 75 @ 1 00
Squash, Florida, white, per crate. 60 @ 80
String Beans, Fla., wax, per crate. 1 25 @ 1 75
Spinach, Norfolk, per bbl. 50 @ 1 25
Tomatoes, Florida, per carrier. 1 50 @ 2 00

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

COLE, Pella, Ia.—Garden Annual for 1897. Illustrated.

F. C. HEINEMANN, Erfurt, Germany.—General Seed Catalogue.

T. W. WOOD & SONS, Richmond, Va.—Illustrated Seed and Plant Catalogue.

E. W. BURBANK SEED CO., Fryeburg, Me.—Catalogue of Field and Garden Seeds, Implements, etc.

THE GEO. A. WEAVER CO., Newport, R. I.—Annual Illustrated Catalogue of Seeds, Farm, Garden and Lawn Supplies.

A. A. MARKS, 701 Broadway, New York.—Catalogue of Artificial Limbs and other Appliances for the Maimed. It is quite a curiosity, and we would advise our readers to send for it. It is really wonderful the improvements which have been made in artificial limbs and in tools for the use of those who have lost their hands or arms.

A Mightier Foe Than Armies.

OVERCOME BY A BRAVE UNION GENERAL AND HIS FAITHFUL ALLY, DR. WILLIAMS.

From the Sentinel, Cherokee, Kansas.

At the breaking out of the war of the rebellion in 1861, General Wiles, whose portrait adorns our page, was captain and owner of the then well-known river steamboat, "Charley Potwin," plying between Zanesville and Parkersburg, but he immediately disposed of his boat and became enrolled as lieutenant in the 78th Ohio Infantry. At the battle of Fort Donelson, on February 16, 1862, Lieutenant Wiles was promoted from lieutenant to lieutenant-colonel, for "brave and meritorious conduct on the field," and at the age of thirty-six

proving fatal. Typhoid fever, followed by inflammatory rheumatism and then paralysis, made a temporary wreck of the herculean frame, and in view of his advanced age, his anxious friends believed that he was not long for this world. The following is his own account of his illness.

"In the latter part of 1890, I was taken down with a severe attack of typhoid fever, which confined me to my bed for two months. Two months is a long time to be in bed, but I was not to get up yet, for inflammatory rheumatism seized me, and it was worse than the typhoid, for it was more painful. To add to my trouble and make it more interesting, the inflammatory rheumatism was followed by a stroke of paralysis, and I lost almost totally the use of my legs and arms, for I could not walk a step and could not feed myself. It would seem that I had reached the depth of misery, but such was not the case, for my kidneys gave out, and this seemed to be the last straw on the load that was to crush me.

"My friends all thought I would never recover, and though the doctors came to see me and prescribed, it was easy to see that they were but trying to make my pathway to the grave a little more easy, without the remotest hope of recovery, and I looked forward to death with happiness.

"While in this frame of mind, I was advised by a friend to try Dr. Williams' Pink Pills, and began the use of them, taking one pill after each meal, and this I continued for one week, and began to fancy I perceived improvement in my condition. I then increased the dose to two after each meal, and at the end of the second week there was no doubt but what Pink Pills were making me better, so I kept on using them according to directions, and in three months was a well man."

Dr. Williams' Pink Pills are sold by all dealers, or will be sent post paid on receipt of price, 50 cents a box, or six boxes for \$2.50 (they are never sold in bulk or by the 100), by addressing Dr. Williams' Medicine Company, Schenectady, N. Y.



GENERAL G. F. WILES.

General Wiles was colonel of his regiment, and while with Sherman, was gazetted brigadier-general.

The General lives the greater part of his time in Halstead, Kansas, though he is much in Windsor, New York, in both of which places he has business interests that require his presence.

Some few years ago General Wiles was attacked by illness, which came very near

WEEBER & DON,

Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Illustrated Catalogue
of Vegetable and Flower Seeds
NOW READY.

EVERY GARDENER SHOULD HAVE ONE.
Free on Application.

Mention American Gardening when you write.

Business Cards.

Cards will be inserted under this heading at two cents per word each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Joe Forsyth Johnson, P. O. Box 1097, New York City

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at two cents per word each insertion, payable in advance. The address will be charged as part of the advt. and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSBOSCH BROS., bulbs and plants, Englewood, N. J.

NEW GLADIOLUS. Leaflet free. Norman Cole, Glens Falls, N. Y.

STRAWBERRY PLANTS for sale. Catalogue free. Charles Howard, 2 Johns, Md.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedman, Rochester, N. Y.

HOW TO GROW RHUBARB in the field and greenhouse. Price fifty cents postpaid. Fred. S. Thompson, Station D, Wis.

THE RIDGEWAY, a new strawberry of great merit. For price of plants and free catalogue, address M. H. Ridgeway, Box 293, Wabash City, Ind.

MIXED SEEDLING GLADIOLI. Blooming bulbs of fine strain, \$1.25 a hundred. Expressage to be paid by purchaser. Mrs. George Such, South Amboy, N. J.

STRAWBERRY PLANTS, Clyde, best early perfect flowering variety ever introduced. Sixty varieties, best plants at lowest prices. Catalogue free. Enos W. Dunham, Stevensville, Mich.

STRAWBERRY PLANTS. Try the Margaret Fountain, Michigan, Clyde, Glen Mary. Headquarters for Gan y, Brandywine Marshall, Parker Earle and all choice standards. Catalogue free to all. C. N. Fiansburgh, Leslie, Mich.

SCOTCH COLLIES are grand companions and best watchdogs. Handsome orange sabbie puppies, \$10, \$15, \$25, from best registered stock. Poultry bred from my New York winners. Clifford Beman, Port Dickinson, N. Y.

CELERY, BLANCHED with paper tubes, and grown by two girls, took first prize at State and County fairs. Photo-engraving 5x7, of the two girls and their celery, with tubes on celery. Price, 10 cents. Nine years' practice with paper tubes. Richard Branson, Syracuse, N. Y.

FOR SALE Country place, about three acres, 85 miles from New York; house large, arranged for two families, heated by steam; new greenhouse 20x50, poultry houses and yards, fruits, large and productive garden, very convenient and accessible, very desirable for garden-r and flower grower, or gentleman's residence. Address Henry S. Concklin, 26 Court St., Brooklyn, N. Y.

GLADIOLI, CANNAS, CLIVIAS, Bouchet and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingelside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings, Cannas, Italia, Austria, and best standards. New Hybrid Clivias, Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.

WANTED

Radishes and Cucumbers.

Stocks of these are selling exceptionally well just now.

Valentine Produce Co., Commission Merchants,
262 Washington St., New York.
Mention American Gardening when you write.

PRIVATE GARDENERS.

We solicit for publication under this heading notes on the work being done by private gardeners, changes in appointment, and all matters of interest to horticulturists generally.

Notes on Bedding Plants.

It may seem somewhat early to discuss bedding plants in midwinter, but in order to ensure success in our work during the coming season, we should prepare in advance. And to those having a little space available in the greenhouse, it may be said that this is none too early to begin working up a stock of some of the most necessary plants for this purpose, and prominent among these are the improved Cannas.

These grand decorative plants are evidently gaining in favor each season, and deservedly so, for they not only add greatly to the effectiveness of the average garden, but also are leading toward a better style of gardening than used to be found in the stiff and formal blocks of Geraniums, Coleus and Alternantheras that once formed the major part of the flower beds in the vicinity of our large cities.

It will, of course, be understood that there is no intention of condemning formal bedding as a whole, for in certain locations, it is most effective and eminently proper, even though we have no sympathy for such floral nightmares as have sometimes been seen in noted public parks and elsewhere.

But to return to the Cannas, there is undoubted progress in some of the new varieties, and one of the best is "Egan-dale," a strong-growing, dark-foliaged variety with bright crimson flowers, the latter being produced in large trusses, and standing up well on strong stems. Columbia also produces very large, dark colored flowers, but has green foliage, and complaint has been made that it is not so strong a grower as had been expected. Queen Charlotte is remarkably showy, the broad yellow edging on its bright red petals attracting attention from a considerable distance.

The spikes of this variety are also large and branch freely, thus giving a long succession of bloom. Various clear yellow seedlings have been offered, but perfection in this line does not yet appear to have been reached, while of yellow varieties that are spotted and marked with orange and red, there is almost an overplus, and still more to follow.

The propagation of these Cannas

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION wanted on private place, by a German, married man, good all around gardener, best of references. Address L. T., Box 446, Summit, N. J.

GARDENER and Florist, 30 years' age, single, German, 15 years' experience, wishes to take charge of gentleman's place, first-class references. Address L. D., care American Gardening.

SITUATION wanted in private place, age 28, understands growing of outdoor and greenhouse vegetables and flowers, care of lawns and general gardener's work. D. J. care American Gardening.

BY women, each with an infant or young child, situations in the country (general housework, plain cooking, etc.) in New York and adjacent States. Small wages expected. Railroad fare paid by Association. Apply State Charities Aid Association, 105 East Twenty-second St., New York City.

SITUATION wanted—First-class Gardener with diploma from both sides of the Atlantic, will guarantee financial success in producing choicest roses, also mushrooms under glass, in same building, and heat, thereby saving expense in labor, space and fuel; forcing vegetables under glass and European grapes specialties; thorough artist at table decorations; good landscape gardener; best city references. Wm. Thompson, 741 First Ave., N. Y. City.

Mention American Gardening when you write.

should begin now, providing a temperature of 60° or over can be maintained in the greenhouse, the tubers being divided with a knife, and the sections potted up into as small pots as possible, 4 inch pots being usually used for this purpose. After potting, give a moderate watering to settle the soil, then water but sparingly until the plants have made some new roots, for too much moisture at this time will result in rotting the tubers. By beginning this operation thus early, time is given for a second division of the young plants before planting-out time, in case the first division does not provide a sufficient stock of some particularly desirable variety.

The Crotons have again come to the front in eastern gardens, and almost anywhere south from New York will give admirable results. And in this connection it may be worth noting once more that the Crotons should be hardened off before planting out, this being readily managed by putting them outdoors in a frame, where the ventilation is gradually increased for a period of about ten days before the final planting.

Another thing to be borne in mind is the fact that Crotons will grow more freely when planted right out in the bed than when they are left in pots and simply plunged, and strong young plants that are planted in rich soil and given an abundance of moisture, will make greater progress than old plants that have been cut back several times.

Among the varieties that have been notably fine the past season are Day-spring, James de Rothschild, Queen Victoria, and Fascination, these having been exceptionally good in the gardens of Girard College, Philadelphia, at which fine establishment a special feature has been made of outdoor Crotons by Mr. Geo. Huster, the gardener in charge, for several years past. Strobilanthes Dyerianus has not proved an entire success in this locality, for though its growth was free enough, yet the color of the foliage disappeared to a great extent during the long hot and dry spell in the latter part of the summer.

Up to the latter part of July the Strobilanthes leaves were beautiful, and the plant seemed to be an acquisition, but after that time it failed greatly and looked decidedly weedy, though there is a possibility that better results may be had in a more favorable season.

The white variegated Abutilon, Souvenir de Bonn, made a good showing in several localities that I noted it, and seemed to stand pinching very well, though it would doubtless be more effective and produce finer foliage when planted in a large bed of foliage plants, where but little trimming would be needed.

Occasionally a plain green shoot was observed on this variety, but the tendency to run out did not seem to be very marked.

Another new Abutilon of somewhat similar character to the above is being sent out under the name of A. Savitzei, this being claimed to be a considerable improvement on A. Souvenir de Bonn, but as it has not yet been tested as a bedding plant, it is too soon to offer an opinion on its merits. A mingled bed of Abutilons is one of the possibilities of the coming season, and can be made a telling feature in the garden by the judicious use of A. Thompsonii (yellow variegation), A. Pattersonii (green foliage, dull red flowers), A. Boule de Neige (pure white flowers), A. Souvenir de Bonn, and an edging of A. vexillarium pictum. And if still more variety is desired, some one of the clear yellow

flowered varieties could be added—for example, A. Canary Bird or A. Yellow Prince.

Tuberous Begonias have not been a success in this vicinity (Philadelphia) so far, though it is to be hoped that their peculiar needs will be better understood in the future, for the descriptions one has of the brilliant successes attained in Europe with these plants increase our desire to do likewise, providing our trying climate will permit it.

W. H. TAPLIN.

Grapes Under Glass.

I see you are publishing Mr. W. Scott's essay on "Grape Growing under Glass," and, therefore, send you a photograph of one of the houses, where he at one time had charge. This photo, however, was taken when I had charge of it. The house is 100x30 feet; the variety is Gros Colmar. The place is Park Hall, Polmont, Scotland. ALEX. NAPIER.

[The photograph sent in by our correspondent showed a well managed, well cultivated lot of grape vines, bearing a very full crop of grapes—Ed.]

Boston.

An interesting exhibition of plants and flowers was made in Horticultural Hall on Saturday, January 16. Oakes Ames (Carl Blomberg, gardener) sent several Orchids, one of which, *Scuticaria (Maxillaria) Steelii*, was growing on a block of wood; it is known as the "Shoestring Orchid," from the peculiar foliage which looks like green cords 3 feet or more long. It is a native of British Guiana. There were two seedling *Cypripediums*—Susan Ames, a hybrid between *C. Leeannum* and *C. nitens*, and *Cypripedium*. F. T. Hubbard, a hybrid between *C. marmorophyllum* and *C. barbatum*. Honorable mention was made of these by the plant committee. There were also six other *Cypripediums*: *Fascinator*, *Leander*, *Hyeanum* (from Borneo), *Daviesianum*, *Colmanii nigrum*, and *Morganæ*. A gratuity was awarded to C. E. Richardson for a plant of *Senecio Petasites*.

Hugh Graham, of Philadelphia, sent a vase of the new Carnation Victor, a sport from Daybreak, which received honorable mention. James Comley brought another large collection of Camellias, among which were *Wilderii*, *C. M. Hovey*, President Clark, Cup of Beauty, etc., for which a gratuity was awarded. He showed also a seedling *Lasiandra* and a seedling *Brugmansia*. Dr. C. G. Weld (Kenneth Finlayson, gardener), sent some handsome cut flowers, including *Hippeastrum aulicum*, *Erica Wilmoreana*, *E. hyacinthiflora rosea*, *Streptosolen speciosum major* (new), *S. Jamesonii*, *Centropogon Lucianus*, some fine spikes of *Phalenopsis Schilleriana* (Orchid), and two seedling scarlet *Pelargoniums*. A gratuity was awarded for this collection.

Gratuities were awarded by the vegetable committee to Norris Comley for rhubarb, and Warren Heustis & Son, for celery.

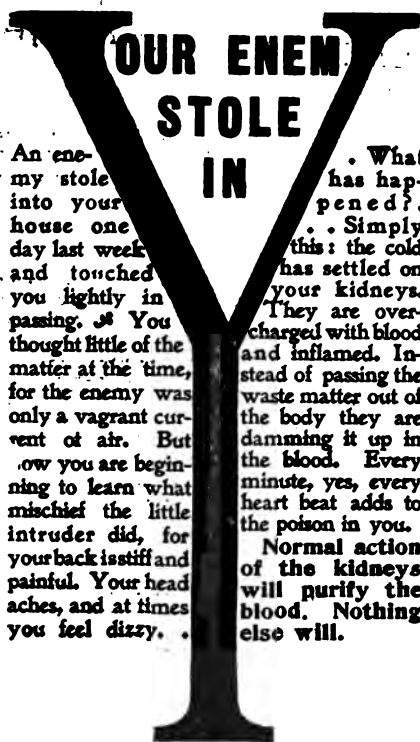
Lenox, Mass.

At a meeting of the Horticultural Society, Jan. 18, Mr. Littlefield, representing Mr. C. W. Ward of the Cottage Gardens, Queens, L. I., had on exhibition a fine display of new and standard varieties of carnations which secured the following honors: Certificates for C. A. Dana, Mrs. G. A. Bratt and Glacier. Diplomas for Lillian Strauss and Snow Crest; special mention for Mrs. Charles Dume, Abundance, Mrs. Potter, John Young, Storm King and Mrs. Jas. Dean.

Mr. George Thompson, Superintendent to H. H. Cook, Esq., showed some very nice cyclamen for which he was awarded the society's diploma.

Mr. Thomas Hartnett, gardener to Mr. Dr. Witt Smith of Lee, showed *Freessias*, the flower stems of which were about thirty-two inches long. (Diploma).

The feature of the evening was a lecture by Mr. P. O'Mara of New York, on "The Gardener's Mission in Horticulture." This will be given in full in our columns.



An enemy stole into your house one day last week and touched you lightly in passing. You thought little of the matter at the time, for the enemy was only a vagrant current of air. But now you are beginning to learn what mischief the little intruder did, for your back is stiff and painful. Your head aches, and at times you feel dizzy. . . . What has happened? . . . Simply this: the cold has settled on your kidneys. They are overcharged with blood and inflamed. Instead of passing the waste matter out of the body they are damming it up in the blood. Every minute, yes, every heart beat adds to the poison in you. Normal action of the kidneys will purify the blood. Nothing else will.

WATERBURY'S
Safe Cure

is the friend in need. It will reduce the inflammation, so that the grip on the tissues of the blood-vessels is relaxed, and the uric acid is sent on its way out of the body.

Thus You Overcome Your Enemy

Large bottle, or new style, smaller one at your druggists.

◆ A GOOD ◆ Pruning Knife.

YOU HAVE NEED OF ONE?

Send \$1.00 to the New York Farmer, Port Jervis, N. Y., and the knife will be sent, postpaid, as well as the paper for one year.

The New York Farmer

is a wide-awake, up-to-date journal, looking after the interests of the agricultural population, keeping well in the foreground in all matters pertaining to agriculture, the dairy, poultry, etc., and furnishes, in addition, much valuable literature for the home.

Send 5 weeks for 10c. - postmen copy free.

NEW YORK FARMER, Port Jervis, N. Y.

Mention American Gardening when you write.

Offer No. 35.



Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Maman Cochet
Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Hermet

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition. Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

DISCOVERED A face wash that will remove that greasy complexion and leave it soft and white in 10 minutes after washing, and in a week remove all pimples, blackheads and tan. Bleaches the skin without irritation. Perfectly harmless; contains no poisons. Costs but five cents to prepare enough to last six months. Recipe and full directions, 25 cts. Mrs. E. HUNTER, 6815 Evans Av., St. Louis, Mo.

Mention American Gardening when you write.

HALL'S FAVORITE. The coming new Strawberry. berry. It defies competition. Better than Bubach No. 6. Forty other kinds. Pedigree plants. Asparagus roots, etc. Home quarters for Pedigree Second Crop Seed Potatoes. Superior to all others for seed purposes. Descriptive catalogue free. J. W. HALL, Marion Station, Md.

Mention American Gardening when you write.

100 BEST EVERGREEN SEEDLINGS

delivered free by mail, only \$1. 100 best evergreens 2 to 5 ft. delivered east of Rocky Mt., only \$10. Write for free catalogue and price list a 50 big bargains, selections from complete nursery stock. Cash paid for getting up clubs or to salesmen with or without experience. Address

D. HILL
EVERGREEN SPECIALIST, DUNDEE, ILL.

Mention American Gardening when you write.



OUR 1897 CATALOGUE
of **FRUIT TREES** Plants, Vines & Ornamental Stock. Standard Varieties & Novelties. Prices Low. Stock first-class Mailed Free. **T. J. DWYER**, Orange Co. Nurseries, Cornwall, N. Y.

Mention American Gardening when you write.

...2,000,000... Strawberry Plants

FOR SALE.

Eighty varieties. Catalogue Free. It Tells How to Raise a Big Crop of Berries.

E. J. MULL, Clyphant, Lack's Co., Pa.
Mention American Gardening when you write.



The choicest **MAGNOLIAS**, **JAPANESE MAPLES** and other **TREES & SHRUBS** are accurately described in our New Catalogue. Profusely illustrated, including three lithographs. Contains prices of large and small trees, specimens for immediate effect; and special prices for quantities. A Guide to Tree Planting. The most complete catalogue of its kind ever published. 6 cents in stamps.

THOS. NEENAN & SONS, Germantown, Philadelphia.

Mention American Gardening when you write.

SENT postpaid, for **ONE** NEW subscription at **\$1.00**

...BEAUTIFUL...

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Maman Cochet
Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Hermet

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

••• We cannot undertake to reply by mail.

(To M. W., Arlington, N. J.): The specimen submitted is *Bignonia venusta*, a native of South America. Its season of flowering ranges from September to February. It thrives best in an ordinary greenhouse, and likes to be allowed to run freely over the rafters or roof, or it makes an admirable pillar plant in a cool greenhouse, but usually resents any sort of restrictions, and under such conditions flowers but little. When allowed liberty, it usually is a very profuse bloomer. For potting soil, use coarse fibrous loam, a little leaf mold and some very sharp, gritty sand. A few pieces of charcoal added are advantageous. Keep a sharp lookout for insect pests—red spiders, mealy bugs, etc.

(To M. E. F.): Now your cypripediums are over blooming, treat them even more liberally than had already been the case. Keep the temperature as warm and the air as moist as possible, and if it be necessary, renew the peat and moss. Strive in every way to get the plants to make as many new and vigorous growths as possible so that the plant may be well established before the hot weather of summer; then, during that season, you will keep them as cold as possible. Many cypripediums do well at that period if under the shade of trees or in cold frames.

(Please inform me through your paper how to treat a Cycas. I have one thirteen years old, which has never done well. Would like to know what kind of soil to use; if the plant should have the sun.—F. E. W.)

—During the winter months any cypres enjoys a high temperature and a moist atmosphere, and plenty of sunlight. But little soil is needed at the roots, but that little should be of a rich and porous nature; strong loam with lots of fibre in it, sharp sand and a few nodules of charcoal makes a good mixture.

(What treatment should be used for plum tree pests, and when applied? Our trees are six years old, but have never borne any fruit.—**AMATEUR**, Cohocton, N. Y.)

—Amateur should be explicit as to the kind of pests on the trees. Plum trees are subject to a number of diseases and enemies. Chief among them are black knot, plum leaf rust and the curculio. Remedies will be given in proper season in our fruit and garden notes and in special articles. The bearing age depends a great deal on the variety and the treatment received, and will vary from two to seven years after buying from the nursery.

DISCOLORING CELERY WITH BORACIC ACID.

(Do you know any remedy against "celery rust"? If so, would you kindly inform me of such? The past season I have tried spraying with the "Bordeaux mixture," and I had some success. The best result was obtained by spraying just before papering the celery for bleaching. It improved it about 50 per cent., but the objectionable feature is the discoloring of the celery by the Bordeaux mixture. Do you know of a better remedy?—M. L. R., Guyahaga County, O.)

—The cupram mentioned on another page of this issue is a much clearer liquid, and does not disfigure the crop; it is also as effective as the Bordeaux, and is to be recommended in its place.

I have some seedling plums of one year's growth, and sprouts of pear trees that I wish to bud next summer. Would it be better to cut them off and plant the roots, or plant them as they are and bud in last year's wood?—
X. Y. Z., Kansas.)

—It would be best not to move them, but to cut them back and bud on the summer growth in July or August.

(Can watermelons be raised in a hotbed? I intend to start the plants in the greenhouse and transplant them in the hotbed about the beginning of April. Which is the best kind for this purpose, and how long does it take to get the first crop, if raised in the way suggested?—NEW READER, N. Y.)

—We have no experience in growing water-melons in the way asked; neither do we know of any one who has done so; more than that, we do not think it practicable, and even if possible it would not be profitable. The South commands the market with early supplies. We have tried potted plants to transplant outdoors early, and found the process useless; also the same with musk melons.

LET US FILL YOUR ORDERS FOR 1897.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including **AMERICAN GARDENING** for one year.

General.		A.	B.	General.		A.	B.	
Advance (Cong'l) renewals.....	\$3 00	\$3 00	Scribner's.....	\$3 00	\$3 00			
" new.....	3 00	3 00	St. Nicholas.....	3 00	3 00			
American Field (new).....	4 00	4 25	Sunday School Times.....	1 50	2 10			
" Renewals.....	4 00	4 00	Texas Sittings.....	4 00	4 25			
" Kitchen Magazine.....	1 00	1 75	The Etude (new only).....	1 50	2 15			
" Machinist.....	3 00	3 20	The Etude (renewals).....	1 50	2 35			
Aquarium.....	1 00	1 75	The Outlook.....	3 00	3 00			
Arena.....	3 00	3 00	Toledo Blade.....	1 00	1 35			
Art Amateur.....	4 00	4 25	Turf, Field and Farm (new).....	4 00	4 25			
Art Interchange (with plates).....	4 00	4 35	Renewal.....	4 00	4 60			
Atlantic Monthly.....	4 00	4 30	Womankind.....	50	1 20			
Ava Maria.....	3 00	3 70	Young Ladies' Journal.....	4 00	4 60			
Babyhood.....	1 00	1 90	YOUTH'S Companion (new only).....	1 75	2 35			
Baptist Missionary Magazine.....	1 00	1 90	Renewals.....	1 75	2 75			
Carpentry and Building.....	1 00	1 35						
Century.....	4 00	4 60	Agricultural, etc.					
Chicago Times-Herald (Weekly).....	1 00	1 35	American Agriculturist.....	1 00	1 35			
Chicago Inter-Ocean.....	1 00	1 30	Breeders' Gazette.....	3 00	2 40			
Christian Herald.....	1 50	2 15	Country Gentleman.....	2 50	2 70			
Christian Register.....	3 00	3 85	Farmers' Advocate (Canada).....	1 00	1 75			
Churchman.....	3 50	4 10	Farmers' Magazine.....	1 00	1 75			
Colman's Rural World.....	1 00	1 35	Farmers' Review.....	1 00	1 90			
Cosmopolitan.....	1 00	1 90	Farm, Field and Fireside.....	1 00	1 30			
Delineator (Butterick's).....	1 00	1 90	Farm and Fireside.....	50	1 40			
Demorest's Monthly Magazine.....	2 00	2 60	Farm and Home.....	50	1 40			
Detroit Free Press (Weekly).....	1 00	1 90	Farm Journal.....	50	1 30			
Domestic Monthly.....	1 50	2 15	Farm News.....	50	1 20			
Donahoe's Magazine.....	2 00	2 60	Gleanings in Bee Culture.....	1 00	1 35			
Eclectic Magazine.....	5 00	5 25	Home and Farm.....	50	1 45			
Electrical Review.....	3 00	3 20	Indiana Farmer.....	1 00	1 35			
Engineering Magazine.....	3 00	3 50	Mass Ploughman (new).....	2 00	2 60			
Forest and Stream (new only).....	4 00	4 20	Renewals.....	2 00	2 90			
Forum, The.....	3 00	3 60	Michigan Farmer.....	1 00	1 60			
Frank Harrison's Magazine.....	50	1 40	National Stockman and Farmer.....	1 00	1 35			
Frank Leslie's Popular Monthly.....	3 00	3 50	Nebraska Farmer.....	1 25	1 35			
Godey's Magazine.....	1 00	1 90	New England Farmer.....	3 00	3 50			
Golden Days.....	3 00	3 35	Ohio Farmer.....	1 00	1 60			
Good Housekeeping.....	2 00	2 70	Orange Judd Farmer.....	1 00	1 35			
Harper's Bazaar.....	4 00	4 25	Pacific Rural Press.....	2 40	3 00			
Harper's Magazine.....	4 00	4 25	Practical Dairyman.....	50	1 35			
Harper's Weekly.....	4 00	4 25	Practical Farmer.....	1 00	1 35			
Harper's Round Table.....	2 00	2 50	Prairie Farmer.....	1 00	1 35			
Home Queen.....	50	1 35	Rural New Yorker.....	1 00	1 30			
Illustrated American.....	4 00	4 30	Southern Cultivator.....	1 00	1 35			
Independent.....	3 00	3 60	Southern Farm.....	1 00	1 35			
Jenness Miller's Illus. Mag.....	1 00	1 75	" Florist and Gardener.....	1 00	1 75			
Judge.....	5 00	5 20	Strawberry Culturist.....	50	1 35			
Judge's Library.....	1 00	1 35	Texas Farmer.....	1 00	1 75			
Ladies' Home Journal, The.....	1 00	1 90	Texas Farm and Ranch.....	1 00	1 35			
Ladies Home Companion.....	50	1 45						
Ladies' World.....	35	1 30	Poultry.					
Leslie's Illustrated.....	4 00	4 40	American Poultry Advocate.....	25	1 15			
Life.....	5 00	5 40	Fancier's Review.....	50	1 35			
Lippincott's.....	3 00	3 25	Farm Poultry.....	1 00	1 50			
Macmillan's.....	3 00	3 60	Ohio Poultry Journal.....	65	1 50			
McClure's Magazine.....	1 00	1 90	Poultry Herald.....	50	1 40			
Munsey's Magazine.....	1 00	1 90	Poultry Keeper.....	50	1 40			
Nation, The.....	3 00	3 80	Poultry Monthly.....	1 00	1 35			
New England Magazine.....	3 00	3 50	Reliable Poultry Journal.....	50	1 40			
New York Ledger.....	2 00	2 50						
" Tribune (Weekly).....	1 00	1 90	Horticultural, etc.					
" World (Tri-Weekly).....	1 00	1 75	Canadian Horticulturist.....	1 00	1 90			
North American Review, The.....	5 00	5 50	Garden and Forest.....	4 00	4 25			
Notes and Queries.....	5 00	5 50	Gardening (Chicago).....	3 00	2 50			
Observer (new only).....	3 00	3 25	Green's Fruit Grower.....	50	1 35			
Observer (Renewal).....	3 00	4 00	Meehan's Monthly.....	2 00	2 50			
Outing.....	3 00	3 35						
Peterson's Magazine.....	1 00	1 35	Foreign.					
Philadelphia Press (Weekly).....	1 00	1 35	Farm and Home.....	3 25	3 35			
Phrenological Journal.....	1 50	2 25	Field.....	10 50	11 00			
Popular Science Monthly.....	5 00	5 65	Garden.....	4 50	5 25			
Popular Science News.....	1 60	2 50	Garden Work.....	3 50	3 35			
Puck.....	5 00	5 10	Gardener's Chronicle.....	4 50	5 25			
Puck's Library.....	1 20	1 95	Gardener's Magazine.....	4 50	5 25			
Review of Reviews.....	2 50	3 25	Gardening, Illustrated.....	2 25	3 00			
Scientific American.....	3 00	3 60	Gardening World.....	2 50	3 25			
" Supplement.....	5 00	5 25	Journal of Botany.....	4 75	5 25			
" with.....	7 00	7 25	Journal of Horticulture.....	1 50	1 85			
" Builders' edition.....	2 50	3 10	Kew Gardens Bulletin.....	4 00	2 25			
" inc. B'l'ds' edit.....	5 50	5 75						
" All 8 editions.....	9 00	9 25						

ADDRESS _____
CASH WITH ORDER. **AMERICAN GARDENING, P. O., Box 1897, NEW YORK.**

Names of Plants.—(To A. G. Dwight, Ill.) No. 1 is an Acacia. Send us a larger spray when in flower, and we will name it for you. No. 2 we cannot recognize from such a wretched scrap. It must be distinctly understood that we will not hazard the name of a plant from any insufficient sample. Ample material must always be sent, and that properly packed, and whenever possible it should be a flowering branch.

Wanted.—*Garden and Forest*, No. 31, Vol. 1; state price to C. B., care American Gardening, Box 1697, New York.

We Never Prune a tree while frozen; a warm, pleasant day is desirable.

Mr. O. W. MAPES, of Middletown, N. Y., says that *The Rural New-Yorker* is the next best thing to having a farmers' club meeting composed of the best informed men in the country, every week at his own fire-side. Wouldn't you enjoy such a meeting and profit by it? We can send you *The Rural New-Yorker* and AMERICAN GARDENING, both one year for \$1.80 and your money back for *The Rural*, if you want it.

For \$4 we will send *Leslie's Weekly* (formerly *Frank Leslie's Illustrated Weekly*) and AMERICAN GARDENING to any address, one year. *Leslie's* is one of the most attractive of New York's numerous illustrated weeklies, and its subscription price alone is \$4 a year; therefore, it will be seen that our offer is a very liberal one. Address your orders to AMERICAN GARDENING. Sample copies of *Leslie's* on application.

POULTRY BREEDERS! Send 50 cts. for a 20-paged monthly devoted to Poultry, etc. Sample 5 cts. MICHIGAN POULTRY BREEDER, Little Creek, Mich.

Mention American Gardening when you write.

Second Crop Potato Seed—Surpass all others in yield. OMMIS A. BROWNE, Cape Charles, Va.

Mention American Gardening when you write.

McKinley's Choice. (No one else has them). Gold Coin Frolite Vineless Sweet Potatoes. Genuine—no yams. Address with stamp, for full particulars, the only original introducer and grower, G. CAMERER, Box 72, N. Madison, Jefferson County, Ind.

Mention American Gardening when you write.

ALL THE LATEST NOVELTIES AND PLANTS THAT CAN'T BE HAD ELSEWHERE. Cannas, Italias and Austrias, at \$1 each. New Roses, New Fruits, New Shrubs, New Bulbs. 10 Cents for \$1.—5 for \$5 cts. Book on Cacti 110 pages, 120 cts. 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free. A. BLANC & CO., Philadelphia.

Mention American Gardening when you write.

FLORA of JAPAN & CALIFORNIA Chinese Narcissus, over 100 varieties of Lily Bulbs, Camellias, Palms, etc. **HARDY PLANTS**, Japan Maples, Iris K., Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan. Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above. W. N. SHERROD & CO., San Francisco, Cal. (ESTABLISHED 1887).

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's **New Catalogue of Rare and Beautiful Flowers.**

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others. **Ventura-by-the-Sea, - California.**

Mention American Gardening when you write.



We have the largest and finest Collection of **PALMS, ORCHIDS, FERNS** and **FOLIAGE PLANTS** for Conservatories, Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines. Everything for Private places. Estimates and Plans for Planting Places and furnishing stock (free).

SIEBRECHT & SON'S,

Long Hill Nurseries, New Rochelle, N. Y. Mention American Gardening when you write.

**STRAW
RASP
BLACK
GOOSE
DEW**

ASK WM. O. BABCOCK, SEEDSMAN, NICH., For prices of strong **STRAWBERRY PLANTS**, dug out in solid blocks, not from between the rows, true to name. **Competition Defied, QUALITY considered.** Complete Stock of **CURRENTS AND GRAPE.** (Mention this paper.)

Mention American Gardening when you write.

**BERRY
PLANTS**

GARDEN CROPS

of every kind may be greatly increased in quantity and improved in quality by liberal use of **NITRATE OF SODA**, either singly or in combination with other fertilizers. Best results from **EARLY VEGETABLES** are impossible without the use of nitrogen in soluble form. **NITRATE OF SODA** is the most soluble, cheapest and most reliable source of nitrogen. Your soil may contain all the other fertilizing elements in sufficient quantity and fail to yield good crops because it is deficient in nitrogen. Over this deficiency by using **NITRATE OF SODA**. All about its source, use and the profits resulting therefrom in book on **"FOOD FOR PLANTS."** Sent FREE. Address..... **S. M. HARRIS, Moreton Farm, P. O., N. Y.**

Mention American Gardening when you write.

\$1.00 THE CHAMPION OFFER \$1.00
OF THE SEASON.

ELLIOTT'S \$1.00 COMBINATION!

AS FOLLOWS:

Eighteen Full Packets Choice Flower Seeds, value \$1.50

And, by special arrangement with the publishers,

Am. Gardening, one year, NEW names only, " 1.00

Total value, - **\$2.50**

\$1.00 under the terms of this offer, therefore, gives you AMERICAN GARDENING, the brightest gardening paper issued, one year, and sufficient seed to start a goodly sized garden with some to spare for your friends. We look for thousands of responses to this the greatest bargain of the season.

THE SEEDS OFFERED

are not of the cheap varieties which one finds advertised and described in glowing terms in all the papers at this time, but are full-sized packets, of the most reliable sorts, such as we put up for the Trade. There is not one cent of profit to us in this offer; in fact we lose money on every order we fill, but in these days it is necessary to make some sacrifices to promote business. We want to obtain new patrons to whom to send our 1897 catalogue, and take this method as the most direct means to accomplish same.

THE FOLLOWING IS A LIST OF THE PACKETS:

Alyssum, Sweet. Good border plants.
Asters, fine mixed. Select strains.
Balsam, Lady's Slipper. Finest double mixed.
Calendula. Needed in every garden.
Candytuft, mixed.
Carnation Marguerite, Mixed. A genuine novelty for the garden.
Batchelor's Button. The German Emperor's favorite flower.

Cosmos, mixed. The pride of the Fall in the open garden.
Larkspur. Fine for mass planting, the herbaceous border, or a rock garden.
Marigold, French varieties.
Mignonette, most fragrant of all plants.
Nasturtium, assorted colors.
Pansies, Giant strain, assorted colors.

Petunias, in superb mixture.
Phlox Drummondii, choicest strain, elegant for bedding.
Poppy, Elliott's mixture, double flowering.
Sweet Peas, in mixture, including all the standard varieties.
Ricinus, Castor Oil Plant. For sub-tropical effect, very showy.

The above collection is all of choice, fresh seed, in full packets, such as retail at Ten Cents each, and is not made up of cheap, unreliable or worthless stock. Our reputation in the seed trade for the past Fifty years is our voucher.

If you are already a subscriber to AMERICAN GARDENING, but want the above collection, it will not take you ten minutes to obtain the subscription of some one interested in gardening. Send in this new name, together with \$1.00, money order preferred. Orders filled without delay. Paper and seeds sent to separate addresses when so requested. Address

WM. ELLIOTT & SONS, SEEDSMEN, 54 Dey St., New York. Est., 1846.

Corn

is a vigorous feeder and responds well to liberal fertilization. On corn lands the yield increases and the soil improves if properly treated with fertilizers containing not under 7% actual

Potash.

A trial of this plan costs but little and is sure to lead to profitable culture.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.

SPRAYERS EXP. PAID
Any Point.
We are the largest Sprayer Co. in U. S. Get our Catalogue and compare it with others.
LENOX SPRAYER CO., 94 West St., Pittsfield, Mass.

Mention American Gardening when you write.

B KEEPER'S!
SEND FOR sample copy of
CLEANINGS IN BEE CULTURE.
A Handsomely Illustrated Magazine and
Catalogue of **BEE SUPPLIES.** Valuable
book on Bees given FREE to each one who
sends this paper. **THE A. I. ROOT CO.,** Medina.
Mention American Gardening when you write.

**IRON AND STEEL
ROOFING**
Is cheaper than shingles, because the first cost is no greater and the lasting qualities are double; if kept properly painted it will last indefinitely. A Good corrugated Steel Roof at 24c per square foot. For terms in circulars and estimate address—
THE BERLIN IRON BRIDGE CO., EAST BERLIN, CONN.
Mention American Gardening when you write.

Plants Thrive

You can almost see **ON** **THESE**
them grow
10c. of your dealer will buy the
package that feeds 10 plants
1 year. Or mail eight cc. stamps to
Russia Cement Co., Gloucester, Mass.

Mention American Gardening when you write.

DEMING PUMPS
THE WORLD'S
BEST
SPRAY FOR PROFIT
WE MANUFACTURE
PUMPS FOR ALL PURPOSES
Our Spray Pumps and Nozzles are used by the
experiment stations and all leading horticultur-
ists. The best fruit and berries can only be pro-
duced by spraying. We send a valuable illustrated
36 Page Book on Spraying, FREE. Address
THE DEMING CO., SALEM, OHIO.
HENSON & HUBBELL, General Western Agents,
61 to 69 North Jefferson St., CHICAGO, ILL.
Mention American Gardening when you write.



BRADLEY'S
Comparative field tests always reveal the superior crop-producing powers of Bradley's Fertilizers. The plant gets from them more food to the pound than from any other brands. That's why they produce larger, better, and earlier crops. Ask for "Bradley's" and you will get the best. Insist upon having Bradley's and refuse all substitutes.
Our 1897 "American Farmer," rich in farm facts, free.
BRADLEY FERTILIZER CO., - BOSTON, MASS.
Rochester, N. Y., - Cleveland, O., - Augusta, Ga.
FERTILIZERS

Mention American Gardening when you write.

5,000,000 Strawberry Plants, 100 varieties, including Carrie, the queen berry ever introduced; Edith, the largest; Equinox, the latest. We carry the largest and best stock in the United States. The King Red Raspberry, the brightest and best red ever offered. 1,000,000 Wakefield Cabbage Plants. Also, tobacco dust. Send for free wholesale price-list free.
THOMPSON'S SONS, Originators of the Strawberry, Rio Vista, Va.
If you cut this adv. out and send with 50 cents, we will send free, by mail, 12 plants each of Rio Vista Tennessee and Lady Thompson.

Mention American Gardening when you write.

MARKET GARDENERS
GET MY PRICES BEFORE YOU BUY. Catalogue Free.
GROWER OF FARM AND GARDEN SEEDS. * FRANK H. BATTLES, Rochester, N.Y.
Mention American Gardening when you write.

Before buying Seeds you should write for
BURPEE'S FARM ANNUAL 1897
FOR
Tells the plain truth about
THE BEST SEEDS that Grow!
Illustrations with remarkable NEW Novelties, painted from nature.
"The CHEAPEST MODE OF TRAVEL BETWEEN THE NORTH AND SOUTH."
LEE BURPEE & CO., PHILADELPHIA, PA.
Mention American Gardening when you write.

The Savannah Line
FLORIDA THIS WINTER? THINK IT OVER!
Steamers leave Pier 35, N. R., N. Y., Tuesdays, Thursdays and Saturdays, at 3.00 P.M., for Savannah direct. Tickets sold at same rates from New York via rail to Philadelphia, thence Steamer to Savannah. Close connections made with rail lines.
FOR JACKSONVILLE and all Points South and Southwest.
QUICKEST, LARGEST, SAFEST AND BEST STEAMERS ON THE ATLANTIC COAST. TICKETS INCLUDE BERTH AND MEALS EN ROUTE ON BOARD SHIP, THUS AFFORDING THE CHEAPEST MODE OF TRAVEL BETWEEN THE NORTH AND SOUTH.
UNSURPASSED CABIN ACCOMMODATIONS.
Sea Spray Baths, Electric Lights, and all conveniences. Send two-cent stamp for copy of Savannah Line News, and illustrated book, something new, to **RICHARDSON & BARNARD, Agents, 20 Atlantic Ave., Boston, Mass.; M. C. HAMMOND, Agent, Pier 18, South Delaware Ave., Philadelphia, Pa.,** or to
G. M. SORREL, Manager, New Pier 35, N. R., New York.
Mention American Gardening when you write.

1849 - VICK'S FLORAL GUIDE - 1897
Standard Seed and Plant Catalogue. Contains all that's New and Good. Always Reliable.
THE GUIDE and your Choice } One packet either Wonderful Branching Aster, New Japan Morning Glory, or Pansy Choice mixed, for **15 CTS.**
Two packets 25c., three packets 30c. Full retail price 45 cts.
Vick's Illustrated Monthly Magazine which tells how to grow Plants, Flowers and Vegetables, and is up to date on these subjects, for 3 months, the Guide and One packet of Seeds (named above) for 25 cents.
Every tenth person sending an Order as above will receive a coupon good for 50 cents' worth of Seed free.
When ordering state where you saw this adv. and we will send a packet of Flower Seeds free
JAMES VICK'S SONS, ROCHESTER, N. Y.
VICK'S ILLUSTRATED MONTHLY MAGAZINE
Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 111.
COMBINED SERIES VOL. LI.

NEW YORK, FEBRUARY 6, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Apples, Pruning Young	84	Fruit Handling	94	Market Gardeners	81	Registration Bureau	81	Canna, John White	85
Azaleas, Care of	98	Gardeners' Bank	83	Ideas of	90	Sec'y of Agriculture	88	Cosmos, Dawn	87
Bulletins	88	Gardeners' Mission, The	96	Marketing	82	Seeds, Cost of Free	88	Fruit Lifting Box	94
Carnations, Rooting	99	Good Investment	88	Novelties Selected	85	Societies' Reports	97	Hollyhock, Mammoth	87
Caterpillar, Live	98	Home Plot	94	Onions	84	Tubs and Boxes	83	Manuring, Lesson	83
Chrysanthemums	84	Hotbeds	84	Orchards in Neb.	91	Vegetable Garden	84	Physalis Franchetti	81
Chrys., Pink Ivory	89	Inquiry Department	98	Peninsula Hort. Soc'y	82	Illustrations		Violet, Princess of	92
Flower Garden	83	Manure, Applying	83	Product Car, A.	96	Asparagus Sprengeri	86	Wales	
Fruit Garden	84	Market Report	95	Readers' Notes	88				

That Plant Registration Bureau.

In response to your request for my views upon the proposed establishment of a bureau of registration for varieties of horticultural plants, I may say that I have already pretty thoroughly expressed myself upon the subject, giving at the same time what historical data I was able to collect. These notes will be found in my "Annals of Horticulture for 1890.

I look upon a bureau of registration as a means of collecting and preserving knowledge rather than as a means of protecting the originators of varieties. I believe, however, that the existence of such a bureau would result in a great incidental advantage to originators, for the public would soon learn that those originators and introducers who are willing to make the most complete and careful record of their novelties are the ones who, as a rule, are to be most fully trusted. Varieties are not entities like machines; they are not fixed and invariable but they vary under the influence of every modification in soil, climate,

and cultivation, and they cannot therefore be patented as inventions are.

I was not present at the meeting which adopted this proposal for a bureau of registration, and was not aware that I was placed upon the committee until informed some time

after the meeting by the chairman, yet I am most heartily in sympathy with the proposition, as I understand it.

I do not understand that there is any desire to attempt to compel people to register their varieties, as one of your correspondents fears; and there certainly can be no successful attempt to copyright a variety itself. The nearest that we can come to such protection is to copyright the name and to use that name as a trade-mark. It is certainly true that a variety may originate more than once; that is, that plants which are so near alike that there is no commercial difference between them, may originate in different parts of the country. This being the case, it will be seen that no man can have the exclusive right to any particular type of plant. A discussion



FIG. 27.—FRUITING BRANCH OF PHYSALIS FRANCHETTI. (See Page 85).

of this very point respecting the origin of varieties is discussed in chapter 11 of my "Survival of the Unlike," but leaving aside all this matter, the collection of specimens, photographs, and descriptions in the hands of a bureau of registration would give us an inexhaustible repository of information, and could not help but result in incidental and very substantial recognition of the introducers of novelties. Rather than acting as a discouragement to experiment as one of your correspondents suggests, it would result in a direct stimulus thereto; but I am free to confess that it might discourage the dissemination of various novel names of old varieties.

L. H. BAILEY.

Peninsula Horticulturists Talk.

Hon. J. S. Willis, Congressman from Delaware, made the address of welcome at the late meeting held at Milford, and Prof. J. S. Robinson, of the Maryland Experiment Station, responded.

In his opening address, Prof. Van Deman, formerly United States Pomologist and now president of this Society, made the remark that a "lover of fruits was not a bad man."

Spraying.

Discussion brought out the fact that sprayed trees not only produced more marketable fruit, but fruit of better quality that would both ship and keep longer. Prof. Powell said they had no slack barrels since they had sprayed. The fruit was solid and bore shipment better than unsprayed. They had Spitzenberg trees that bore the eighth consecutive crop the last year often to fifteen barrels of apples to the tree; fruit of the very highest quality.

S. H. Derby showed Winesap from sprayed trees 50 per cent. finer than Winesap ordinarily is. Also Jackson, sprayed, and from trees affected by cedar rust. He also read an able paper on apples, and from his experiments thought it possible to have fair crops of apples every year, if the orchard were properly cultivated and sprayed. The sand storms had damaged the buds somewhat the past spring, thus preventing a full crop of fruit setting. Trees must not be sprayed while in bloom, or harm will result.

Prof. F. D. Chester, of Delaware Experiment Station, gave the results of his spraying on apples the past year. Thirteen baskets of Winesap apples of first grade were obtained from a sprayed tree; three baskets from an unsprayed tree, and much poorer fruit. All solutions injure peach foliage more or less.

Pears.

Asked for a list of pears for market, Capt. R. S. Emory said he would plant Manning, Bartlett, Duchess, Keiffer and Lawrence. Dr. Black and J. S. Harris corroborated this list. There was no early pear yet tested of more value than Manning. Lawson was a good grower, and in some instances gave good crops of beautiful fruit, but whether the market would take it or not remained to be seen. It was some time coming into bearing. Koonce was new and not fruited. The Alamo, of Texas, was very similar to Bartlett in every way. Prof. Helges, United States Pomologist, said the Summer Beauty, a new pear from Texas, was very early and a fine pear every way. Moore's Sugar was better than Seckel and larger. In fact, he knew of no better pear in quality; ripens with Giffard.

Crops for Profit.

The consensus of opinion was that fruit culture paid better when diversified, unless one was peculiarly situated. Although the late Col. Wilkins, of Kent Co., Md., had cleared from a single peach crop from 105,000 trees \$103,000, Mr. Harris said we need not look for the same profitable crops of peaches as in former years. Railroads had opened up new localities which brought fruit in competition. He said the best thing would be to lengthen the season at each end by the introduction of better varieties than we now have. As an inducement he proposed offering premiums to such as

would introduce better varieties than we now have, and a resolution to that effect was passed.

Peaches.

Prof. Powell said that the shoots coming below the bud in seedling trees was no indication of yellows although it had been so considered in former years. It was caused by the process of budding, the string used in tying the bud causing a girdle; trees not budded did not show this. Prof. Wait said Georgia growers universally planted small trees, and made as good orchards out of them as from big trees. Some growers preferred small second or third grade one year old trees, while others planted June buds.

Root Pruning.

Mr. Derby had practised cutting off most of the roots when planting. His per cent. of loss by transplanting was small and trees had made an excellent growth. If a tree showed roots on one side and none on the other he simply cut the bark a little, causing new roots to start and sufficient roots all around the tree was the result. Prof. Powell was trying an experiment with 500 peach, apple, plum, and pear trees, and grape vines on two different kinds of soil to determine if the Stringfellow method of root pruning were desirable here.

Marketing.

C. J. Monroe, of Michigan, read a paper on methods in marketing, and said the California growers had to transport 48,000 lbs. of dead weight across the Rockies in order to get 24,000 lbs. of fruit into Eastern markets. The growers each took their fruit to a central house where competent packers packed and graded it. The grower was too apt to overlook a blemish that a professional packer would not. In Michigan Mr. Stearns made personal visits to his customers and asked them to report any badly packed fruit. Another grower stayed at the commission house and guaranteed his fruit, refunding money if not as represented. At least one-tenth to one-quarter of fruit brought to the packing house was rejected. A leading commission man had told him that there was a market for about 5 per cent. of the extra grade of fruit, for 75 to 80 per cent. of the prime or second grade, and the poorest grade made up the balance. It was for the medium grade consumed by the masses we should try to get the bulk of the prices. Dr. Black thought it would pay good packers to go to the growers here and pack the fruit. Mr. Rosa said in his paper on marketing, that railroad charges must come down if the growers were to expect profits. Cost of production was at the lowest notch and so was labor. The grower must either produce fruit in carload lots, or combine with others and secure them. Then select a market and send all goods there. Mr. Woodall believed we should centralize markets and draw buyers to them, thus getting rid of any responsibility of shipping. No freight, cartage nor commission was to be deducted in this case. The buyer took the risk. Mr. Slaymaker said the loss of the Fruit Exchange was one of the greatest we had experienced. President Van Deman said it was impossible to unite farmers and Mr. Derby thought the only thing needed was money like the steel trust, to put backbone into the combination. Capt. Emory said there was no law to compel us to grade fruit; grade it ourselves and grow only the best. Prof. Robinson said growers must have a thorough knowledge of markets. Some required one sort of package and others did not. The first peach trees ever planted in Maryland were planted at Cassey's Wharf, Cecil Co.

Commercial Floriculture.

Jos. Heacock, of Jenkintown, Pa., read an interesting paper on "Commercial Floriculture." He used dry Cypress for building greenhouses, and Red Cedar posts. Walks were 22 inches wide; buckwheat coal costing \$1.90 per ton laid down, was used.

Select an old sod; plow, harrow, and cover completely with cow manure; harrow thoroughly. This was used in the greenhouses to grow the flowers. Roses, Chrysanthemums, Violets, and Carnations were the principal crops. Had taken \$5000 in a single season from two houses. Has 1 1/4 acres under glass.

Varieties of Roses grown were Bride,

Bridesmaid, American Beauty, and Meteor. Tobacco stems are kept spread along the walks to keep insects in check. Fumigating is sometimes resorted to. Sells wholesale in Philadelphia, but has customers 100 miles away. The grower must have experience, either his own or pay for it, and must be near good railroads.

Crimson Clover.

H. W. Collingwood said the Peninsula farmers had largely decreased their fertilizer bills since its introduction. Now when the farmer needs a fertilizer he simply buys what he needs for some special crop. He also said there was no locality where such a variety of crops could be produced as here. Anything that grew in a temperate climate could be produced here with more or less degree of success, and the only drawback was the one railroad. Give us railroad competition and there was no other locality that could equal it.

Grapes.

J. E. Carter reported for the committee on grapes. He trained on the Kniffin system arms 2 1/2 feet long. Three hailstorms had about ruined the crop the past season. In spite of this, had netted \$70 per acre. Sprayed with Bordeaux mixture twice before blooming and twice after. Moore's Early was the best variety, Niagara next, and Concord third. A number of new varieties are on trial. Moore's Diamond is not equal to Niagara. Uses scarlet clover, kalmint, and rock as fertilizers. Mr. Killen still regards Concord as his most profitable variety; sold his grapes the past season for \$40 per ton. Mr. Gulick has found Prof. Munson's new varieties to succeed admirably here.

San Jose Scale.

Prof. Johnson gave a complete history of this. It is found on apple, pear, plum, peach, and cherry trees, black raspberry, currant, and gooseberry bushes, and even crab grass. It was discovered at San José, California, by Prof. Comstock in 1880, and is one of the most destructive insects known. Does not come from eggs, but is born alive; the male insect rarely seen, and does not live long. The female does the damage, and the progeny of a single female is 3,216,000,000. Travels very little, not more than a foot in 24 hours; is transmitted by contact, on nursery stock, by the winds, and by birds, also on specimens of fruit. Insects injurious to the scale are numerous, but not entirely satisfactory as remedies.

Capt. Emory said a spray made of whale oil soap, if it could be had pure, was most efficient, but too expensive. Nurserymen outside the State were ready to co-operate with them, and have stock examined before shipment. Prof. Powell advocated the State paying for the infested trees, and having all destroyed before the scale got a foothold. He said this was the cheapest plan.

Plums.

Mr. Kerr said it was a fact that red plums of the Wild Goose type had sold higher the past summer than either blue or green of the domestic type. The market demanded a red plum. He had found natives far superior to others, and was digging up other sorts. Milton averaged larger than Wild Goose, and was earlier. Smiley was the best to pollenize Wild Goose and others of this type. The six Japan varieties he would advise to plant were Yosebe, Red June, Abundance, Berckmans, Maru, and Chabot ripening in order named; Willard was of little value.

Nuts.

J. W. Killen reported he had five varieties of hazel, 14 of chestnuts; besides several of pecans, Persian Japan and Black walnuts, butternuts, and shellbarks. He showed specimens of the Killen, a new Japan chestnut measuring 6 1/4 inches in circumference. Quality equal to any native chestnut, also Ridgely, and a single burr of Paragon, with seven large nuts in it. Col. J. T. Wright, of Laurel, Del., showed a bedding pecan grown there. Tree is 14 years old, and has produced nuts for four years, producing half a bushel in 1896. Nut very large and thin shell, of the finest quality; almost as large as Stuart. The tree is a good grower. English walnut trees are now growing in the State, measuring near 2 feet in diameter, and producing good crops of nuts.

How to Apply Manure.

It is at once clear that a nursery affords some special advantage in the study of the manure question. Here trees and plants are dug up at their feeding stage, in a way that hardly obtains with another crop. One can see what an apple tree or strawberry plant likes to feed upon and in what shape, as is not likely to be the case with a cabbage or a tree in the orchard, which are not dug from the earth.

Many years ago I learned a lesson in the application of manure. It was when, as a boy in my father's nursery, I began to take a hand in the operations. We purchased from a tannery a large pile of compost, hair, ashes, lime and other refuse, with enough bark in layers to make all pile up well. In the winter we drew this on land

say that the surface application of manure is the more rational method, because the strength of the manure can only go one way, namely, downwards to the roots. The avidity with which roots seek out and lay hold of particles of manure in the case stated showed to me that there can be no mistake in putting the plant food right where it will be needed.

With the surface application of manure in the fall and winter there is often great loss of fertility, through escape by leaching and surface drainage during thaws in the winter. If it be drawn to the plat and be kept in piles until just before spring plowing or cultivating, such loss is not appreciable.

The question of the comparative merits of surface manuring and the plowing in of manure may depend somewhat on the crop also. It is plain

squashes, and cucumbers. Of such the extent of the crop is almost measured by the amount of manure, and thirty to forty tons per acre each year is none too much.

The bush small fruits need less manure than do strawberries, while in vegetables, potatoes, peas, parsnips, carrots, beans, tomatoes, and melons get along very well with one-half the manure called for by the others named. While I am not ready to agree that good tillage will make up for shortage in manure, yet no one can go further than I in faith in good culture. It greatly supplements the effects of free manuring. By good tillage I refer both to deeply stirring the soil and to complete surface culture.

In the frequent trips I make past some of the most successful market gardens of Buffalo I have often wished that the young men throughout the country who aspire to be successful market gardeners could be impressed by the two fundamental planks of success witnessed here, namely, the most liberal annual manuring and the most perfect tillage. These two things accomplish wonders for the produce garden.

ELIAS A. LONG.

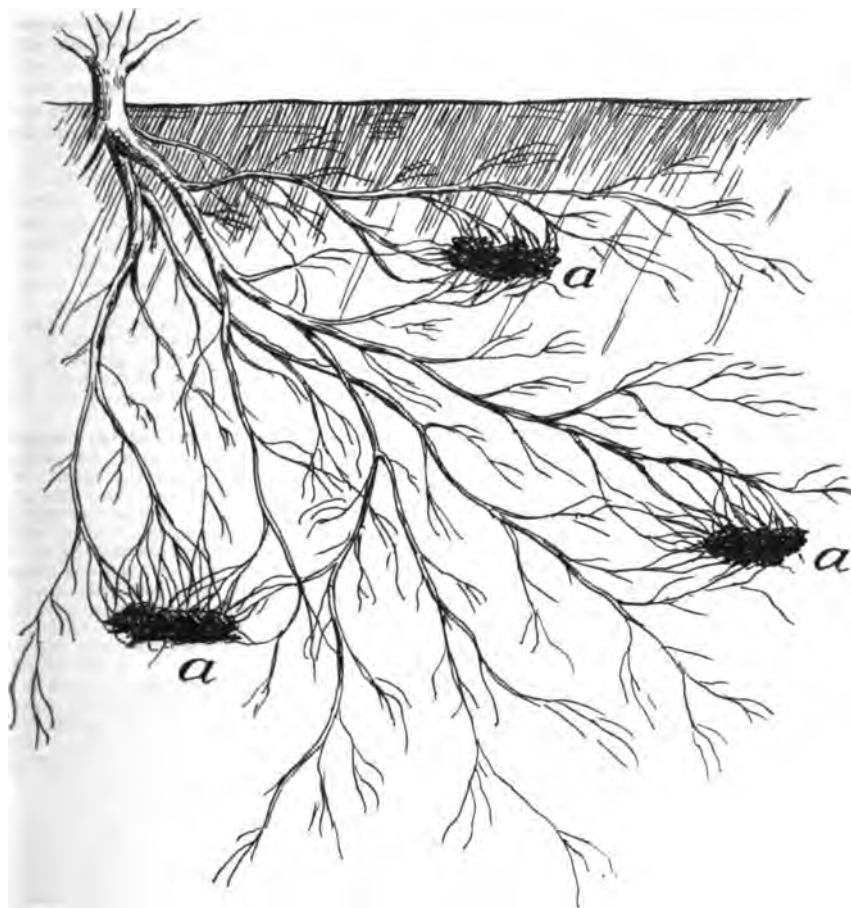


FIG. 28.—A LESSON IN MANURING.

devoted to nursery and other crops, usually plowing it under in the spring. Sometimes on fall-plowed land we would incorporate the mixture with the soil, by the use of the cultivator or share harrow, in the spring.

One of the things that vividly impressed me as we dug trees and plants from soil thus manured was the way in which rootlets would lay hold of congenial bits of plant food; the tufts and felted knots of hair would be the attraction to a mass of small roots. This is illustrated in the accompanying sketch, in which A A A show bunches of hair. This thing was seen not only in the case of seedling and tree roots, but also in those of strawberry plants, which lie much nearer the surface.

A lesson to be drawn from this is that the plowing in of manure as a method of applying it should not yield to surface applications in any marked degree. We meet with persons who

in the case of shallow-rooted crops like lettuce, radishes, onions, strawberries, etc., that the manure is not wanted at the same level as with parsnips, cauliflower, and other deeper rooters. Then, again, surface manuring may, as in the case of strawberries, serve an excellent purpose as a mulch in keeping the soil cool and in preserving moisture.

Another thing I have learned as regards soil fertility is that all crops do not need the same amount of manure. It is a poor plan, for instance, to be lavish in the use of manure on potatoes, and then slight it on onions and celery. I have grown better potatoes on common farm land than in a garden that has been treated to forty loads of manure per acre.

Among crops that do the better for high feeding I would place strawberries, celery, onions, lettuce, spinach, beets, radishes, cabbage, cauliflower,

Lawn and Flower Garden.

Lawn.—Last season I used wood ashes for top dressing the lawn; the result was so satisfactory that throughout the hottest part of the summer the grass was of a beautiful bluish green color. When there is a large area of lawn to be treated, a horse machine, such as is in use for sowing fertilizers, is the best method for distributing the ashes which are best put on in the spring, and before raking off the rubbish, for in the ashes I find nails and scraps of iron which would sadly injure a mowing machine; if the ashes be put on before the raking these can be easily removed. For a small lawn, handle with gloves, for the ashes are injurious to the hands.

Tubs and Boxes for piazza walls, and the decoration of the lawns can now be made, and old ones repaired and painted as required. Tubs in which plants are set out should not be of a glaring color; a red tub to my taste borders on vulgarity, the first thing the eye rests on is the tub, and the plants set in a vessel of such a color must be most attractive to get even a second place. Locust bark fastened onto boxes and tubs has a natural look, and gives a picturesque appearance to all. Portions of tree trunks left in place for setting tubs on can be made beautiful by planting *Ampelopsis Veitchii* around them.

JOHN SHORE.

The Gardener's Bank.

The great and only secret in gardening lies in the enrichment of the soil; it cannot be made too rich. Anything that decays within a reasonable time should be added to that bank of all banks—the Compost Bank. Stable manure, leaves, woodpile dirt, waste water from house, weeds, in fact everything useless for any other purpose, should go to the Bank; it cannot be made too large. Land plaster or kainit, sprinkled over, will prevent offensiveness, and it, instead of the pocketbook, can be drawn upon at any time, for the best of fertilizer. Some writers advocate the application of green manure direct. Don't do that in the garden, if quality is desired; many vegetables seem to absorb an amount of undecomposed matter, that develops unfavorably in cooking; cabbage notably so, turning red and strong smelling; potatoes get diseased, etc.; plants become weakened and fall an easy prey to rust, blight and insect enemies. Whereas, if there is a surplus of food, fully decomposed in the soil, ready to be taken up, the plant will outgrow almost any enemy that it has, and mature perfectly.

The Fruit Garden.

Quick Crops.—Knowing that apple tree planting is commonly looked upon as planting for someone else, I append a few notes, showing what common nursery stock planted in the fall of 1890 has done. The height from ground to first branch varies from 2 feet to 4½ feet. The last three were again transplanted in the fall of 1893.

Variety.	Spread of Branches.	Clim. of Trunk.	First Fruits In.
Greening.....	19 ft.	21 in.	'95
Baldwin.....	14 "	19 "	'96
Hubardston.....	12 "	16 "	'94
King.....	17 "	18½ "	..
Early Harvest.....	13 "	17 "	'94
Roxbury Russet.....	19 "	19 "	'95
Jersey Sweet.....	12½ "	17½ "	'94
Pound Sweet.....	10 "	11 "	'95
Spy.....	19 "	14 " trans.	'98
Newtown Pippin.....	12 "	10½ "	'96
Grimes' Golden Pippin.....	9 "	14 "	'96

These have not been staked or had braces to spread the branches at any time.

Pruning Young Apple Trees.—How different in style of growth they are. To tell a person how to prune the trees when received from the nursery is very simple, but to carry on the treatment necessary for eight or ten years after, is neither simple nor easily explained, which is thoroughly understood by a large class very much interested in garden work, but yet cannot be called professional gardeners; to such and some of my younger brethren I pen these few remarks. Surmising that the tree is a standard, and has made one season's growth in the garden, and has a number of clean shoots, select four or five which are located 6 or 8 inches apart on the main stem, and growing directly outward, then cut out all the others, do not merely shorten them back. For the second summer give the trees a heavy coat of rotted manure, fork in lightly, and put on the mulching again, and cultivate close up to the tree all summer. The pruning next in order for the third season will be by selecting the best placed shoots to fill in between the leaders, and cutting out others. Keep the tree looking thin. Don't prune back for fruit spurs, but follow up last season's plan, and the following spring you should have a young tree of some proportion and beginning to show the characteristics of that particular variety, which will become more clearly seen each year, and which it should be the pride of the owner to retain when pruning in future.

Let us now look at a few of these trees two years later, taking Spy, Baldwin, Early Harvest, Roxbury Russet, and King as trees of different styles of growth. The Baldwin will strike the eye as the most ordinary of the trees. A great growth of wood, but no sign of fruit. Spy might be a soldier at attention, judging by the stiff upright growth, but here again indications for fruit in the near future are absent. The appearance of Roxbury Russet nearby is so totally different that you intuitively feel that it is a more matured tree, and on closer inspection find along the stems of the older branches many little, short, stubby, fruit spurs. The general contour of the tree gives the idea of lack of small twigs or fullness, yet there is a certain grace in the curve of the branches which is missing, as we turn to examine the growth of a King, which we sum up as spare, lean, and ungainly. Here are the stubby spurs again, but showing only on the wood made one year ago. In striking contrast to all is the Early Harvest, willow-like, with many branches, twigs everywhere, and looking as if its main object were making wood, and that only. Here the shears have to come into play to get light into the center of the tree. In doing the thinning we observe that many of the light shoots and some of the leaders are finished up with a plump, rounded, flower bud.

Thus it will be seen each tree must be known by the operator when pruning; he should endeavor, 1st, to get wood; 2d, to get the fruits for his labor in the shortest time, which cannot be had by the starvation process. If by extra good treatment your trees are making at the bearing age unusually strong, sappy wood, treat as advised in "Fruit Garden" for January 2.

If a Nut or Screw persist in working loose in your pruning shears, take it out and dip the thread in varnish; screw into place, and don't use the shears for a day or two.

J. HOLLOWAY, L. I.

The Vegetable Garden.

Hotbeds.—Those who have to depend entirely upon hotbeds for their supply of early plants, should now commence their preparations. One frame of about twelve square feet will be found large enough for a starter. A few weeks later, or as soon as the seedlings are large enough to transplant, others could be made to supply the space needed. A very satisfactory method of making hotbeds was described and illustrated in these columns, issue of January 23. At this season, many days will follow which will be too cold to admit of any fresh air being put on, the ammonia from the hot manure must be allowed to escape, otherwise bad results may follow. To avoid this risk I have frequently put on a ventilator on the highest point of one of the sides, made of four boards 24 inches long and 4 inches wide, this is connected by a hole cut into the side-board of the frame, and the whole nailed to the frame; through this the ammonia gas will steadily escape, without chilling the interior air. The ventilator may be stopped up during cold nights and left open during the day.

Tender and Half Hardy Plants.—I have frequently seen amateurs make the mistake of sowing tender plants of a tropical nature, such as egg plants and tomatoes, in the same hotbed as the hardier cabbages, lettuces, etc., a practice which results in disappointment and the seeds being unjustly condemned. It is important that all should learn the nature of whatever plants they endeavor to cultivate, as an aid to the prevention of mistakes. Wherever such a lack of knowledge exists, cultivate the friendship of some neighboring gardener, and I am sure he will be pleased to make any suggestions necessary. Ordinarily it is not advisable to start these tender plants in hotbeds before March 20 in this latitude; they are very sensitive to chill or damp, and if they receive any check they seldom recover satisfactorily.

Onions.—A sowing now in a shallow flat, placed in a hotbed, and transplanted into other flats as soon as large enough, then steadily hardened 'by exposure to abundance of fresh air after the middle of March, and planted out as soon as the weather is favorable, on well enriched and deeply dug soil, will give fine onions for exhibition; and a very satisfactory crop, if a large variety as the Prizetaker is selected. Grown in this way, onions are not so subject to attacks of the maggot or rust.

Parsley.—Parsley takes such a long time to germinate and grow large enough to be fit for use, that it is a good plan to start a few seeds early, to be transplanted to the open ground in spring.

Radish.—A sowing of Early French Breakfast made now in the hotbed, will soon give roots fit for the table; they should be sown thinly.

W. M. EDWARDS, R. I.

Readers Mean Business.

My advertisement in AMERICAN GARDENING last year has given me the most satisfactory results. Your readers mean business.—G. CAMERER, North Madison, Jeff. Co., Ind.

Chrysanthemums.

A paper on this subject was read before the Massachusetts Horticultural Society on Jan. 25, by E. M. Wood of Wellesley. After having briefly sketched the history and peculiarities of the flower, Mr. Wood continued:

"Within a radius of ninety miles of Boston the chrysanthemum is grown to a perfection nowhere excelled in this or any other country. The cultivation of the chrysanthemum for blooms for the market and single specimens for exhibition is given more care and attention than any other branch of the industry. The culture of the flowers for exhibition alone has been elevated to the dignity of a fine art, and is a most arduous task. Exhibiting to-day is by no means what it was, and the gaining of prizes has become a difficult feat.

"As eternal vigilance is the price of liberty, so unremitting attention is the price of success, as far as the chrysanthemum is concerned. It possesses a voracious appetite, and requires to be fed with as much regularity and care as a suckling infant. It is dainty in its food and is a gourmet as well as a gourmand. It must be fed upon the very best soils, manures, etc., and its drinks must be rich liquids and plenty of them. Proper drainage is an essential requisite, in order to insure that the plants shall not become 'waterlogged.' Cleanliness is an essential point; never use a dirty pot or box, or the roots will cling to the sides and undergo a check from being broken in shifting to larger sizes. In the cultivation of the chrysanthemum do not attempt too many varieties, as many, perhaps even three-fourths, of the new sorts sent out are not equal in merit to the older varieties.

"Every grower is aware of the tendency to 'sport,' that is, a plant which has always yielded flowers of a certain color, produces others of a different hue. Many of these sports when 'fixed' are improvements, and cuttings taken from the branch which 'sports' will usually produce flowers of the same color again. If they and the plants raised in turn from them continue to do so, the departure becomes a permanency, and the sport is said to be 'fixed;' it receives a name, and is introduced into the market. Sometimes the sport reverts to the original color and becomes worthless. There is no reason why a new variety obtained from a sport is not as good as one obtained from seed. Growing plants to produce large blooms is not favorable for increasing the number of new varieties by sports, as the plants are denuded of the side shoots, as they grow, from which the largest number of sports are obtained. In the Japanese class the fewest sports are found. Sports are usually counterparts in foliage and habit of their parents; and some possess better constitutions and finer flowers, and are improvements upon their parents. Most chrysanthemums in cultivation, however, have been raised from seed at one period or another. Until recently the English gave up growing plants from seed, as their varieties would not ripen the seed in the damp and unfavorable climate of England, but Americans have supplied to the mother country several hundred varieties with stronger constitutions, enabling seed of the chrysanthemum to be again grown in England.

"There is one thing to which I wish to call special attention; it is the unsightly staking of chrysanthemum plants with willow and other stakes, reminding one of a cripple supported on crutches. They have neither grace, finish nor even presentable foliage, or flowers with either form or coloring. If judged by a correct standard of coloring and finish or foliage, all would be condemned, and relegated to the rear. I trust the coming season that plants will be judged by a standard of blooms, by finish and luxuriance of foliage, by the form and color of bloom, and that the plant shall exhibit only its foliage and flowers, and not a forest of unsightly sticks supporting a weak stem with little or no foliage and colorless flowers."

Novelties of the Season.

In this issue we commence the presentation of a selection of the novelties of the season, as seen in the various trade catalogues and lists. The present series will be followed up by others during the next few weeks, when fruits and vegetables will also be included. The descriptions given are those of the introducers.

The New Seedling Variegated Leaf Canna JOHN WHITE.

In the Fall of 1894 this novelty in cannas originated in a batch of seed taken from Emile Leclerc. Since that time it has been severely tested both under glass and in the open with most satisfactory results, retaining its color under all tests and standing the sun exceptionally well, making it very valuable as a decorative bedding plant for outside work, as well as exceedingly valuable as a pot plant for conservatory and greenhouse decoration. The leaves when young are of a pale yellow, with narrow margins of dark red, the yellow surface being dashed and spotted with green. They retain this color until they gradually mature by losing the yellow and gaining a deep suffusion of pink, with an admixture of green, later becoming green and yellow. The plant in this condition is decidedly striking and novel, and arrests the attention of plant lovers the moment they come in contact with it. It reproduces itself perfectly



from seed. It is of dwarf habit, attaining a height of about 3 feet, and growing strong and vigorous. The flower is a bright scarlet, and although small compared with the large varieties, it has a peculiar value of its own in that it shows such a contrasting decorative effect among the light and beautiful foliage. Without doubt it is a variety that progressive florists cannot afford to be without. (fig. 29.)

From Price List of John White, Elizabeth, N. J.

PHYSALIS FRANCHETTI

So-called from physa or bladder, alluding to the inflated calyx; ground or Winter cherry, Ord. Solanaceae. This particular species is a native of Japan and China, and has only lately attracted attention. It is in every way superior to any other species known, the flowers being a pure white, the leaves large, of a beautiful light green, very ornamental. The flowers are solitary in the axils of the branches. The inflated calyx forms around the blossom as the seed or berry ripens, growing larger and of a more brilliant red on reaching maturity. The color is of the most intense and brilliant scarlet, and as the time of its fruiting falls in the Winter or Christmas holidays, its growing in greenhouses could not fail to be of value. Another point to recommend it to the grower is its easy propagation, and its adaptability to any common soil. If cut and placed in a vase without water a useful winter decoration may be had. Propagation is effected by seeds or division. The calyx, if left on the plant, will in due course become skeletonized, affording another pretty change in the appearance of the plant. The physalis is a half hardy perennial.

The great beauty of the calyx is lost in the picture (page 81), as the superb coloring which constitutes its chief beauty cannot be shown.

From H. H. Berger & Co., San Francisco, and other introducers.

DWARF PAPAYA (CARICA PAPAYA.)

A magnificent bedding plant for the north, of the easiest culture, as easy to grow as a ricinus. It forms a branchless palm-like trunk, crowned with a magnificent head of the grandest leaves, each 2 to 3 feet in diameter, deeply cut and divided, and on petioles 3 or 4 feet long. The leaves are of a rich, dark green color, with white midribs and veins, forming a beautiful contrast. The plant is dioecious, the male and female flowers being produced on different plants. The male flowers are produced on long racemes, are pale yellow and waxlike, somewhat resembling in size and shape those of the Catalonian jessamine, and are most exquisitely fragrant. The female flowers are much larger, are produced in small clusters at the base of the petioles, and are succeeded by most curious and odd melon-like fruits. The male plants are the most beautiful, and the flowers are produced in such extreme abundance, that a good sized plant will have thousands of flowers and buds on it at once, and so fragrant as to perfume the air for yards. Each raceme continues to produce flowers until the end of the season. They are splendid for cutting, lasting for days.

Not only is this one of the grandest of all bedding plants, but it is also a very valuable decorative plant, somewhat resembling a palm, and quite as beautiful, attaining a large size in a short time. No plant is easier grown bedded out.

We have spoken of its merits as an ornamental plant only; it also has its uses, producing a beautiful large orange colored fruit, large as a musk melon, exceedingly rich and spicy, and sometimes called vegetable pepsin, from the fact that the fruit is a remedy for indigestion.

Description furnished by The Rose Valley Nurseries, Dongola, Ill.

Gold Medal Rose "Jubilee."

This grand rose was raised in 1892 by Mr. M. H. Walsh, gardener to Jos. S. Fay, Esq., Woods Holl, Mass., and is a pedigree seedling—Prince Camille de Rohan x Louis Van Houtte. It was first exhibited before the Massachusetts Horticultural Society, July 1, 1893, and even at that early stage of its development it was deemed so meritorious that it received a "first-class certificate of merit." Exhibited the following year, June 20, 1894, it sustained all that had been expected of it, but the special committee decided to subject it to another year's trial before passing upon it, for a rose that may win the "gold medal" must prove its worth by every test before the award is made. It was exhibited again on June 15, 1895, and commanded unbounded admiration. A special committee of experts visited Woods Holl to inspect it growing in the ground, and so, after three years of probation, it was triumphantly and deservedly awarded the Society's gold medal.

A technical description of the "Jubilee" rose is as follows: It is a true hybrid remontant rose, perfectly hardy, blooming in the Fall as well as in the early Summer, very vigorous, large, dark green foliage, one of its distinguishing features; short-jointed, long flower stems, and branches freely, blooms most abundantly, three flowers and over on each shoot, the ideal habit for a hardy garden rose. The flowers are very large, reaching six inches across under good culture; outer petals partially reflexed and recurved when the flowers are mature, the center petals upright and very gracefully disposed, giving grace and finish without showing the center; they last a long time when cut. The buds are long and rounded, the petals falling away gracefully, revealing the rich velvety texture and grand coloring. The fragrance is strong, delightfully rich and very lasting.

The rich coloring and soft velvety sheen are beyond description, and must be seen to be understood and appreciated. A pure red in its deepest tone, shading to deep crimson red and velvety maroon red in the depths of the petals. "The coloring is alive," as one expressed it. "It fairly glows in its rich warmth of coloring," another said. The rich velvety finish to the petals is all its own, and is not even approached by any other rose yet introduced. It is admirable, unique, and, as Mr. F. Schuyler Mathews, the celebrated artist, said: "This rose contains the darkest color, combined with pure color, of which nature is capable." It required centuries and the skill of the world's hybridizers to produce this peerless rose, perfect in all its attributes, peerless in its magnificent color, and it is fair to assume that it will again require the centuries to produce its equal—if it ever is produced—for nature is not prolific in repetitions.

From the Catalogue of Peter Henderson & Co.

Violet PRINCESSE DE GALLES (Princess of Wales).

Though not a novelty in the strict sense of the word, this beautiful violet, which is comparatively new, we consider worthy of a place in our Novelty Supplement, the aim being to bring it more prominently before our readers, which it certainly deserves. Princess of Wales, as we have seen it grown, is probably the best single violet on the market to-day. It is of a vigorous growth, a very profuse bloomer, the stems being often over a foot in length. The flowers, as seen by the picture herewith presented, are very symmetrical, very large in size, one and a half inches in diameter not being uncommon, and have an extremely delicious fragrance. It is being introduced by several houses. (See fig. 33 page 92.)



ASPARAGUS SPRENGERI.

The more this valuable new decorative green is seen, the more it is appreciated. Introduced by us only about a year ago, it is already grown by the thousands. Indeed, one enterprising Philadelphia florist recently bought 7,000 plants of us.

Our illustration hardly conveys a perfect idea of this beautiful plant. Its gracefulness and bright color always elicit exclamations of wonder. When well grown, it forms immense specimens in a couple of years, that will produce cut sprays 6 to 8 feet long. These remain fresh for much longer than any other green; in many instances for six weeks. As the roots are tuberous, the plant is able to stand heated atmosphere with greater impunity than can palms, ferns, etc. (fig. 30.)

From the Catalogue of A. Blanc & Co., Philadelphia.

New Carnation HARRISON'S WHITE.

This variety has excited a great deal of interest among carnationists, the announcement that it is a pure white sport from Scott being in the main responsible. Sports from Scott are by no means uncommon, but the most of them are only variations in shade, being either darker or lighter pinks. All such have been of but little importance so far. Three years ago this white sport appeared on a Scott plant. Mr. Harrison took great care of the cuttings, and succeeded in obtaining nine plants. These were well cared for, and the result is to-day 1500 healthy plants, bearing large, well-formed flowers in great profusion, of great purity in color; and despite the fact that the plants are being largely used to supply cuttings, the flowers maintain their size to a marked degree. Much has been said about the character of the bloom and its similarity to the parent, also the nature of the growths. Experts have examined these with the result that the flower is pronounced similar to that of the parent. However, on Mr. Harrison's place, there is this distinction, it is much more robust than his regular Scott in other houses, but when the pipe, stems, grass, leads and breaks are all compared with those of Scott, they are none other than the same thing. The flower stem and the calyx are absolutely identical with the parent, but the petalage, in some instances, varies, being slightly flatter and broader, and the serrations are not so finely toothed or cut, yet many blooms can also be found with the same build, form and contour, this being more apparent now than in the early season. These slight variations in petalage are of no consequence, but rather help the flower than otherwise, giving it a larger spread and better appearance than the variety from which it has sported. The plants are singularly healthy and propagate well.

John Harrison, Jersey City, N. J., originator and introducer.



New Dwarf Early Flowering Cosmos Dawn.

free bloomer, color pure white, with a tinge of rose. Begins to bloom in July and lasts until frosts cuts it down; it is always loaded with flowers, and is not apt to be blown over by the wind, as the old tall variety." (fig. 31.)

From the catalogue of Henry A. Dreer, Inc., Phila.

NEW DWARF EARLY FLOWERING COSMOS "DAWN."

This new variety of Cosmos comes into full flower in July and continues a mass of bloom until cut down by severe frost. This feature alone is sufficient to stamp it as a novelty of the first class and will make their successful cultivation possible in the most northerly states and Canada; but added to this, it is of dwarf, compact growth, growing only 4½ feet high, while the old variety, growing alongside, towers up nearly 7 feet, a victim to the first strong wind. The flowers are fully as large as in the best selections of the old type, the color is a beautiful white, relieved by a delicate tint of rose at the base of the petals, altogether the finest novelty introduced in many years. The originator, who resides in Northern New York, writes about it as follows: "Originated from seed purchased from your firm (H. A. Dreer) four years ago. We got only one plant out of the lot and saved the little seed therefrom to try another season. All the plants raised from this seed began flowering in July, and none of them reverted to the original late flowering type; it has acted this way ever since, and is certainly a great improvement on the original for our northern country, as we rarely can flower the common kind, they being cut down by frost before fairly in bloom. Plants of the new variety grow no higher than 4 feet 6 inches, while the late flowering kind is more than 7 feet. It grows more compact and bushy. The flowers are as large as in the old variety, the petal being rather broader, which makes the flowers appear rounder; it is a very

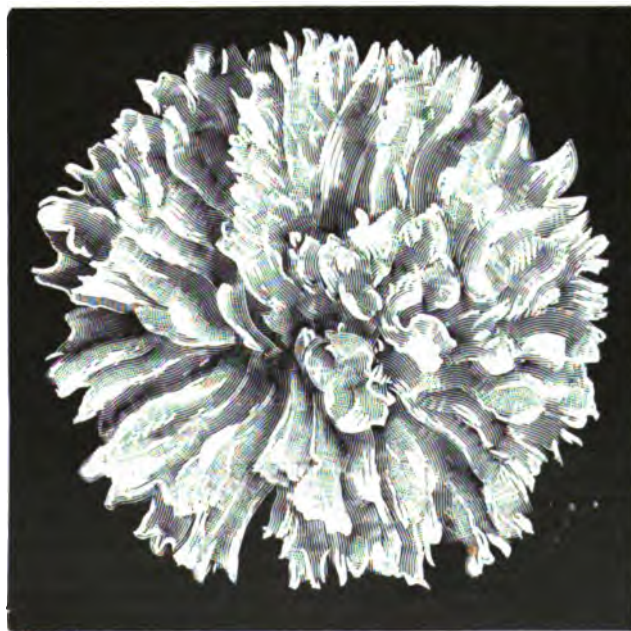
New Geranium MARS.

Mr. Eichholz, Waynesboro, Pa., the introducer, has the following to say of it:

"Mars is a seedling obtained from a lot of seeds bought of a New York firm by the late J. Nitterhouse. He thought a great deal of it, but his death made it impossible for him to put it on the market. We have given it a thorough trial in beds, in the open field and under glass. The flower is single, deep salmon center and distinct white edge, a most pleasing and new color combination in geraniums. As a market or home seller, we claim it to be a rival to such good sorts as Beauty of Poltevine, Paul Bruant, etc. It is perfectly sunproof, and produces a quantity of flowers—completely hiding the foliage which is of a deep green color with dark brown zone, making a grand contrast to the white and salmon of the flower. It will prove one of the finest border plants on account of its dwarfness, a great market geranium, a great Christmas and Easter plant when grown with a little care. It loves a cool temperature, that of a carnation house suits it best. It requires to be kept on dry side during Winter, like all geraniums, but avoid syringing when in bloom as the flowers are not waterproof. With a little extra attention the finest specimen plants can be grown."

New Hardy Mammoth-Flowering HOLLYHOCKS.

These exquisitely beautiful hollyhocks are an entire break from the old-style formal flowering ones. The flowers of this new Mammoth-flowering type measure up to 5½ inches in diameter, or over 15 inches in circumference—but their great merits lie in the



wondrous delicacy of coloring and texture; the semi-double flowers are gracefully composed of fringed and crinkled petals, resembling rosettes of daintiest crushed satin. The colors are shell pink, rose and ruby red. The plants are hardy and large robust growers; the flowers are not closely huddled up, like other hollyhocks, but gracefully and carelessly placed among the large leafy branches which exactly suits the airy style of the flowers, showing them off to the best advantage; every bud, clear to the top, develops into

a flower, thereby considerably extending the flowering period, and as the flowers mature they drop from the stem, so that the plants are always objects of beauty. We regret that our illustration does not do justice to these peerless New Mammoth-Flowering Hollyhocks. (fig. 32.)

From the Catalogue of Peter Henderson & Co., New York.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 11, 1896.

PUBLISHED BY
A. T. DELAMARE Ptg. & Pub. Co. Ltd.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.

Publishers' Announcements.

Checks. Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credits same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

A CIRCULAR regarding the annual seed distribution has been issued by Secretary Morton, in which he shows exactly what the free seed for the various sections of the country has cost, and makes a comparative statement with preceding years, showing that the plan which he has adopted gets nearly twice as much seed, and that of a better quality. The total appropriation for seeds this year was \$130,000, with \$20,000 additional for testing, inspection, and other expenses of distribution. This \$130,000 bought 19,053,839 packets of vegetable seeds, 1,012,500 packets of flower seeds, and 292,925 quarts of field seed, such as corn, timothy, clover, etc. Each packet of vegetable seed cost less than six mills, each packet of flower seed less than eight mills, and each quart of field seed only a fraction over four cents. The total weight of the seed purchased is over 1,200,000 pounds. As put up for distribution it would require seventy-five mail cars to contain it. The cost to the Post Office Department of handling this amount of seed is estimated at \$100,000. The vegetable and field seed would plant 227,346 acres.

After describing the improved system of purchase, the circular concludes: "The only further improvement that can be commended with sincerity is the

total abolition of the promiscuous and gratuitous distribution of seed by governmental agencies."

Secretary of Agriculture. IT is announced that the Secretary-elect of Agriculture is Prof. James Wilson, director of the Iowa State Experiment Station at Ames. It is thus a guarantee that a man who has acquaintance with the demands of agriculturists and horticulturists has been chosen for this important post, and so should not fail to be of service in his new sphere.

Professor Wilson is a Scot, having been born in the parish of Girvan, Ayrshire, Scotland, in 1840, and was brought to America by his parents when a small boy. The first settlement of the family was in Connecticut, from which State they removed to Iowa, in the fifties.

For many years Mr. Wilson was a teacher in the country schools near old Buckingham and West Union. In the course of time he accumulated money enough to purchase a farm of 1,200 acres, which he now owns in Tama County, Iowa.

For several years Mr. Wilson has been Professor of Agriculture in the State school at Ames, and, in connection with his other duties, has edited a farm department for a newspaper.

Prof. Wilson is, we believe, more distinctly interested in stock raising; and we trust that a representative horticulturist will be selected as Assistant Secretary.

Station **THAT** the great majority of cultivators in the States do not yet appreciate the work that the Stations are doing, is shown by the fact that at the Geneva Station in New York State, for example, only 25,000 copies of the bulletins are needed to satisfy all demands, at the same time the lists of those calling for the bulletins are gradually increasing. Director Jordan, of Geneva, now proposes to issue specially edited "farmers' bulletins," which will give in popular language the gist of the full bulletins, and to leave it to everyone more particularly interested in the subject of the bulletin, to ask for a copy of the entire bulletin. This surely seems to be a needed and worthy innovation. It is safe to say that the great majority of those who now receive the bulletins, look at them and throw them aside unread. Text and language are usually far beyond the understanding of the ordinary man. To send these scientific bulletins broadcast to the number of 25,000 is a great waste of effort, paper and printing ink. Now write up a little story, readable, practical, interesting, all the time keeping within the understanding of the simplest farmer, and much good can be accomplished.

Other stations please copy!

Seed Trade.—The annual meeting of the American Seed Trade Association will be held at Washington, D. C., June 8, 9, and 10.

Hudson Valley Horticultural Society (to embrace 18 counties) is the title under which the fruit growers and others of Eastern N. Y. duly organized at Poughkeepsie on February 3. Officers are: President, James Wood, Mount Kisco; Vice-President, F. W. Taber, Poughkeepsie; Secretary, E. Van Alestynne, Kinderhook; Treasurer, B. Van Buren, Stockport; Corresponding Secretary, E. G. Fowler, Port Jervis. The first regular meeting is to be held in the Court House, Poughkeepsie, March 11 and 12.

Notwithstanding the severe cold, raging storms, and delayed trains, with all the inconveniences of travel which these things imply, the Western New York Fruit Growers came to their 42d annual meeting at Rochester in almost more than the usual numbers. The seating capacity of the big council chamber in the City Hall, even with the exhibition tables and aldermanic chairs of former years removed, was taxed to its utmost during the entire session. Notwithstanding the low prices which have characterized the past season's fruit sales, all over the State, and the often very unsatisfactory outcome of the season's business for the fruit grower, the old-time interest, enthusiasm, and push were still prevailing, and there was no sign of dejected or depressed spirits.

Thank You!

I want to congratulate and thank you for your very able report of the Fruit Growers' meeting at Cornwall on the 25th ult. Yours is the best I have yet seen of the proceedings, and your editorial shows you have the horticulturists' interest at heart.—T. J. DWYER.

READERS' NOTES AND COMMENTS

A Good Investment.—I am, in connection with my son, engaged in growing vegetables under glass. While our plant does not compare very favorably as regards size with some in the east, still we think for the time we have been engaged in the business we have a very fair beginning. We started in October, 1894, with one house, 20x8 feet, heated with a brick flue; we now have eight houses in all, one 10x80 feet, two 20x80 feet, four 20x150 feet, one 52x150 feet, all steam heated; we have two 80 horsepower boilers, set low enough to allow all the condensed steam to return to them by gravity (we only use one boiler at a time, the other being held in reserve in case of accident), wood is used for fuel; we grow lettuce, cucumbers, tomatoes, mushrooms, and rhubarb in them; we grow the Grand Rapids lettuce, as the head lettuce does not sell as well as this variety; this winter we are growing as an experiment some of Rawson's Forcing lettuce; at this writing it looks fine; we also keep 12 head of A. J. J. C. Jerseys; our barn is so arranged we save all the manure, both solid and liquid; the liquid manure runs to a large cistern and the solid is kept under cover, and worked over to thoroughly compost it; we have a large well, and all the houses have eave troughs connecting them with it; have two tanks of a combined capacity of 1200 barrels, which are at an elevation to give good pressure for irrigating purposes. This is my second year's subscription for AMERICAN GARDENING, and I have found it a very satisfactory investment.—A. F. HAAS, Wash.

Horticulture and the Schools.—Two recent issues of AMERICAN GARDENING contain very interesting articles on the Horticultural Society, and on Ornamental Gardening; the interest attaching to these subjects is now more important to the people of this city than most other branches of culture which present themselves. Education has long been regarded as a necessity for the people, and our common school system is a complete and thoroughly organized

department requiring large and constantly increasing expenditure. The division of natural science, however, scarcely finds a place in the curriculum of the public school. This is unfortunate, as it deprives us of many skilled workmen. Instruction in botany and chemistry and mineralogy might easily be introduced with success into the elementary departments of education, preceding grammar, geography, and languages. As exercise of memory and of the reasoning faculties natural science is an elementary form would be the basis of a practical education for the people. Science still struggles with prejudice. As a preliminary stage to the cultivation of taste in all such matters, the publication and introduction of improved text books on natural science is essential. The expansion of the city has been the result of modern methods of locomotion. With larger gardens and lawns comes an increased taste for elegant shrubbery; and the refinements of taste indoors and in the architecture of the home little brook a desert of waste outside. Horticultural taste, therefore, must be fostered by educational instruction in the elementary departments. And if the children love fruit, flowers, and music, their advance in culture under the guidance of religion will be a safety from anarchy and disorder.—**PRO BONO PUBLICO, Columbus, O.**

Chrysanthemum Pink Ivory.—I hope amateur gardeners will not be frightened from trying the beautiful Pink Ivory Chrysanthemum by the remarks of Myra V. Norys in a recent issue of your paper: "White Ivory has never done well with us. Can the pink beauty do any better than its antecedent?" I am myself an amateur on the smallest scale, but I found Pink Ivory as vigorous and as easy to grow and flower well as any. My one plant of it was grown entirely outdoors. By judicious pinching, I managed to get about 40 shoots. Leaving only the terminal bud on each, I had about the middle of October as vigorous, beautiful, and bushy a plant as one would wish, the flowers being of excellent size, considering how many there were on the bush. It ought by all means to be in every collection.—**L. C. L. JORDAN, N. J.**

Over Sanguine.—I notice that your correspondent on page 55 considers my statements "extravagant." He should remember that I said those results could only be obtained when all the conditions were right; intensive cultivation on very rich soil, with irrigation, and a good market. Last year, on a field of early celery, with close planting on rich soil with irrigation, my sales were at the rate of \$2000 per acre. This statement I can verify if any one be doubtful; but the celery was retailed at summer resorts and in nearby villages at from 40c. to 60c. per dozen. At the same time some celery on not very rich soil, and without irrigation, but little more than paid expenses.—**W. H. JENKINS.**

Begonias and Sunshine.—Myra V. Norys would like to hear from some one on this head (page 58). I would say that a temperature of about 55° to 60° is about right for flowering Begonias. A sunny position is all right during the winter months, but in spring it will be necessary to shade lightly. Ornamental leaved Begonias require partial shade at all times, and a higher temperature than flowering Begonias, with a moist atmosphere when growing; when partly at rest a dryer atmosphere and less water will suffice.—**R. SHORE, Ithaca, N. Y.**

Peach Prospects.—The annual prophecies as to the future crop are beginning to turn up. The outlook for New Jersey is said to be promising, so far.

Western New York Fruit Growers in Council.

In recognition of the fact that the fruit exhibits of the Western New York Horticulture Society have always been excellent and remarkable, even in years of comparative fruit failure, the particular excellence of the show of fruit at this year's meeting hardly excites much comment. It was to be a matter of course, especially in a season like this, and concerns like the Geneva Experiment Station and the firm of Ellwanger & Barry among the competitors. Of the apples, each specimen seemed to represent the type in its highest perfection, and nothing finer could possibly be imagined. The State Station had on exhibit 114 varieties of apples, pears and quinces, while Ellwanger & Barry's exhibit included 150 varieties of apples, pears, grapes, quinces, etc. There were also some fine specimens of Japan persimmon. Some slight improvements in spraying machines and fixings were shown again by their respective manufacturers, although it seemed that the number of exhibitors in this branch was smaller than for years. An unusually interesting exhibit was the Bemis transplanting machine, which promises to be a material help to those who plant cabbages, tomatoes, strawberries and other vegetable and fruit plants in large quantities.

President's Address.

President Barry referred with evident feeling of pride to the constant growth of the society, and urged the members to make further efforts in order to reach the five hundred mark. He then made a comparison of olden times with the present for the sake of showing the wonderful developments from the modest beginning made by our ancestors. "Could they have been with us the past autumn," he says, "and have seen the glorious harvest of apples, the trees everywhere bending beneath the heavy burden of beautiful fruit, and then taken into consideration the quantity as well as the quality, how proud and happy would they have been of their achievements, begun in so small and modest a way, but completed on such a magnificent scale."

The Apple Crop of 1896.

Mr. Barry spoke of the apple crop of the past year as one of the most remarkable in the history of fruit culture in this country and of the results upon the markets as surprising and discouraging. "Abroad and at home the crop was practically lost. The outlook is certainly discouraging, but if we are willing to profit by the experience of the year and learn a lesson, it will be of advantage to us. It must be self-evident that hereafter greater care must be exercised in packing, and choicer fruit must be selected for both home and foreign markets. It will probably be many years before a similar crop will be produced. In the meantime growers should provide themselves with storage houses, where the fruit can be kept till the time arrives to market it advantageously. Among the many kinds which growers in this vicinity have had an opportunity to test, the Jonathan heads the list as a handsome, delicious and profitable variety; its size, shape, color, flavor and shipping qualities are all that can be desired, and it is somewhat strange that an apple possessing so many desirable characteristics should not have received greater attention. An orchard of this kind is probably the most beautiful that can be seen. The tree is naturally graceful, the branches being willowy, and the dark-red apples against the green foliage present a picture that does not fail to arrest the attention and excite the admiration of the most indifferent observer.

General Recommendations.

Mr. Barry thinks that as the years pass by and our experience increases it becomes evident that a greater variety of products is necessary to success. The fruit grower should enlarge his sphere of work and cultivate fruits for the various seasons of the year, thus giving employment to a regular force of hands, who, on account of their proficiency, become indispensable on the fruit farm. Crops should be anticipated and markets provided just as the manufacturer seeks and secures sales for his goods. The grower who realizes this and

who is alert and industrious will very often, if not always, have a favorable showing to make at the end of the year. In this way only can large and satisfactory crops be grown and harvested. Fruit growing is a business which must be conducted on business principles in order to secure success. It will not do to leave everything to chance.

In Memoriam.

The society has lost the following members by death during the year: (1) William Brown Smith of Syracuse, born March 2, 1815, died March 10, 1896. (2) Professor Albert Nelson Prentiss, Ithaca, born May 22, 1836, died Aug. 14, 1896. (3) John K. Beckwith of Brighton, died June 21, 1896. (4) Ernest Gustavus Lodeman of Ithaca, born May 3, 1867, in Switzerland. (5) Dr. Peter Collier, the former director of the New York Experiment Station.

What We Accomplish.

Amid the gloom and disappointment of the year and the present situation, President Barry sees circumstances which should cause us to be happy and grateful. The fruits of our labors are spread throughout the land, bringing comfort and pleasure to many a household. The poor as well as the rich are enjoying them; the pear, the apple, the peach, the plum, the orange, and the grape are so beautiful and so good and furnish such pure, unadulterated and healthful food for millions of people that as the growers of such products we can justly be proud of our occupation. We have at least the great satisfaction of knowing that our productions are beneficial and not harmful in the least to mankind. With the return of prosperous times we shall be sharers in the general prosperity of the country, and if we give to our pursuit the attention it merits, there is no doubt but we shall reap rewards as great and as satisfactory as those gained in other occupations.

Plant Diseases and Spraying.

Professor S. A. Beach of the Geneva Experiment Station, from data gathered from about 100 replies received in response to the inquiries which were sent to every member of the society, gave an account of the distribution of diseases during 1896. In a general way it appeared that plant diseases have been less prevalent and less serious than in some other years, and that therefore less improvement has been observed as a result of spraying. For detailed information on plant diseases and their treatment Professor Beach refers to *Bulletins Nos. 98, 100, and 101 of the Geneva Station, and Nos. 113 and 114 of the Ithaca Station.*

Some Newer Ornamentals.

George H. Ellwanger, on behalf of the Committee on Ornamentals, mentioned the following of the newer introductions as of especial merit, viz.: *Acer circinatum*, *Acer Heldreichii*, *Acer platanoides* O. Stall, *Acer platanoides undulatum*, *Acer pseudo-platanus* Simon Louis Freres; *Morus tartarica pendula* (weeping Russian Mulberry), this is of rapid growth and effective from the start, few ornamentals are more deserving. *Pyrus angustifolia*, *Deutzia parviflora*; *Elaeagnus longipes*, *Caryopteris mastacanthis* (blue spiraea), *Spiraea Anthony Waterer*. Among Roses he mentioned *Marchioness of Londonderry*, *Earl of Dufferin*, *Margaret Dickson*, *Mrs. R. G. Sharman*, *Crawford*, and especially *Olio*; tea rose *Mrs. Pierpont Morgan*; polyantha rose, *Pink Souper*; Double White rugosa and *Brunt's rugosa Belle Politiene*.

The State Experiment Station.

Director W. H. Jordan spoke of the work that the station is doing for the farmers and horticulturists of the State. We now have a vocabulary entirely unintelligible to the growers of an earlier period, and use freely such terms as nitrogen, potash, phosphoric acid, carbohydrates. The Experiment Stations also seem to have developed into courts of arbitration for questions submitted to them by editors and farmers. The first Experiment Station, that of Connecticut, was established in 1875. Now we have fifty-five stations with 600 workers. The station is not an institution to provide farmers with arbitrary rules for carrying on their business. The question, How can I make more money? is not for the station

to solve. The legitimate work for the station is to discover the facts and principles which underlie agricultural operations, and which every farmer must handle in his own way to make a success.

The Fertilizer Trade.

Director Jordan deplors the condition of the fertilizer trade. Manufacturers take three different substances, mix them in different ways, and sell them to the farmer under 1,126 different trade names. This is a tangle that should be straightened out.

Desirable Station Work.

The stations might do more in two ways, says Professor Jordan. They should have a closer grip on the seeds sold in the State, which are so often adulterated and foul with weed seeds.

Recent Investigations.

In recent years the cucumber or "pickle" industry on Long Island has been seriously threatened by the cucumber blight. Experiments made by the station have shown that the disease can be controlled by persistent spraying. Unsprayed plots gave only one picking, while sprayed plots held out to the end of the season. A bacterial disease of cabbage has been discovered as a new enemy.

Variety Tests.

Professor Jordan differs from the critics who have held that variety tests are not proper work for the stations to undertake. He thinks that the advantages of such work to all concerned are too great to be neglected. People come to the station to get information on varieties, and the station should be able to furnish it.

Fruit and Vegetables as Diet.

Professor W. R. Lazenby combats the idea that fruits, etc., are medicines. The normally healthy body, he says, craves what is wholesome not what is medicinal. So it is wrong to think we must eat fruit when we do not feel well. Fruits are not perfect foods; in order to get all the nutrients required by a healthy person from strawberries or tomatoes, etc., a man must eat these fruits or vegetables by the bushel. The qualities which make fruits and vegetables useful are acids and flavor. The acids are cooling, allay feverishness and tend to keep the organs of nutrition, especially the liver, in good working order. The acids of sound, mature fruit are also in a measure germicidal, and therefore wholesome.

Apple Varieties.

In response to the question: What variety is best for the grower, Mr. J. S. Woodward stated that he had made most money from the Maiden Blush. On heavy clay soil the trees are healthy and bear uniformly, while the apple is always wanted at good prices; it keeps well. Oldenburg is profitable, but must be marketed when ready. Baldwin is a good apple. Hubbardston's Nonsuch is too early. Professor Lazenby mentioned the Lady apple as bringing big prices; it is not a heavy bearer. Mr. S. D. Willard speaks of Mackintosh Red as a good apple; it is beautiful, and the tree hardy; needs spraying. Longfield needs careful handling, being tender, but sells at high prices; its foliage is perfectly healthy, saving the trouble of spraying. Mr. Willard would select this as one of the varieties, picking and handling very carefully. Alexander drops badly from tree. Peck's Pleasant is a good apple, but hardly of the right style for market. Princess Louise was mentioned as a Canadian apple of the Fameuse type, beautiful and ripening in early winter.

Ideas by Boston Market Gardeners.

Dropping Unprofitable Crops. Women as Field Help. Taxation Farm Land. Management of Celery.

At the recent meeting of the Boston Market Gardeners' Association, J. C. Stone, of Watertown, gave an interesting address on making the farm pay, in which he advocated cutting down expenses by dropping crops which return only the cost of production and substituting strawberries and hay in place of them. He said that 1895 was the fourth year that the business

had not returned a profit, and that if gardeners dropped some crops they would have money at the end of the year. He recommended each one present to set an acre of strawberries and to grow hay enough for his own use. One acre of strawberries in Belmont produced \$1000 worth of fruit. He could see no chance to make money on pears, apples, or currants, and advised reducing the acreage of onions and beets. The returns from the 1896 crop of celery were unsatisfactory, as the crop did not keep well, and has had to be rushed into market regardless of price.

In speaking of help, he said that one man was required to every two acres; that the price of labor had not decreased with the price of produce; that we were paying too high wages, and had got to let old men go and put younger and cheaper men and even women in their places. He cited an instance wherein a ten-acre field of beets last year all the labor except loading and unloading the beets was done by women who received 83c. per day. Referring to the manure question, he said that it cost too much at present. Market gardeners must have it, but they were foolish to pay for it. It has got to be removed from the stables, and if the members will support each other they can get it for nothing. He mentioned that irrigation was necessary to insure success, and said that the claim that when a market gardener was getting a living that he was doing well, and could depend upon the increase in the value of his land for his profits was N. G., as three-fourths of the market gardens are not worth more to-day than they were twenty years ago. He emphasized the fact that farmers should take an active interest and part in town affairs, and labor too.

Keep down taxes by limiting appropriations and by having it taxed on its agricultural value, which rarely exceeds \$300 per acre, rather than on its prospective house-lot value. He referred to the sewer question and favored paying for them by general taxation in a series of years, saying that it was only fair for those that come after us and receive benefit from the sewers to pay their share of the cost of construction.

B. P. Ware, of Marblehead, spoke on taxation, saying that land could be rented in Marblehead for the amount of taxes, and that ownership is no advantage except from sentiment. The average rate in Massachusetts is \$15 per 1000, but if all personal property eligible to taxation was taxed, the rate would be reduced to \$7.50 per 1000. Those who evade taxation do not consider themselves thieves and robbers, but what else are they? The farmer's property is all in sight, and all of it is taxed. Land should not be taxed at its prospective house-lot value. The agricultural value of his land is from \$100 to \$300, and it is taxed at \$12 per acre. This valuation and the high rate in Marblehead eat up the profits of the farm.

Captain Strange stated that it is cheaper and better for some farmers to have part of the cost of sewers assessed on abutters, than to have it all paid by general taxation. Location decides the question.

Mr. Sullivan, of Revere, said that if he wanted to punish a man he would put him in charge of a market garden with Italian laborers. He believes in keeping tried and trustworthy men, and hopes that the new tariff will make it possible to maintain the wages of the past. He agreed with Mr. Stone that farmers should take an active part in town affairs.

Mr. Derby believed that those vegetables that sell high one year, go low the next, and vice versa, and said that the Market Gardeners' Association, by disseminating information, had increased competition.

President Rawson stated that he had written Congressman Dingley in behalf of the association requesting a restoration of duties upon farm products equal to or above those which existed in the McKinley bill. His action was commended, and Mr. Sullivan said that cabbage should be included in the list as large quantities of Danish cabbage come into New York, and will soon make their appearance in Boston. Secretary J. H. Crosby, referring to the recommendation that farmers take an active part in town affairs, said that in most towns the farmers were a hopeless minority, and that the only effective way for them to work was to exert their moral influence and mould public opinion.—New England Farmer.

Facts

Are worth more than theories. It is a fact that pure, rich, nourishing blood is given and good health established and maintained by taking

Hood's Sarsaparilla

The best—in fact the One True Blood Purifier.

Hood's Pills are the only pills to take with Hood's Sarsaparilla.

GAME COCKERS? Send 50 cts. for a monthly journal devoted to Game fowls. Sample 5 cts. **GAME FANCHES' JOURNAL**, Battle Creek, Mich.

Mention American Gardening when you write.

OLD BOOKS SEND STAMP FOR LIST. Address A. J. Crawford, 519 N. 7th Street, St. Louis, Mo.

Mention American Gardening when you write.

GRAY HAIR MADE DARK

By a hairman, Home Work. Also makes the hair grow. Full directions and notes for 25 cts. Mrs. A. MURPHY, 4212 Evans Ave., St. Louis, Mo.

Mention American Gardening when you write.

BLINDNESS PREVENTED

The Absorption Treatment a Success. Hundreds successfully treated for all diseases of the eyes or lids without knife or risk at their homes and at our Sanatorium, the largest and most successful institution in America. "Don't want to be blind." Pamphlet Free.

THE BEMIS EYE SANITARIUM, Glen Falls, N. Y.

Mention American Gardening when you write.

The Classic Series OF MUSIC BOOKS

THE EMBODIMENT OF THE BEST IN MUSICAL ART . .

THE Classic Series of music books stand pre-eminently first among the music books of the world. They contain the very highest and finest grade of music ever written. All the best works of the great masters of music will be found in these volumes. Every music lover who desires to have the best examples of musical composition should order one or more of these volumes.

- Classic Vocal Gems for Soprano, 31 songs.
- Classic Vocal Gems for Alto, 33 songs.
- Classic Vocal Gems for Tenor, 30 songs.
- Classic Vocal Gems for Bass, 25 songs.
- Song Classics for Low Voice, 40 songs.
- Classic Tenor Songs, 36 songs.
- Classic Baritone or Bass Songs, 33 songs.
- Piano Classics, Vol. 1, 44 pianoforte pieces.
- Piano Classics, Vol. 2, 31 pianoforte pieces.
- Classical Pianist, 42 pianoforte pieces.
- Young People's Classics, No. 1, 51 easy pianoforte pieces.
- Young People's Classics, No. 2, 48 easy pianoforte pieces.
- Classic Four-Hand Collection, 19 pianoforte duets.
- Selected Classics, 32 pianoforte pieces.

For further particulars, send for descriptive circular, giving list of contents, etc., free . . .

EACH book is printed in the best style of the music-printer's art. The modern engraved transfer process is employed; only the finest quality of paper is used; and the binding is artistic as well as substantial. In make-up as well as quality of contents, the Classic Series stand alone at the top.

Price, Each Volume, Postpaid, Paper, \$1.00. Boards, \$1.25. Cloth, Gift, \$2.00.

Any piece or book of music published at home or abroad can be secured from us at shortest notice.

OLIVER DITSON COMPANY
453-463 Washington St., Boston.
NEW YORK. J. F. DITSON & CO.
C. M. Ditson & Co.

Mention American Gardening when you write.

With a Produce Car.

How many readers of American Gardening know what a product car is? Probably not many are aware that it is a railroad car fitted out for the traveling exhibition of the agricultural and other products of a State, or some railroad having a land grant to dispose of and which takes this method of advertising its land and the possibilities of its production.

There are several such cars on the road advertising Florida and California, and the particular one here described is sent out by the Northern Pacific Railway with a full exhibit of the agricultural and mining products of the several States traversed by the line of road.

The history of this particular car will bring it dimly before the mind of many a reader when it is known that it is one of two cars specially constructed for the purpose and which were exhibited at the World's Fair at Chicago. After the Fair it was fitted out to advertise the products of the Northwest.

It is, perhaps, one of the most expensive methods of advertising possible. In the first place, the car and its contents cost about \$20,000, and the expense of running it, with its manager and assistants, together with the tons of literature put out, place it beyond anything but a railroad company to operate. The car is specially built for show purposes, and is as gaudy on its exterior as a circus van, while all the resources of the most skilful artisans are called on in its interior decoration to show the native woods in their most effective combinations. When all is ready for fitting up, the services of a collector are called on, and every plant of an economic character, minerals, specimens of the taxidermist's skill, preserved fruits and all that sort of thing, together with photographs of scenery, are artistically displayed in the interior. Before a wheel turns a good-sized fortune is expended. Then a route involving a hundred or more towns having been all arranged, the car is ready. The towns are all billed in advance and every means taken to secure attendance. Admission is free.

When the car pulls into a town and is placed on its siding it is at once swarmed with people, who pass to the right, around and around, asking all sorts of questions and getting the advertising material given out.

People who see these fruits and vegetables almost invariably imagine that the largest specimens are selected and that their method of display in glass magnifies their size. This is only partially true, if at all. It is a fact that some of the largest fruits and vegetables in the world grow on the Pacific coast.

What will interest our readers as much as anything else is the method of preparing fruit for exhibition. There are twelve different chemical preparations for as many different fruits, and with the right one a plum, for instance, can be preserved indefinitely in glass in such a way as to leave even the bloom intact. But it is not good to eat. There are few, if any, fruits that can be preserved in alcohol, as it extracts the color and shrivels the specimens. Cooking, or heat of any degree, ruins them. Without giving away any trade secrets, it may be said that almost every fruit or vegetable can be preserved fairly well for a good length of time if simply put in

glass and covered with clear, cold, soft water.

The attendance at a product car often mounts as high as 5,000 in a day, many coming miles to see it, and it is worth while, too, as it gives a fair showing, and a free one, of what can be done in the great West.

HOWARD MILLER.

Orchards in Nebraska.

At the recent meeting of the State Horticultural Society, the following, among other topics, were presented: In "Orcharding in Western Nebraska," J. A. Hogg, of Shelton, told of his early experience with pruning, which he soon found was not a success if done heavily. He had found that one-year-old trees headed from four to six inches from the ground were the most likely to grow. He gave five reasons: Branching out protects the trunk from injury, it protects from sun scald, it keeps the ground moist and prevents evaporation, wind does not injure the fruit so readily, and the fruit is easier to pick. He used Russian Mulberry and Honey Locust for wind-break. For success with grapes, sub-irrigation is necessary.

C. A. Barnard, of Table Rock, discussed "Methods and Varieties of Apples for Commercial Orcharding." He said: "A man must lay aside all preferences. Soil should be prepared in the fall, and trees of two or three years planted in the spring. There should be some summer and some early fall apples, and not run all to winter varieties as many do. Early Harvest and Red Astrachan are the best for his locality for early varieties. Next come Fall Winesap, Maiden Blush, for winter use Winter Winesap, Jonathan, Junetia and Missouri Pippin."

In "Profitable Orcharding," by G. A. Marshall, of Arlington, it was held that Nebraska has a good climate for profitable orcharding. Early Harvest and Maiden Blush apples, which succeeded well in Southeastern Nebraska, will do well north of the Platte. Wallbridge and Iowa Blush take their place. The Whitney is good. Benova and Red June do nothing north of the Platte. He opposed giving local names to varieties, and this point was taken up in the following discussion.

J. M. Russell, of Wymore, talked on "The Peach—Our Experience in 1896 With It." The crop was very large, prices lower, but quality not so good as some other years. He heads the trees to the ground and does not prune.

Quenched Fire With Wine.—The dwelling of John Hauser, who owns large vineyards near Egg Harbor City, was on fire Jan. 25. There was no water available to fight the flames, but the firemen, to save the building, had recourse to the big wine vats, pumping wine upon the flames until the fire was out. The loss on the house is about \$2,000, but the loss in wine was considerably greater.

Prevention of Insects.—A convention is called for 10 A. M. on March 5 next, at the Ebbitt House, Washington, D. C., to "consider the best measures to be taken in securing such national legislation and supplementary uniform State legislation as may be necessary to prevent the dissemination of noxious insects and fungi, and prevent their introduction into the United States from other countries."

Popularity of Orchids.—As proof of the growing popularity of Orchids this season, these figures concerning a recent dinner given by the Bradley-Martins in New York City are of interest: A large table set for 32 covers was decorated with 500 Cattleya blooms, 220 Dendrobium blooms, and 200 spikes of Lælia aneups; these were laid on a foundation of Adiantum Farleyense. In the center was a raised mound of Cattleyas, working down from which was a bed of Farleyense covered with Cattleya blooms. Corner mounds were made with Dendrobiums nobile and Wardenium, with sprays of Lælia aneups gracefully laid around. Another feature of the table was the designs of the same flowers worked out on each corner.

Quackery is always discovering remedies which will act upon the germs of disease directly and kill them. But no discovery has ever yet been approved by doctors which will cure consumption that way. Germs can only be killed by making the body strong enough to overcome them, and the early use of such a remedy as Scott's Emulsion is one of the helps. In the daily warfare man keeps up, he wins best, who is provided with the needed strength, such as Scott's Emulsion supplies.

POULTRY BREEDERS! Send 50 cts. for a 20-paged monthly devoted to Poultry, etc. Sample 6 cts. **MICHIGAN POULTRY BREEDER**, Battle Creek, Mich. Mention American Gardening when you write.

SPRAYERS EXP. PAID. We are the largest Sprayer Co. in U. S. Get our Catalogue and compare it with others. **LENOX SPRAYER CO.** 94 West St., Pittsfield, Mass.

Mention American Gardening when you write.

Have you read about **THE COMET** \$2.50 to \$5.00. **SPRAYERS** Beats them all. Don't buy till you see them. Send postal card for free catalogue. A harvest for agts, write today. **H. B. RUBER**, Johnstown, O.

Mention American Gardening when you write.

CANTON GARDEN PLOW



THREE SHOVELS AND RAKE ATTACHMENT.
WEIGHT, 20 POUNDS
\$3.75 EACH.
CASH WITH ORDER.

PARLIN & ORENDORFF CO.
Largest and oldest permanently established Plow Factory in America.
CANTON, ILLINOIS
Mention American Gardening when you write.



The "IRON AGE"

Combined Wheel Hoe Shown as a Seed Drill.

Begin right by planting right. Do not waste good and expensive seed by planting with a poor drill. The "Iron Age" will do it perfectly. It is light, strong, simple, and easy to operate. Our catalogue describing 50 different implements will interest you. Send for it.

BATEMAN MFG. CO.,
Box 106
Greene, N. J.

Mention American Gardening when you write.

The Window Garden.

Two Classes of Plants. Formula for Liquid Manure. Heat and Moisture.

Generally, only two classes of plants are grown; those requiring a temperature of from 50° to 60° Fahr., at night, with a rise of 10° to 15° during the day, and those which require a temperature of about 15° less. In the first class are included Geraniums (with the exception of Pelargoniums, often called Martha Washington Geraniums), Roses, Fuchsias, Ferns, Palms, Begonias, etc., and in the latter, Carnations, Hyacinths, Cyclamens, Cinerarias, Geraniums (Pelargoniums), Azaleas, Primroses, etc.

Plants grown in a dry, heated atmosphere do not thrive as well as those grown in a moist one, and are more subject to the attacks of red spider and aphids (lice). The air may be rendered moister by keeping an open vessel of water in the room. Red spider may be kept in check by frequently spraying the plants with water, while the aphids can usually be deterred from attacking the plants by dusting them occasionally with tobacco dust. If they should prove troublesome, they may be killed by spraying the plants with a liquid tobacco solution. A tobacco extract is sold which is a valuable insecticide.

A pottling soil meeting the needs of most window plants is found in a mixture of two parts loam, and one part each of leaf mold, manure, and sand.

It is often necessary during the winter months to supply some liquid stimulants to the plants, in order, in the case of flowering

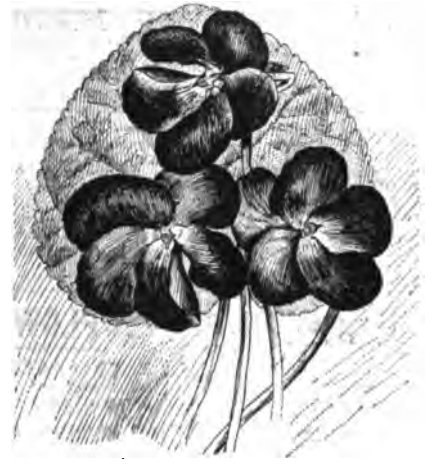


FIG. 33—VIOLET PRINCESS OF WALES.

(See page 86.)

plants, to increase the number and size of the flowers, and in that of foliage plants to give a darker and more luxuriant growth. These artificial stimulants may be applied in the form of manufactured plant foods or what is infinitely more satisfactory, if not quite as pleasant, in the form of liquid manure made from a mixture of cow and sheep manures, in the proportion of about four to one, with a small amount of ashes to furnish an excess of potash. These ingredients should be steeped in a barrel or tub of water for several days before using. Care should be exercised in the use of artificial stimulants of any kind, as they will injure the plants if applied too strong, or in too liberal amounts. Liquid manure made according to the method described, should be diluted until it resembles the color of weak tea. Plants should not at first be watered oftener than once a fortnight with it, gradually increasing in frequency until once or twice a week is reached.—Bulletin 41, Purdue University.

N. J. Cranberry Growers Met on January 26 at Trenton. J. H. Brakeley, of Bordentown, presided at the meeting. T. I. Budd, of Pemberton, made the opening address. The crop last year was unsatisfactory. Cape Cod had a full crop, but New Jersey had only half a crop. The growers do not take a cheerful view of the situation. The crop of 1895 was 400,000 in New England,

150,000 in New Jersey, and 30,000 in the Western States, making a total of 580,000 bushels against 630,000 in 1895. The officers elected are: President, Dr. J. H. Brakeley, Bordentown; first vice-president, the Rev. E. H. Darrell, Woodbury; second vice-president, C. L. Hulman, Lakewood; secretary, A. J. Rider, Trenton.

Hemp and Jute.—The demand during the past two years for information regarding the best practices for the successful growth of hemp and jute has caused the Department of Agriculture to issue "A Report on the Culture of Hemp and Jute in the United States, with statements concerning the practice employed in foreign countries, the preparation of the fiber for market, and remarks on the machine question," by Chas. Richards Dodge, special agent. Formerly the hemp-growing industry of this country was of considerable importance, large areas were devoted to the cultivation of the plant, and as much as 75,000 tons of the fiber were produced in one year, but last year hardly more than 5,000 tons were reported for the whole country. The bulletin treats of the history of hemp and the range of its culture, statistics, and production in the United States, soil selection, fertility, and preparation, the necessity for good seed, harvesting, and retting the crop, extracting the fiber, recent experiments in California and the South, and the uses to which the fiber is put. It is considered that the extension of the already established culture of hemp might supply a substitute for the jute in many of the coarse jute manufactures now produced in this country, and thus re-establish one of the decreasing products of American farms. The second part of this bulletin gives a history of the jute industry, and discusses the different kinds of fiber and its uses, culture, etc.

Is some branch of your farm work going wrong? Some hen or animal not doing well? Some tree or plant not producing well? Write the whole trouble to *The Rural New Yorker*, and you will get the advice and experience of the best authorities in the country on the matter. It costs only \$1 a year to have it come to you every week. We can send it and AMERICAN GARDENING, both one year for \$1.80, and your money back for *The Rural* in three months, if you want it.

Business Cards.

Cards will be inserted under this heading at two CENTS PER WORD each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. JOA. FORSYTH JOHNSON, P. O. Box 1697, New York City

Second Crop Potato Seed—Surpass all others in yield. ORRIS A. BROWN, Cape Charles, Va.

Mention American Gardening when you write.

ONE YEAR FOR 10 CENTS

We send our monthly 16-page, 40 col. paper devoted to Floriculture, Home Decorations, Fashion, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents. If you send the names and addresses of six lady friends.

WOMAN'S FARM JOURNAL, 4815 Evans Ave., Saint Louis, Mo.

Mention American Gardening when you write.

Are You Interested in Horticulture in the SOUTH?

THE GLEANER, Austin, Tex.

...WILL TELL YOU ALL ABOUT IT...

Mention American Gardening when you write.



FLORA OF JAPAN & CALIFORNIA

Chinese Narcissus, over 100 varieties of Lily Bells, Camellias, Palms, etc. HARDY PLANTS, Japan Maples, etc. Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan.

Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above.

M. N. BERGER & CO., San Francisco, Cal.

(ESTABLISHED 1887.)

Mention American Gardening when you write.

GOOSEBERRY AND CURRENT—50,000. Other Nursery Stock.

T. G. ASHMEAD, Nursery, Williamson, N. Y.

Mention American Gardening when you write.

POULTRY BOOKS. ABC Poultry Culture.

25 cts.; 500 Questions and Answers, 25 cts.; Poultry House Plans, 25 cts.; Pigeon Queries, 25 cts.; Fancy Birds, 1 year, 50 cts. All \$1.00. Any 2 books, 40 cts.; 3 for 50 cts. J. DARROW, CHATHAM, NEW YORK.

Mention American Gardening when you write.

OLDS' SEEDS ARE RELIABLE.

POTATOES are our specialty. We have an immense stock and prices are way down. Also 8-12 Corn, Oats and Barley with a full line of Groceries &c. Catalogue FREE. L. L. OLDS, Clinton, Rock Co., Wis.

Mention American Gardening when you write.

"Strawberry Plants That Grow."

Standard sorts; \$1.50 to \$2.50 per M. Best Rasp. and Blackberry plants, \$1.50 to \$5.00 per M. My "1897" catalogue mailed free.

C. E. WHITTEN'S NURSERY, Bridgman, Mich.

Mention American Gardening when you write.

1,000 Peach Trees

One year, from bud, 2 to 3 ft., mostly branched, with freight prepaid to any station east of Miss. River for \$80., or 500 for \$11.50. Sample prepaid, 25c. Other sized trees proportional prices. R. S. JOHNSTON, Box 21, Stockley, Del.

Mention American Gardening when you write.

MY STRAWBERRY CATALOG

FREE of interest to progressive growers and careful buyers. SEND FOR IT.

C. N. FLANSBURGH, Leaside, Mich.

Mention American Gardening when you write.

HALL'S FAVORITE. THE COMING NEW

des competition; the best introduced for years. Forty other kinds pedigree plants. Raspberries, Blackberries, Asparagus roots etc. Headquarters for Second Crop Seed Potatoes, double crop and earlier than other seed.

Descriptive Catalogue Free.

J. W. HALL, - Marion Station, Md.

Mention American Gardening when you write.

ALL THE LATEST NOVELTIES

AND PLANTS THAT CAN'T BE HAD ELSEWHERE. Camellias, Itellia and Austria, at \$1 each. New Roses, New Fruits, New Shrubs, New Bulbs. 10 Cents for \$1.—5 for 50 cts. Book on Cacti 14 pages, 120 cuts, 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free.

A. BLANC & CO., - Philadelphia.

Mention American Gardening when you write.

SEEDS. FREE

If you send 3 correct names and addresses of gardeners or those intending to buy seeds, we will mail FREE OUR NEW 1897 Seed and Gardeners' Guide; tells how to MAKE MONEY on a small piece of land. \$1.00 worth of Seeds for 25 Cents. 25 years experience.

JOHN BAUSCHER, Jr., box 802, Freeport, Ill.

Mention American Gardening when you write.

PREMIUM AMERICAN PANSY SEEDS

and plants grown by W. Toole, Pansy Specialist, Baraboo, Wis. 25 varieties and mixtures of Pansies. Hesperian Pansy, 25c per pkt.; trade pkt., 50c. Selected mixed, pkt., 15c.; trace pkt., 30c. Extra choice mixed, pkt., 10c.; trade pkt., 20c. My Pansies have never been equalled at any show where competing. Complete directions "HOW TO GROW PANSIES," sent free to any address with catalogue of Pansies and other seeds and plants by

WILLIAM TOOLE, Pansy Specialist, Baraboo, Wis.

Mention American Gardening when you write.

Clematis....

MEXICAN BULBS, and others, at low prices. Write for price list.

CACTI PLANTS and SEED

Fresh crop in great variety.

WM. TELL, Austin, Texas.

Mention American Gardening when you write.



We have the largest and finest Collection of PALMS, ORCHIDS, FERNS and FOLIAGE PLANTS for Conservatories.

Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines.

Everything for a private place. Estimates and Plans for Planting Places and furnishing stock (free).

SIEBRECHT & SON'S, Rose Hill Nurseries, - New Rochelle, N. Y.

Mention American Gardening when you write.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Grow the Best grade of fruits.

Feed the Soil and it will feed you.

An Even Temperature for the house plants.

Bouncer Strawberry seems not to be up to the claims made for it.

Peaches.—We planted more Early Crawford and Foster peaches last fall than any other variety.

Profits in Poultry depend more on the care it receives than most people think.

Woodruff Red Grape does not prove to be equal to the claims made for it.

The Land is Exhausted by frequent cropping. Let us then refill it with plant food by frequent manuring.

Quality Does Not always govern the price in small fruit as much as size and appearance.

All Purpose Fowl.—A cross of the Brown Leghorn and Wyandotte or the Plymouth Rock, makes a first-class "all purpose" fowl.

A New Orchard had better be planted out, to take the place of that old one that is on the decline.

New Strawberry.—Is your shortly to be introduced novelty free from the rust? If not, don't impose it on the public—too many new ones on that order now.

Gardening, skilfully managed, is one of the most independent and agreeable occupations.

Shall We Plan to have a fresh bouquet of flowers in center of the table during each meal next summer?

The More I See of setting rows of strawberry plants between rows of raspberry plants, the less I am in favor of it. Of course, it means economy in ground but not in labor.

Replanting.—I have seen farmers set young trees in an old orchard where trees had died out, and have noticed that they were mostly a failure.

The Most Beautiful Peach Orchard I ever saw was one in Michigan. When the proprietor set out the trees, he cut off all limbs, and cut the tops back to within twelve to eighteen inches from the ground, leaving a mere stub with three to five good buds near the top. The orchard is now in full growth, and during picking season the peaches can mostly be picked from a chair or low step-ladder.

Parker Earle is a fine strawberry on rich, heavy loam with a clayish subsoil, but on sandy land I find it will not mature one-half of the berries it sets.

Early in the Spring when the black raspberries are being set, it is good to put a large fork full of rotted manure in the row between each hill, and if poor sandy land, two forkfuls will be better. A vigorous healthy growth the first year will be the result, if well cultivated and hoed.

Study and Plan understandingly and carefully; try to avoid the mistakes of years past; step ahead cheerfully with a firm determination to improve, and there will be better times ahead for you.

Cracked Pears.—If you have a pear tree that bears cracked fruit scatter wood ashes all over the surface of the ground under the tree out about two feet beyond the outer limbs, then at fruiting time note the result. If the ashes can be stirred two or three inches into the soil, all the better.

Successful

growers of fruits, berries, and all kinds of vegetables, know that the largest yields and best quality are produced by the liberal use of fertilizers containing at least 10% of

Actual Potash.

Without the liberal use of Potash on sandy soils, it is impossible to grow fruits, berries and vegetables of a quality that will command the best prices.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.



A Fatherless Country.

Washington declared Agriculture to be the "most healthful, most useful and most noble employment of man." He was loath to leave his farm, although clumsy "Virginia rail" fences were the best to be had. With neat Page fences on all sides he would have "stuck to the farm."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

Beunett's Stump Pullers



Strongest and Best Machines for the money on the market.

Made in ten sizes and three styles, Hand Power, Screw Power, and Horse Power. Also Manufacturers of a TILE

DITCHER that will dig 100 yards of ditch in 10 hours. And the BENNETT HANDY FARM WAGON, with or without dump-bed.

Write at once for prices to

H. L. BENNETT & CO., Westerville, Ohio.

Mention American Gardening when you write.

We Grow Seeds.

Our Specialties are:

Cabbage, Celery, Onions, Tomatoes, Potatoes and Improved Farm Seeds. Prices low. Please ask for Catalogue.

JOSEPH HARRIS CO.,
Moreton Farm (P. O.), Monroe Co., N. Y.

Mention American Gardening when you write.



Is he going to have a fit? No. He has seen Green's sacrifice prices, and they fit him. Cherry trees \$5.75 per 100; Plum trees \$7.25; Dwarf Pear \$5.00; Apple \$5.00 per 100. Catalogue, also copy of "Fruit Grower" free.

GREEN'S NURSERY CO.
Rochester, N. Y.

Mention American Gardening when you write.

BUY BERRY BOXES of
32-page Illustrated Catalogue for 1896-7 mailed FREE.



Climax Baskets for Peaches, Grapes and Melons.

Mention American Gardening when you write.



3 NEW AND POPULAR FLOWERS.

New Star Petunia. A new variety for garden or pot culture, each flower having distinct white star-like stripes, on rich purplish-red ground. The flowers, about 2 1/2 inches across, almost hide the plant from view for months.

Double Calliopsis. Handsome double variety. Flowers golden yellow color, wine-mauve room.

Sweet Scented Pansies. Have the perfume spots, of the Violet; the beauty of the Pansy. One packet each of these New and Popular Flower Seeds sent by mail, postage prepaid, and three months' subscription to the

AGRICULTURAL EPITOMIST. ALL FOR 10 CTS

The Agricultural Epitomist now goes regularly into the homes of over 150,000 Practical, Prosperous and Progressive Farmers of the United States and Canada, and is said by them to be the most Practical, Timely and Interesting Farm, Garden and Household Paper published. It treats intelligently upon General Farming and Stock Raising; tells how to make the Garden pay; how to raise Poultry; treats on Floriculture; and its Household Department, known as "Chatter Corner," is alone worth a year's subscription to any live household. This offer to furnish a packet of each of the above described new and popular flower seeds and three months' subscription to the Agricultural Epitomist, all for 10 cents, is made for the purpose of introducing the Epitomist into new homes, believing that where it is read for three months, it will be found so valuable and interesting as to secure for us in nearly every case a yearly subscription, the regular price of which is 35 cents. The money we will receive from this offer will not be sufficient to more than pay for the advertising, to say nothing of the Flower Seeds and three months' subscription. Send 10 cents in silver or stamps, upon receipt of which the Flower Seeds and Epitomist will be promptly forwarded. Address: EPITOMIST PUBLISHING CO., Indianapolis, Ind.

Mention American Gardening when you write.

The Savannah Line

FLORIDA THIS WINTER? THINK IT OVER!

Steamers leave Pier 35, N. R., N. Y., Tuesdays, Thursdays and Saturdays, at 3.00 P.M., for Savannah direct. Tickets sold at same rates from New York via rail to Philadelphia, thence Steamer to Savannah. Close connections made with rail lines.

FOR JACKSONVILLE and all Points South and Southwest. QUICKEST, LARGEST, SAFEST AND BEST STEAMERS ON THE ATLANTIC COAST. TICKETS INCLUDE BERTH AND MEALS EN ROUTE ON BOARD SHIP, THUS AFFORDING THE CHEAPEST MODE OF TRAVEL BETWEEN THE NORTH AND SOUTH. UNSURPASSED CABIN ACCOMMODATIONS.

Sea Spray Baths, Electric Lights, and all conveniences. Send two-cent stamp for copy of Savannah Line News, and illustrated book, something new, to RICHARDSON & BARNARD, Agents, 30 Atlantic Ave., Boston, Mass.; M. C. HAMMOND, Agent, Pier 18, South Delaware Ave., Philadelphia, Pa., or to

G. M. SORREL, Manager, New Pier 35, N. R., New York.

Mention American Gardening when you write.

Ocean Steamship Co. of Savannah & New England & Savannah S. & Co.



GREAT deal of nonsense has been written—and believed, about blood purifiers. What purifies the blood?

THE KIDNEYS PURIFY THE BLOOD

AND THEY ALONE.

If diseased, however, they cannot, and the blood continually becomes more impure. Every drop of blood in the body goes through the kidneys, the sewers of the system, every three minutes, night and day, while life endures.

WATER'S Safe Cure

puts the kidneys in perfect health, and nature does the rest.

The heavy, dragged out feeling, the bilious attacks, headaches, nervous unrest, fickle appetite, all caused by poisoned blood, will disappear when the kidneys properly perform their functions.

There is no doubt about this. Thousands have so testified. The theory is right, the cure is right and health follows as a natural sequence.

Be self-convinced through personal proof.

BUFF LEGHORNS.—Winners for five years. Circular free. GEORGE S. BARNES, Battle Creek, Mich.

Mention American Gardening when you write.

HATCH Chickens BY STEAM—With the MODEL EXCELSIOR Incubator. Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced Best-class Hatchers made. GEO. H. STABLE, 114 to 122 N. 6th St. Quincy, Ill.

Mention American Gardening when you write.

WANT TO SUCCEED?

Then use the NEW STYLE SUCCESSFUL INCUBATOR.

They succeed where others fail. This due to their new system of ventilation; new method of generating moisture; and the positive action of the new self regulator. Sold under positive guaranty. All about these and other things for poultrymen in our new catalogue and Book on Poultry. Sent for 6c in stamps. Address: DES MOINES INC. CO. Box 92 DES MOINES, IA.

Mention American Gardening when you write.

NEVER BEATEN In all the many shows in which it has participated, there must be something at the superlative claims of the RELIABLE INCUBATOR. Self regulating, entirely automatic, you put in the eggs, the Reliable does the rest. All about this and many things of value to the poultry man in our new book. Send 10c, for it. RELIABLE INCUBATOR & BROODER CO. QUINCY, ILL.

Mention American Gardening when you write.

INCUBATORS The OLENTANGY Incubator has proved to be the best. Have taken prize after prize. Brooders only \$5.00. Before buying elsewhere, send for free description and testimonials. Also breeder of 40 varieties of high-class poultry. 110 yards. 110 houses. Address: G. S. SINGER, Cardington, O.

Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Begonia Semperflorens.

Begonia lovers who are distraught because of repeated failures with these favorite plants, would do well to turn their attention to the Semperflorens type. Semperflorens gigantea rosea will give satisfaction where no other type can be well grown. It is so sturdy and free, and so handsome withal, that to grow it once is to have it always on the list. Its fine crimson buds are replaced in the new Liberian Begonia, with those of a deep pink. Otherwise, the plants seem much the same. They do not, of course, take the place of the Rex varieties, but under certain conditions, may give more satisfaction than the latter.

A Remarkable White Carnation.

People who love Carnations, and who like to keep up with the times, should have open eyes for the new white sort known as Flora Hill. Last spring, when shown at the meeting of the American Carnation Society in New York City—both plant and cut flowers—it created quite a buzz of excitement among the growers. It was certificated by the National Society, and has just received a special certificate from the Cincinnati Florists' Society. A rather prominent expert on Carnations states, without qualification of any sort, that, in his opinion, Flora Hill has all the good qualities that a Carnation can possibly have. The National Society gave it 86 points, if my memory is correct, out of a possible 100. It must mean

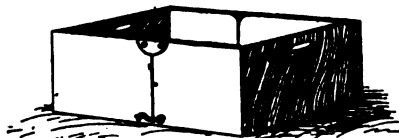


FIG. 34.—FRUIT LIFTING BOX.

a very stiff standard, when 86 points is as near as Carnation men expect to get to it. But the immense number of new seedlings necessitates strictness. This new beauty can now be had at retail.

A Lilac-red Saintpaulia.

The typical Saintpaulia in dull blue is barely becoming known in this country to the people at large, but an improvement is already offered. The new style is known as Saintpaulia ionantha rubra. It is said to come true from seed, and as the type is long-blooming, the two are likely to be of much interest, and it may be hoped, of much pleasure and profit to window gardeners.

Thriving Plants and Decorative Effect.

If there is difficulty in effectively arranging a general miscellaneous collection, what must be the trials of the experimenter? A larger range of sorts, and the necessity of giving each plant the conditions best suited to it in order to fairness, if nothing else—make the work far more difficult. Either the effort toward effect must be given up in favor of results plantward and blossomward, or else there must be a most judicious giving up of space to some few decorative things which may be considered from the standpoint of the room rather than of the sunshine and the plant's needs. Dracenas, Aspidistras, "Nile Lilies" and Palms may help much in this direction. The Rubber plant is also good, if young; older, it would take too much room from other things. Generally speaking, she who gives full con-



A Little Child With a Little Cold.

That's all!
What of it?

Little colds when neglected grow to large diseases and

Ayer's Cherry Pectoral
CURES COLDS.

sideration to decorative effect, will find the plants soon failing, to be replaced by purchases of others. A supply window in an unfrequented room is a good thing to rely on.

A Talk About Ornithogalum Arabicum.

"Honestly, now, does any one succeed in blooming Ornithogalum Arabicum? I've had it four different seasons, and it never has bloomed for me yet. One winter the bulb stood in the pot the whole season making never a root, and no foliage. The bulb was large, and notwithstanding this behavior was sound, and apparently all right in the spring. The difficulty doubtless lay, as is usually the case, in the fact that the bulbs were not as well ripened as they should be. What was the treatment they received from you?" "The same as the Hyacinths, with which I have no trouble; rather cool, always." "Perhaps it would be well to try more heat." "Would you try again this season?" "I think not; the bulbs now obtainable are culls and not in good condition."

To Handle Fruit Without Bruising.

When fruit is sorted over in the winter, it must often be turned out of baskets or boxes, or picked out slowly by hand—a laborious process. The cut (fig. 34) shows a box—to hold a bushel or so—that is divided through the middle, hinged at the top on either side, and hooked at the bottom to keep the sides together. The box can be filled by hand at one bin, carried to another, the hook loosened, and the sides gently raised, when the apples will gently settle into place in the bin, many of them being moved scarcely at all. The bottom of the box can be covered with cloth to minimize risk of bruising. The same kind of a box will be found very useful also in the fall when securing the fruit crop.

Fruit Growers are learning the value of elevation and a northern exposure if they are to succeed well with certain lines of fruit. The elevation is a means of giving good air drainage, and is thus quite effective against injury to fruit buds by late frosts. There is also little danger from late growth to be injured by the cold of winter. The northern slope is an effective precaution against early bursting flower buds to be injured by late frosts. Fruit growing is one of the occupations wherein men are apt to make costly mistakes at the very outset unless they go about their work understandingly.—Nebraska Farmer.

WHOLESALE MARKET REPORT

New York.

The cut flower trade still remains quite brisk in many lines, fully equal to that of last week. High grade roses are in demand and are realizing fair prices.

Cattleyas are now rivaling American Beauty roses in popular favor, at least with the most fashionable set, or for very expensive dinner decorations; possibly there is an average of 1,500 blooms per week used in this city. The highest wholesale price is \$50 per 100.

Sales of hothouse vegetables have improved considerably over previous reports; the freeze in Southern section has already had its effect, which possibly will be more felt in the near future.

Very heavy losses are reported from Florida owing to the cold snap. Accumulated stocks of many kinds are in our market, and there is a promise of a full clearance; then a boom in nearby stock may be anticipated.

Radishes still continue an excellent selling article. The high prices and ready sales have tempted growers to work in inferior stock and also to bunch slim; this is poor policy. Prices range from \$2 and \$2.50 per 100 bunches for moderate and mixed stock to \$3.50 and \$4 per 100 bunches for superior.

Lettuce has stiffened a little, and is quoted at 75 cents per dozen for strictly fancy, with inferior grades at from 50 cents to \$1 per barrel.

Tomatoes are poor generally; 35 cents is the top price for the few that are really good.

Cucumbers are still desirable stock for the grower; prices rule for seconds \$1 to \$1.50 per dozen; No. 1 making \$2 and \$2.50 per dozen. To obtain these figures grading needs to be done very closely indeed, evenness of stock being demanded.

Mushrooms remain practically as stated in previous report; a few very fancy have realized 50 cents per pound, but quantities still change hands at about 15 to 20 cents per pound.

Asparagus is seen here and there, but prices and demand are so irregular that no figures can be quoted.

Hothouse strawberries are in good demand, but prices are on the decline, \$3.75 per quart being about the figure for best; No. 2 at \$1.50 per cup. Florida berries are meeting with a wretched market; unless very fancy these make 35 to 50 cents per quart. Quantities are being peddled on the streets.

Apples.

The arrivals of apples continue moderate. Recent sustained improvement in the foreign market has stimulated a larger export movement, and given considerable support to the recent improvement here. The market is quite firm. Possibly exceptionally fancy qualities might be placed above our top figures. The general offerings, however, are mostly of medium quality, and more sales of Baldwin and Greening are at about \$1.25 than higher.

Spitzburg, fancy, per bbl.	2 00@2 50
Spitzburg, common to fair, per bbl.	1 25@1 75
Baldwin, Vt. and northern, fancy	1 50@1 75
Greening, Vt. & northern, fancy, per bbl.	1 50@1 75
Baldwin & Greening, Vt., ordinary	1 00@1 25
Baldwin, w'n N. Y., fancy, per bbl.	1 37@1 50
Baldwin, w'n N. Y., pme, pr d-h, bbl	1 25@1 50
Baldwin, up-river, per bbl.	1 00@1 25
Greening, w'n N. Y., pm to f'y, pr bbl	1 25@1 50
Greening, up-river, per bbl.	1 00@1 25
Greening & Baldwin, ordinary, per bbl	75@1 00

Vegetables.

Eastern onions are generally well sustained when of fine quality; Orange County stock about steady; State and western yellows are meeting a moderate demand at unchanged prices. Norfolk kale and spinach are nominally unchanged in absence of fresh arrivals. There are no fresh offerings of beans and the few lots carried over are mostly damaged by frost and of uncertain value. A letter from a well posted man at Tampa, Florida, dated January 30th, says that the vegetable crops in the Manatee River section and all south of Tampa are not materially injured by the recent frost, and that the crops in those sections are large and include nearly all kinds. At Winterhaven and all points north he reported more or less serious damage, with many crops entirely frozen and killed. He says that strawberries are set back at least three weeks.

Beets, Florida, new, per bush, crate	60@ 75
Brussels sprouts, per qt.	4@ 8
Cauliflowers, L. I., fancy, per bbl.	6 00@8 00
Cabbages, per 100	3 00@4 00
—Florida, per barrel crate	1.25@1 50
Celery, flat bunches, per doz, bchs.	75@1 50
—California, large, per doz, stalks	60@ 75
Lettuce, Fla., choice per 1/2 bbl. basket	2 00@2 50
Turnips, Canada, Russia, per bbl.	60@ 70
Tomatoes, Florida, fancy, per carrier	1 75@2 00

Philadelphia.

Owing to the cold snap extending well down South the market has presented quite a different appearance this past week; prices have become much firmer, but still not much trade is being done, as the extremely cold weather here prevents dealers from displaying stock, and all buyers purchase with extreme caution.

Apples have gone up somewhat and may raise still more unless more stock arrives. Many apples were frozen during the past week,

CAMPBELL'S EARLY GRAPE

Our Marvelous New

Best and most valuable. Highest commendation from highest authorities. Hardy, healthy, vigorous, very productive. Early or late. Largest clusters, finest quality, not fox. Seeds need not be swallowed. None genuine without our seals. We guarantee safe arrival by mail. Largest stock of Grape Vines in the World. Small Fruits. Introducer of unrivalled Red Jacket Gooseberry and Fay Currant. Catalogue free.

GEO. S. JOSSELYN, Fredonia, New York.

Mention American Gardening when you write.

GREENVILLE (formerly Downing's) APPLE

GREENVILLE STRAWBERRY or anything else in the nursery line. Send for free particulars.

Address. E. M. BUECHLY, (Box 991) GREENVILLE, OHIO.

Mention American Gardening when you write.

ONE HUNDRED DOLLARS AN ACRE

Can only be made from one source—POULTRY. Wheat and corn do not pay by comparison. You may smile, but have you ever tried keeping poultry right. The egg basket is a handy source of revenue these hard times. THE POULTRY KEEPER, Box 89 PARKESBURG, PA. sends a year tells how it is done. Sample free. The paper 1 year and four grand Poultry Books, \$1. Write to-day.

Mention American Gardening when you write.

STRAW
RASPB
BLACK
GOOSE
DEW

ASK WM. C. BABCOCK, BRIDGMAN, MICH.,
For prices of strong STRAWBERRY PLANTS, dug out in solid blocks, not from between the rows, true to name.
Competitive Offered. QUALITY considered. Complete Stock of CURRANTS AND GRAPE. (Mention this paper.)

BERRY PLANTS

Mention American Gardening when you write.

5,000,000 Strawberry Plants, 100 varieties, including Carrie, the queen of Strawberries; Earliest, the earliest berry ever introduced; Edith, the largest; Equinox, the latest. We carry the largest and best stock in the United States. The King Red Raspberry, the brightest and best red ever offered. 1,000,000 Wakefield Cabbage Plants. Also tobacco dust. Send for free wholesale price-list free.

THOMPSON'S SONS, Originators of the Strawberry, Rio Vista, Va.

If you cut this adv. out and send with 50 cents, we will send free, by mail, 15 plants each of Rio Bissel Tennessee and Lady Thompson.

Mention American Gardening when you write.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897

Tells the plain truth about

The BEST SEEDS that Grow!

Hundreds of illustrations with remarkable NEW Novelties, painted from nature.

"The Leading American Seed Catalogue." 42 Mailed FREE to all.

W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

as were also a great many potatoes.

Mushrooms have sold better these past few days, the present price is 20c. to 25c.

Tomatoes are arriving in larger quantities and of much better color; now selling at 25c. per lb.

There seems to be very little stock arriving in this market from local growers. Usually at this season there is a quantity of lettuce coming in, but this season hothouse lettuce is very scarce. Nothing has arrived from the South for several days and all stock that came last week is being held for higher prices. Lettuce is selling at \$2.00 to \$2.50 per basket. Spinach is being asked for, but little can be obtained.

Apples, Spitzburg, fancy, per bbl.	1 50@2 00
—Baldwin, fancy	1 35@1 60
—Baldwin, No. 2	75@1 00
—Greenings, N. Y., fancy	75@1 00

Vegetables.

Beets, Florida, per 100 bunches	5 00@8 00
Beans, Florida, wax, per crate	3 00@3 50
Brussels Sprouts, per qt.	6@ 10
Cucumbers, Florida, per crate	2 00@2 25
Cabbages, new, per crate	2 50@3 00
Cauliflowers, per basket	2 25@2 50
Celery, extra, per doz, stalks	40@ 60
—Fair to good	25@ 40
Egg Plants, Fla., per 1/4 box, scarce	1 00@1 75
Kale, Norfolk, per bbl.	50@ 75
Lettuce, Florida, per 1/2 basket	2 00@2 50
—No. 2, per 1/2 basket	1 00@1 75

Onions.

Nearly all the stock now coming in is from New York State and Ohio. Prices remain low and most commission houses do not care to carry many barrels on hand.

Eastern white, per bbl.	3 50@5 50
—Red, per bbl	3 00@4 25
—Yellow	2 50@3 50
Ohio, red	2 25@3 00
—White	2 50@4 00

Peas.—No good stock in the market. String Beans, green Fla., per crate. 2 00@3 00

Spinach, Norfolk, scarce, per bbl. 4 00@ —
All Southern produce now selling has been on hand three or four days and does not look very tempting. The severe weather in the South has somewhat disgusted the commission men, many of whom have been supplying the growers with seed; one house alone sent down seed last fall amounting to \$2,000, and it now looks as though no returns will come.

"FLOWER QUERIES" 10 Chapters, written in questions and answers, discussing 500 floral topics. Price, 25 cts. The COUNTRY, Box A, Chatham, N. Y.

Mention American Gardening when you write.

DISCOVERED A few wash that will remove that greasy complexion and in a week remove all pimples, blackheads and tan. Moaches the skin without irritation. Perfectly harmless; contains no poisons. Costs but five cents to prepare enough to last six months. Recipe and full directions, 25 cts. Mrs. E. HUNTER, 4515 Evans Av., St. Louis, Mo.

Mention American Gardening when you write.

Berkshire, Chester White, Jersey Red and Poland China Pigs. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs. Catalogue. S. W. SMITH, Coshansville, Chester Co., Penna.

Mention American Gardening when you write.

BEEKEEPERS!

SEND FOR sample copy of **CLEANINGS IN BEE CULTURE.** A Handsomely Illustrated Magazine and Catalogue of BEE SUPPLIES. Valuable book on bees given FREE to each one who mentions this paper. THE A. I. ROOT CO., Medina, O.

Mention American Gardening when you write.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.60.

THE OHIO FARMER is a large, 20 page weekly, \$1 per year. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for illustrations, Correspondence and Market Reports than any other of its class. It is the Best and Cheapest no more than others. Send for a SAMPLE COPY TO THE OHIO FARMER, Cleveland.

THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1898—14 months, if ordered at once. Address all orders to AMERICAN GARDENING, P. O. Box 1697, New York

WEEBER & DON,

Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Illustrated Catalogue of Vegetable and Flower Seeds NOW READY.

EVERY GARDENER SHOULD HAVE ONE.
Free on Application.

Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at two cents per word each insertion, payable in advance. The address will be changed as part of the ad., and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSHOFER BROS., bulbs and plants, Englewood, N. J.

NEW GLADIOLUS. Leaflet free. Norman Cole, Glens Falls, N. Y.

STRAWBERRY PLANTS for sale. Catalogue free. Charles Howard, 3 Johns, Md.

MAMMOTH RHUBARB OR WINE PLANTS, \$1.25 per doz. by mail. F. H. Llewellyn, Olean, N. Y.

DON'T PLACE your orders for Berry plants until you send for my price list. H. H. Aultfather, Box C, Minerva, O.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedman, Rochester, N. Y.

HOW TO GROW RHUBARB in the field and greenhouse. Price fifty cents postpaid. Fred. S. Thompson, Station D, Wis.

THE RIDGEWAY, a new strawberry of great merit. For price of plants and free catalogue, address M. H. Ridgeway, Box 222, Wabash City, Ind.

MIXED SEEDLING GLADIOLI. Blooming bulbs of fine strain, \$1.25 a hundred. Expressage to be paid by purchaser. Mrs. George Such, South Amboy, N. J.

DOMESTIC COFFEE BERRY, the poor man's friend—perfectly delicious. Matures early as corn, bears prodigiously. You can grow your coffee for one cent a pound. Genuine seed, packet 10 cents, 3 for 25 cents. Aug. Cook, Seedsmen, Hyde Park, N. Y.

STRAWBERRY PLANTS. Try the Margaret Fountain, Michigan, Clyde, Glen Mary. Headquarters for Ganey, Brandywine Marshall, Parker Earle and all choice standards. Catalogue free to all. C. N. Flansburgh, Leslie, Mich.

GLADIOLI, CANNAS, CLIVIAS, Bouquet and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings, Cannas, Italia, Austria, and best standards. New Hybrid Clivias. Cannas Seed. H. H. Groff, Simcoe, Ontario, Canada.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER and Florist, 30 years of age, single, German, 15 years' experience, wishes to take charge of gentleman's place, first-class references. Address L. D., care American Gardening.

YOUNG unmarried man wants situation to assist in plain gardening and greenhouse; have quite a good experience in violet growing; good references. John Lomus, Box 106, care of Elbert C. Howes, Brewster, N. Y.

DANE, 32, with 18 years experience in Denmark, Germany, Bohemia, Austria, Switzerland and United States. Eriosea, cut flowers and Palms specialty; fine landscape gardening; wants position. Address or call, Nelson, care of Mr. Thoma, 242 East One Hundred and Fourth St., New York City.

SITUATION wanted as assistant and gardener on large private place, by young married German. Would prefer place where opportunity is offered to get thoroughly acquainted with the culture of orchids and grapes; under glass; good references given. Address H. M., Post Office Box 114, Edwardsville, Ill.

WANTED—A situation by a thorough practical gardener with 40 years practical experience in all branches, including palms, roses and greenhouse plants for conservatory, decorating and bedding out; fruit, vegetable and flower gardens and pleasure grounds; the building of greenhouses; hot water and steam heating, road making, grading and leveling and drainage on private or public grounds; can take the sole charge of an estate or other works; first-class references; married; family; state wages offered to L. E., Lakeside, Ill.

PRIVATE GARDENERS.

We solicit for publication under this heading notices on the work being done by private gardeners, changes in appointment, and all matters of interest to horticulturists generally.

Appointment.

Samuel Henshaw, landscape gardener of West New Brighton, Staten Island, N. Y., has been appointed head gardener to the New York Botanical Garden. The long experience and well known skill of Mr. Henshaw peculiarly fit him for the post.

Alexander McKenzie, who for the last three years has had charge of the greenhouse of W. S. Gurnee, at Blauvelt, N. Y., has bought three Rose and two Violet houses, a hundred feet each, in Nyack, N. Y., and is to start in the florist's business after March 1.

The Professional Gardeners' Mission in Horticulture.*

It is a few years since I was daily engaged in the working department of our business, and, therefore, did not feel justified in choosing as a theme any line of active operation. You will have before you from time to time, I am informed, men who are qualified to speak on these lines, and you will have a variety of subjects. Being in daily contact with men representing all branches of the profession, also with the classes who may properly be called the patrons of horticulture, people who own broad acres and employ gardeners; in daily contact, too, with the amateur gardener who cultivates his or her own little plot of ground, whose facilities for winter gardening are a small conservatory, an enclosed piazza, or, more frequently, a sunny window, it is natural that I should see many phases of the question, that I should sometimes ask myself if the gardener was filling the place which is his by right of environment and technical education, if he was using both to their full advantage for the benefit of all concerned, and 'twas thus I came to choose as my theme "The Professional Gardener's Mission in Horticulture."

To begin with, what is a gardener? Webster says: "One who makes and tends a garden; a horticulturist." He defines a horticulturist as: "One who practices the art of cultivating gardens." Before proceeding further, it is well to bear in mind that he distinctly calls cultivating gardens an art, and he is an authority who is careful in selecting words to convey his meaning. In this country the man who grows vegetables for a livelihood is called a gardener, a market-gardener, and, in some sections, a trucker and a truck-farmer. We also have the florist, which embraces the man and woman who keep a flower store, as well as those to whom the title properly belongs, viz., the persons who are cultivators of flowers. We have also the nurseryman, a calling separate and distinct from these, and yet the three must be combined in one individual to make a qualified gardener, or what is generally known as the "private" gardener.

Occasionally the so-called "private" gardener is known as a "manager" or "superintendent," but it may well be questioned if he gains honor thereby. When he leaves the place where the title was assumed or thrust upon him, it very frequently is left behind, but he still remains a gardener. It also tends to create an artificial distinction between many who are equals and many in and out of the ranks believe it should be discouraged. Gardeners who have charge of public parks, cemeteries and botanic gardens, it has always been admitted, may with perfect propriety assume the name of superintendent, but the fact remains that no man who loves his craft need be ashamed to be known professionally by the "grand old name of gardener." It was a title good enough for Sir Joseph

Paxton, and his claim to fame rests largely on his work as the gardener at Chatsworth. It was a title good enough for Peter Henderson, who claimed it as an honor to the last of his days. It was good enough for his son, who, in writing his memoir, inscribed upon the title-page: "Gardener—Author—Merchant," the gardener being the foundation stone. With two such honorable examples on two continents, even if there were no others, it may well be said that no man entitled to bear it should hesitate to be called by the simple, dignified title of gardener. However, as there may be some danger of a man's true position in gardening not being defined in that word, I would suggest that the word professional be used to qualify it. In the eyes of some outside the ranks, it might have weight, and it would certainly be a proper distinction from the amateur gardener, the trucker, the nurseryman and the commercial florist. It would be well also to have all gardeners' societies known as an association of professional gardeners. It might operate to properly classify those who are entitled by education, experience and natural ability to bear the title from those who, lacking all these, are yet bold enough to call themselves gardeners and to become candidates for positions which they are unable to fill with credit to themselves, with justice to their prospective employers or with a proper regard for the responsibilities they are so willing to assume. That class would be bolder than I imagine them to be if they would, under such circumstances, assume the title of professional gardener, and the well-merited ridicule which would inevitably follow the discovery of their false pretences would be a salutary check upon others.

To have a claim upon the title, a man should be able to grow flowers, fruits and vegetables both outdoors and under glass, care for trees and shrubs, lawns and roads, in short attend to every detail connected with his calling. If in addition he knows how to attend to the details of gentlemen's farming, his services should be all the more valuable. He could then assume entire charge of a place where both farming and gardening are done, and we would, if more men were capable of this, be spared the pain of seeing one or both suffer either from incompetence or want of co-operation between the gardener and farmer.

It is to that class, then, who may properly claim the title of professional gardener that I address myself; it is to them that we must look for developments of an upward tendency and they will be held responsible for any retrogression in ornamental horticulture, for they are before all others the recognized exponents of the art. It is their mission to improve, and the general opinion is that there is room for improvement, more especially in indoor horticulture. The overwhelming tendency during the past ten to fifteen years has been to make the so-called "private place" nothing more nor less than a cut flower establishment and a hospital for the decorative plants which are used in the dwelling house and for outside decoration in summer; as pronounced has this become that the only difference between the commercial establishment of to-day and the average private greenhouse is one of size and architecture. The latter instead of being maintained, as it should be, purely to gratify aesthetic tastes, is devoted to an utilitarian purpose mainly. The product is counted and reckoned at so many dollars and cents. The most the average owner sees of them is the daily or semi-weekly cut which is sent to the house. This is not as it should be, and while it is not the gardener's fault, and may not be within his power to control, yet by well-timed suggestion and persistence, he should be able to effect a gradual and much-to-be-desired change.

The greenhouses should be a place of recreation for the owners, who should be induced to visit them daily, to look forward with pleasure to that visit, and the best way to accomplish this is to induce them to get a good collection of plants. A house of roses, carnations, violets or chrysanthemums has not the attraction of a varied collection, a collection, too, that embraces in their season glorioles, tuberous begonias, cinerarias, cyclamens, caladiums, lilies, sparaxis, primulas, and other seasonal pot plants, both flowering and ornamental

*Paper read by Patrick O'Mara (of Peter Henderson & Co.) before the Essex (Mass.) Horticultural Society, January 16, 1897.

foliage. The late A. W. Bennett set a brilliant example in this line among our latter day gardeners, both at Flatbush and Schenley Park. It is freely admitted that variety is the soul of gardening and not less so in small than in large places. The individual preferences of the proprietor or gardener should therefore in some measure be rendered subservient to the amount of pleasure which visitors are sure to obtain from a variety of plants. I am well aware that in many places the proprietor's residence is of short duration and very often during the summer months only, so that it is difficult, nay, well nigh impossible, for the gardener to influence him in the right direction; but if all earnestly try, some are sure to succeed, and the example once set, it will soon become general. It must not be understood that I advocate an entire abandonment of growing cut flowers, far from it; what I urge is a wider scope for purely ornamental indoor horticulture than obtains at present.

I once felt it necessary to call public attention to the monotony of our flower shows of the present time and to suggest some remedies. That monotony still exists is patent to most people, who have visited many of them. At Millbrook last fall, a new departure was taken, somewhat on the lines then suggested and with flattering results. The exhibition in itself was as a whole equal to any I ever saw and superior in some points, but attractions outside the flowers brought people who otherwise would not come. Now, if good collections of plants were more plentiful, much of the monotony complained of could be done away with, and it behooves the gardener for his own sake and the future of horticulture to strive to get them.

This thought suggests another. It was once said that: "A garden of plants without names is like a library of books without titles." There is food for thought in that observation. Have your plants distinctly labelled so that your employers may become acquainted with them; acquaintance begets friendship and will ripen into love. How often do we see a greenhouse where the labels are few and far between and that few partially obliterated. How embarrassing for the proprietor not to be able to tell the visitor what a plant is called, and how very awkward, as is often the case, that when the gardener is appealed to, he has the name "on the tip of his tongue" and can get it no farther.

An annual prize should be offered by every horticultural society for the best labeled collection of plants in the greenhouse and grounds and persisted in until its need should disappear. Not only should the botanical name be given, but the vernacular also, when the subject has one. "What's in a name?" Why even the stars in heaven have a deeper interest for us when we know their names. But to know the names of plants alone should not suffice. The gardener should know their history and should know how to tell it when asked. An hour should be set apart at every meeting wherein the president should call upon members to tell what they know of plants in their collection, no matter if it be only a China aster (or Callistephus.) Let the man get up and give the history of its introduction, the efforts made to improve it, who did it, etc. It will at all events give him practice in telling what any visitor may ask him and will encourage study in the young men. Let the president be asked questions, too, his position should not exempt him. Try it. Many a meeting can thus be made interesting which otherwise would be uneventful.

These then should be steps in the right direction and the gardener should take them.

Another thing, study the habits of your employers and at the time they may be expected to visit the greenhouses see to it that these are fit to be inspected. Just after, or while watering is being done, is not a good time, neither is the odor of liquid manure an inducement, particularly to ladies, to visit the greenhouses, and it is largely owing to these two causes that they are often associated in their minds with the stable or a malodorous swamp. Remember that the love you bear for plants is born of intimate association, and that you have it in your power to communicate

it, but remember, also, that it cannot, except in rare cases, be communicated on sight. Be patient, therefore; an enthusiasm is contagious, but a sustained enthusiasm is convincing. Loudon says: "Delicacy and intensity depend principally upon organization, and refinement conjointly upon organization and intellectual cultivation; they cannot be communicated by instruction except in a very limited degree, and yet the influence which education may have in giving a bias to taste is so obvious as hardly to require illustration." It is surely the mission of the professional gardener to provide education and so direct taste. He should, to properly fulfill his mission, be so imbued with the lore and love of his art as to be able to say with Horace Smith:

Floral apostles! that in dewy splendor
Weep without woe and blush without a crime,
Oh! may I deeply learn and ne'er surrender
Your love divine.

A tendency born of the dominating influence of the commercial cut-flower grower on horticulture at the present time is to measure the beauty of a flower by its size. We may well pause and ask with the lady who, with Attic wit, inquired: "Do we measure beauty by the square yard?" It seems so. If Burns thought thus, the world would be the poorer by the loss of his exquisite lines, "To the Daisy." The poet in all climes and all ages has ever been the oracle who proclaims the merit of true beauty, and delicacy rather than exuberance has ever been his theme in flowers. It is the mission of the gardener to preserve varieties having delicacy of color, daintiness of perfume and beauty of contour, even though they lack mere bulk. True beauty is imperishable, the rage for size is sporadic. The Colossus of Rhodes is almost a mere myth, the Apollo Belvidere is a living reality. The Venus de Milo and de Medici will endure when Miss Liberty and Germania are only memories.

(To be continued.)

Orange, N. J.

The Floricultural Society of New Jersey held its regular monthly meeting Monday, Feb. 1, President McRorie in the chair, and about sixty members were present. The proposition to hold a fall show received attention. Dr. Kitchen thought it was very desirable that a show be held, and fully realized the necessity of calling in outside aid, and suggested that the executive of the Memorial Hospital Committee, the ladies of the Improvement Society and the committee of the Home for Orphans be asked to co-operate, allowing them a third of the net receipts and a flower booth. This would induce all the society people of the district to support the exhibition, and success would be assured. He also suggested that a dance be held each evening.

Messrs. O'Mara, Withers and May supported Dr. Kitchen, and the Exhibition Committee was instructed to see these various bodies and report at the next meeting.

It was decided to reduce dues for associate membership from \$3 to \$1, and that all those who were not active members and had paid \$3 or more be called sustaining members.

Joseph A. Manda read a paper on the culture and care of a limited number of popular orchids.

Boston, Mass.

At the exhibition of the Massachusetts Horticultural Society, held on Jan. 23, Walter E. Coburn made an extremely pretty exhibit of Chinese primulas. Jason S. Bailey (William Donald, gardener) brought two new seedling double cyclamen plants, a pink and a white—the former very handsome. H. A. Cook showed a vase of the new white seedling carnation, Nivea, for which a first-class certificate of merit was awarded. James Comley brought a primrose colored seedling carnation. Mrs. E. M. Gill was awarded a gratuity for a collection of flowers, including carnations E. G. Hill, Scott, and Lizzie McGowan; Clivia miniata, Cyperus alternifolius, Fuschia Black Prince, two kinds of Begonias, Coreopsis, Freesias, Azaleas and Narcissuses. Mrs. E. M. Gill exhibited a dish of mushrooms. Aaron Low exhibited good spinach, and George D. Moore lettuce.

96	1897-1847	48
95	Not Since	49
94	Adam Dug	50
93	in the gardens around Eden has	51
92	there been seen the peer of our	52
91	"JUBILEE" CATALOGUE for 1897.	53
90	To commemorate our fiftieth	54
89	business year, we have pre-	55
88	pared the most beautiful and	56
87	valuable SEED and PLANT	57
86	CATALOGUE the gardening	58
85	world has ever seen. Every	59
84	copy costs us 25 cts. to produce,	60
83	but in honor of this our "JU-	61
82	BILEE" year, we will send it	62
81	this season FREE of 10c. (in	63
80	stamps) to cover postage and	64
79	mailing. This "JUBILEE"	65
78	CATALOGUE of "EVERYTHING	66
77	FOR THE GARDEN" is a mag-	67
76	nificent book of 170 pages, on	68
75	which are displayed over 500	69
	beautiful illustrations of Seeds	
	and Plants, the work of our	
	own artists. Also six full-size	
	colored plates which in artistic	
	beauty have probably never	
	been equaled, certainly never	
	surpassed.	
	The gorgeous products of our	
	Gardens and Greenhouses are	
	not only faithfully pictured and	
	described in the Catalogue, but	
	equally so every other desirable	
	requisite, new and old, for both	
	Farm and Garden.	
	A "JUBILEE SURPRISE SOU-	
	VENIR" will also be sent without	
	charge to all applicants for the	
	Catalogue who will state where	
	they saw this advertisement.	
	PETER HENDERSON & CO.,	
	35 & 37 CORTLANDT ST., NEW YORK.	

Mention American Gardening when you write.

GRAPE VINES

Small Fruits.
All old and new varieties. Extra quality. Arranged
true. Lowest rates. Descriptive Catalogue Free.
T. S. HUBBARD CO., FREDONIA, N. Y.

Mention American Gardening when you write.

Fruit Growers Make Money.

READ



Dunkirk, N. Y.

SAMPLE FREE, 50 cts. per year. Embrozes Monthly Grape Belt.

Mention American Gardening when you write.

Manwell Strawberry

Is easily in the lead (a staminate). Of large size and firmness unequalled, its color would be hard to improve upon, the quality is superb while the quantity of fruit it matures is simply immense, the yield being greater by one half than Wardfield, Crescent, P. Earle, Beder Wood, Bubach, or Haverland, and several others that have been in the lead. The proof of its value is its ability to outsell all others on the market, bringing for the season 1/2 more than any other variety. For description see AMERICAN GARDENING, July 4th issue, page 419. I also have the exclusive sale of the Hawkeye Runner Cutter, the best and cheapest tool made, can be used by a 12-year old boy. Send for price list to

ALLEN D. MANWELL,
P. O. Box, 686, VINTON, IOWA.

We find that good returns come from advertising in American Gardening.
H. H. BERGER & CO.,
San Francisco, Cal., Jan. 28, 1897.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*We cannot undertake to reply by mail.

Treatment of Azaleas.

[I have a large Azalea 26 inches across top in a 7-inch pot. Should it be repotted into say a 9 or 10-inch pot, and if so, when? It has just finished flowering (over 120 blossoms). It needs pruning badly to get it into shape, as many

branches ran out very long last summer. If pruned now, how late in the season can I again cut it back, in case it straggles out as it did last season, without losing flower buds? Will Azaleas stand bonemeal in soil?—F. S. C.]

—If your Azalea really needs repotting do it at once. Azaleas need very little pot room, owing to the roots being so fine, so if you do repot give only a very small shift. Before putting into the new pot slightly disturb the root surface of the old ball, using a blunt instrument. This will allow assimilation of roots with the new soil to take place quickly. Take care to make the new soil firm when potting; the rule is to beat it with a rammer till it is nearly as solid as the ball itself. Also be careful about drainage, and make that ample,

and remember to leave sufficient space to allow proper watering. Prick off the old flowers and syringe freely, keep the plant fairly warm, and to get it shapely pull the branches into the required positions and tie them, but do not do any pruning unless it be to remove an occasional gross growth; sometimes these start from the parent stock below where the plant is grafted; if so, they must be removed. But if breaking from the plant proper they can usually be tied to advantage, and thus fill up spaces. Remember it is the new growth formed now that makes flower for next year, so that to prune is to destroy flowers. Bonemeal is injurious; do not use it. The Azalea will not tolerate fertilizers.

Moss Rose Not Flowering.

[What is the cause of a White Moss Rose not blooming? It is six years old. I trimmed it back last spring, and it grew clean, healthy foliage. It is now 10 feet high, but not a flower on it last summer. The year before it had two perfect Roses. Is it best to prune it in the spring or not?—J. M. B., Vicksburg.]

—We would suggest a transplanting of the bush; it need not be moved from present location providing that is a sunny and suitable spot. But the replanting acts as root pruning and tends to make flowering wood. Spring is the proper time for pruning.

Violet Disease.

(To A., S. I.—Violet disease takes two forms: sometimes the spot, and sometimes the outer edge of the leaves goes off with a rot. This last named is the more disastrous.

Rose Leaves Dropping.

[I send some Rose leaves which have dropped from my Roses. Can you give me some information as to the cause and remedy. The varieties grown are Belle Siebrecht, Bride, Bridesmaid, Kaiserin Augusta, and Perle. They are growing on benches 6 inches deep, in good soil (old soda and rotted cow manure). They make a good healthy looking growth; then the leaves, or rather many leaves, drop off. I have kept the soil on top stirred, fumigated with tobacco stems, dusted flowers of sulphur over them, and a mild solution of kerosene emulsion about 1 to 20, without any apparent benefit. The night temperature is about 60°.—A., S. I.]

—The Roses are evidently lacking nutrition. From your description of soil and temperature, it cannot be from either of these. Possibly at some time the house was run up too high a temperature, and that would cause the trouble. Or it may be the reverse of that, and by being too cold the plants got checked; or it may be overwatering. Any one or all of these will cause the trouble.

Silo Corn Wanted.

[Can you tell me where I can procure some of the Governor Morton's Improved Silo Corn? It is a white flint corn, developed in New Jersey.—C. F. C.]

—The corn spoken of is none other than Rural Thoroughbred White Flint, and as such appears in many catalogues.

Ermisch's Caterpillar Lime.

[Is this any good as a remedy for canker worms, codlin moth, borers etc.?—G. A., Junction City, Ks.]

"Ermisch's Caterpillar Lime," or "Raupeleim," as the Germans call it, is a sticky preparation, apparently one of the petroleum products, mixed with some other material to give it color and odor. It is a smooth, greasy substance, which on exposure tends to harden something like tar; but will remain viscid for a considerable length of time under ordinary circumstances. Under the influence of heat it tends to thin out and run somewhat, and then to become coated with a crust. It chills readily, becoming quite hard under the chill and losing much of its sticky quality. The material is applied in Germany to the base of forest and other trees to prevent them from being girdled by deer, rabbits, and mice, and has been found very satisfactory and not at all injurious. It is also used in that country for banding trees to prevent the ascent of caterpillars of the "nun" moth and other similar pests. It can be used to good advantage to prevent injury from canker worms, by smearing it on the bark very early in spring, to prevent the ascent of the females to lay their eggs. It has been tried by a number of experimenters with good success, and it remains in perfect condition a long enough time to make one application answer. After the danger season from the canker worm is over, it

Offer No. 35.

SENT postpaid, for ONE NEW subscription at \$1.00

....BEAUTIFUL....

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection

and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Naman Cochet

Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Mermet

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

Offer No. 47.

Sent, Postpaid, for one NEW Subscription at \$1.00.

NEW GIANT FANCY COSMOS

(MRS. SHEPHERD'S STRAIN).



Mrs. Shepherd's New Fancy Cosmos was offered for the first time last season, but this is the first time they have been offered, put up in separate colors, as here described:

Of this strain, five packets of which are offered in this collection, the grower, Mrs. T. B. Shepherd, of Ventura, California, says:

"No one else grows it, and it is so distinct as to be readily recognized anywhere by one who has once seen the different varieties in bloom. I have been working with it so long that it has an individuality peculiarly its own."

One packet of the above, in splendid assortment, containing over 35 varieties of beautiful flowers, in all shades of red, pink, mauve, tinted and white... 15c.

Three packets of above, in separate colors, Red, Pink and White, one packet of each, at 15c... 45c.

"Tints of Dawn," one packet of above, lovely tinted flowers, white ground, delicately tinted or flecked with pink or mauve in lighter or darker shades... 15c.

Curled and Crested ZINNIAS, splendid mixed, one pkt... 10c.

These are the gayest, brightest and most esthetic bedding flowers imaginable, all colors and shades, with petals daintily curled and crested, having none of the coarseness of other Zinnias.

IPOMOEA, Heavenly Blue, one pkt... 10c.
A perfect dream of beauty.

SCABIOSA, New Large Flowering, red and pink varieties, mixed, one pkt... 10c.
These are very beautiful.

Total Value... \$1.05

The Choicest Collection of Seeds ever sent out for the money; a poem in flowers and a revelation in nature.

should be scraped from the trunks of the trees. Instead of applying it directly, a sheet of heavy paper can be nailed on the trunk and the "Raupenleim" applied to this, a little of it being smeared over the edges at the lower part of the band to prevent the insects from getting under it. If this be done, the whole band can be torn off at any time without trouble. As against the Codlin moth the "Raupenleim" cannot be successfully applied. As against borers it may be successfully applied at the base of old peach trees or old apple trees. Experiments have shown that it should not be applied to young trees, and particularly not to young peach trees. It is to be noted in this connection that it is not improbable that the material will act differently in some of the dry western regions, from our experience in the east. The substance cannot be used in California without danger to the trees. Professor Gillette thinks that in Colorado it should never be applied directly to the bark; but that it can be used there by interposing a band of paper. Just how the material may act in Kansas it is not possible to say without experiment, and I would advise a limited use of it only until its action is understood. I believe it to be a very useful material for certain purposes; but its use is still in the experimental stage.—J. B. SMITH, Rutgers College, N. J.

Potting Roses.

[In setting out grafted Rose bushes in pots; should roots as well as tops be pruned? What size pots would be required? How long should the plants take to root, before bringing into greenhouse to force for spring trade?—W., Westfield, N. J.]

—Do very little if any trimming on the roots, the shifting itself is check enough. Such stock should already be potted up, and in a cool house getting settled and established.

Rooting Carnations.

[I find some difficulty in rooting Carnation and some other cuttings; they seem to damp off, but on examining the decayed cuttings, I find them covered with a number of little worms, so small that they can scarcely be seen with the naked eye. They are white and thread-like. Are they in the sand or in the cuttings, or do they cause the trouble?—J. C., Del.]

—We have always considered the presence of the insects spoken of, as the consequence of the disease and not the cause, believing that they find a home in decaying vegetable matter; and if the worms are in the sand it is because of the presence of such matter, in some farm or other. Perhaps it was not clean, having soil or dirt in it. Try sharper and more gritty sand, and if for anything important wash the dirt out of it, and then dry it on the top of the furnace or hot pipes before using.

Persian Ranunculus.

[Having tried to grow Persian Ranunculus in pots, and not having been successful, would like to get some information as to what they require in outside cultivation.—J. H., Mass.]

—The Asiaticus section, or Hardy Tuberous Rooted class of Ranunculus does not thrive as pot plants under any treatment. The soil it best likes outdoors is a good rich loam.

Heating Trouble.

(To Jack.)—The trouble most likely is too much fire surface for the amount of piping to be heated, consequently it heats very rapidly—a difficult matter to prevent in such cold weather. We cannot think of any plan to prevent it except to put on another pipe and to coil the feed pipe to the boiler, and carry your escape pipe out through the gable, to prevent damage from a possible overflow of hot water. To have so much hot water escape as you speak of is a loss of heat and fire; a little extra piping would reduce this.

Lily of the Valley.—(To W., Westfield, N. J.)—Read the directions given in previous issues, for instance, page 810, Dec. 19 last.

Lettuce Culture.—(To J. M., Mass.)—We refer you to the extended articles in Vol. XVI., 1895, pages 89 and 135, where the subject is very fully treated.

Fertilizer Making.—G. B. R., Me.—We cannot devote space to the discussion of manufacturing fertilizers for commercial use, which is indeed entirely outside our scope, but stand always ready to advise on matters of their application and use.

Back Numbers.—Jack.—The numbers you ask for can be had, and will be sent on receipt of price, 25c.

OWING to pressure on our columns, the descriptions of two wonderful Novelty Premium Offers are unavoidably omitted:

YELLOW RAMBLER ROSE (Aglaia) NEW HYBRID SWEET BRIARS

One Yellow Rambler Rose, out of 2½ inch pot, for one new subscription to AMERICAN GARDENING.

Two Lord Penzance New Hybrid Sweet Briars, out of 2½ inch pots, for one new subscription.

IF YOU ARE INTERESTED WRITE US FOR FULL PARTICULARS.

\$1.00 THE CHAMPION OFFER \$1.00
OF THE SEASON.

ELLIOTT'S \$1.00 COMBINATION!

AS FOLLOWS:

Eighteen Full Packets Choice Flower Seeds, value \$1.50

And, by special arrangement with the publishers,

Am. Gardening, one year, NEW names only, " 1.00

Total value, - \$2.50

\$1.00 under the terms of this offer, therefore, gives you AMERICAN GARDENING, the brightest gardening paper issued, one year, and sufficient seed to start a goodly sized garden with some to spare for your friends. We look for thousands of responses to this the greatest bargain of the season.

THE SEEDS OFFERED

are not of the cheap varieties which one finds advertised and described in glowing terms in all the papers at this time, but are full-sized packets, of the most reliable sorts, such as we put up for the Trade. There is not one cent of profit to us in this offer; in fact we lose money on every order we fill, but in these days it is necessary to make some sacrifices to promote business. We want to obtain new patrons to whom to send our 1897 catalogue, and take this method as the most direct means to accomplish same.

THE FOLLOWING IS A LIST OF THE PACKETS:

Alyssum, Sweet. Good border plants.	Cosmos, mixed. The pride of the Fall in the open garden.	Petunias, in superb mixture.
Asters, fine mixed. Select strains.	Larkspur. Fine for mass planting, the herbaceous border, or a rock garden.	Phlox Drummondii, choicest strain, elegant for bedding.
Balsam, Lady's Slipper. Finest double mixed.	Marigold, French varieties.	Poppy, Elliott's mixture, double flowering.
Calendula. Needed in every garden.	Mignonette, most fragrant of all plants.	Sweet Peas, in mixture, including all the standard varieties.
Candytuft, mixed.	Nasturtium, assorted colors.	Ricinus, Castor Oil Plant. For sub-tropical effect, very showy.
Carnation Marguerite, Mixed. A genuine novelty for the garden.	Pansies, Giant strain, assorted colors.	
Batchelor's Button. The German Emperor's favorite flower.		

The above collection is all of choice, fresh seed, in full packets, such as retail at Ten Cents each, and is not made up of cheap, unreliable or worthless stock. Our reputation in the seed trade for the past Fifty years is our voucher.

If you are already a subscriber to AMERICAN GARDENING, but want the above collection, it will not take you ten minutes to obtain the subscription of some one interested in gardening. Send in this new name, together with \$1.00, money order preferred. Orders filled without delay. Paper and seeds sent to separate addresses when so requested. Address

WM. ELLIOTT & SONS, SEEDSMEN, 54 Dey St., New York.
Est. 1846.

OUR PREMIUMS ARE OFFERED

with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

Offer No. 1.

STRAWBERRIES

Your choice of 50 plants in any two varieties below mentioned, 25 of each. Sent postpaid for one new subscription. Plants guaranteed to arrive in good condition. Plants grown in New York. Order by Offer No. and Letter.

A Beder Wood (B)	J Jessie (B)
B Bubach (P)	K Haverland (P)
C Crescent (P)	L Michel's Early (B)
D Chas. Downing (B)	M Lovett (B)
E Cumberland (B)	O Sharpless (B)
F Eureka (P)	P Warfield (P)
G Gandy (B)	R Wilson (B)

H Greenville (P)

Grower states: "I only grow the varieties I find the best for all purposes; many hundreds offer no improvement on the standard sorts now in use. Two of the finest varieties for family use are Greenville and Beder Wood, or Bubach and Beder Wood."

Offer No. 3.

STRAWBERRIES

Plants raised in Ohio. This was one of our most taking offers in 1896, and we hope to see its success duplicated this year.

No. A—50 Brandywine (B)
No. B—50 Staples (B)
No. C—50 Cyclone (B)
No. D—50 Marshall (B)
No. E—50 Greenville (P)
No. F—12 plants each of Brandywine, Staples, Cyclone, Marshall and Greenville. In all 60 plants.

For one new subscription, your selection of any one of the above offers will be sent postpaid. Order by Offer No. and Letter.

If the plants are ordered by express, receiver to pay charges, the grower will **DOUBLE** the number of plants above offered.

A book on transplanting and caring for all kinds of plants, free with each order.

Offer No. 4.

STRAWBERRIES

Grown in Michigan. Any one of these three collections will be sent postpaid for one new subscription:

Collection A.

12 Clyde (B) 6 Glen Mary (B)
12 Wm Belt (B) 12 Enormous (P)

Collection B.

12 Brandywine (B) 12 Mary (P)
12 Satisfaction 12 Marshall (B)

Collection C.

One hundred (100) plants of the following varieties, not less than 25 plants of one kind: Brandywine, Beder Wood, Bisel, Barton's Eclipse, Cyclone, Crescent, Columbian, Eleanor, Gandy, Greenville, Gov. Hoard, Haverland, Iowa Beauty, Jessie, Lovett, Muskingum, Michel's Early, Parker Earle, Princeton Chief, Princess, Staples, Sherman, Saunders, Smelter's Early, Tennessee Prolific, Van Deman, Warfield, Wilton and Woolverton.

Plants will be large, well rooted, true to name, and guaranteed to reach their destination in good growing condition. Orders filled soon as spring opens up.



Offer No. 6.

STRAWBERRIES

15 Plants Marshall (B) and
15 " Brandywine (B)

By mail, postpaid, for One New subscription. This collection can be implicitly relied upon as being true to name and of the very best grade of stock. Raised in New York.

Offer No. 7.

STRAWBERRIES

12 Ima (P) New.....50c.
(A new seedling of great promise.)
12 Cumberland (B).....25c.
12 Dayton (B).....25c.
12 Gandy (B).....25c.

This entire collection of 48 plants, valued at \$1.25, will be sent, postpaid, for one NEW subscription to AMERICAN GARDENING. Plants raised in Ohio.

Introducer's Description of Ima.—"A seedling of great merit, and a berry which, having carefully watched for the past four years, we are now convinced deserves to be enrolled among the worthy members of the strawberry family. In ripening it is about midway between the early and late varieties. It is a long pointed berry. It will ripen quickly and perfectly all over. In color, a beautiful bright red, and in size equals the Crescent or Warfield. It is a strong grower and as large a producer as any variety we have ever fruited. To sum up its meritorious points, it is perfect in color, shape, and flavor; a good shipping berry of large size and very fruitful. A profitable berry for the fruit grower to raise."



Offer No. 16.

STRAWBERRIES

75 Plants Greenville (P)

Raised in Ohio. Mailed, postpaid, to any address for One New Subscription:

Berries of large size, good quality, medium texture, very productive, season medium to late, color very even and fine, flowers pistillate, plants very vigorous and free from rust. A first-class market berry and good enough for home use.

Offer No. 18.

COLLECTION OF 125 STRAWBERRIES

Good plants and named. Delivery postpaid, on and after April 1. Plants raised in Maryland.

Meek's Early (B.)
Baltimore.
Sharpless (B.)
Levianth.
Kentucky Late.

Grower says: Kentucky Late is a berry that is largely grown here for market and shipping purposes, coming in after the glut of other varieties is over; it is a very late berry, extending the season sometimes two weeks.

Levianth, very large, vigorous grower, suitable for family use where an extra-sized berry is looked for; fruit rather tender.

Offer No. 51.

LOUDON RED RASPBERRY.

Five (5) Plants for one new subscription at \$1.00.

This Red Raspberry is pronounced by Mr. Thayer and other leading horticulturists as the best of all reds for the East and West. It was originated by F. W. Loudon, of Wisconsin, originator of Jessie Strawberry.

Offer No. 5.

STRAWBERRIES

Your choice of fifty (50) plants, in two varieties, 25 of each, or 50 of any one variety. Free by mail for one NEW subscription.

A.—25 Brandywine	H.—25 Tennessee
B.—25 Murray's Extra Early (P)	Prolific (B)
C.—25 Michel's Early	L.—25 Cyclone (B)
D.—25 Lovett (B)	J.—25 Bisel (P)
E.—25 Isabella (B)	K.—25 Greenville
F.—25 Rio (B)	(P)
G.—25 Lady Thompson (B)	L.—25 Sunnyside (P)
	M.—25 Weston (P)
	N.—25 Staples (B)

Order by Offer No. and Letter.

The above collection is a good one, and are all standard sorts, embracing the earliest and latest varieties. All nice plants and true to name. Raised in Virginia.

Rio is a fancy berry for early, and one of the best shippers; planted beside Bisel they make a splendid variety to ship together.

Offer No. 15.

STRAWBERRIES

25 Brandywine (B)
25 Staples (B)

This collection will be sent postpaid to any address in the United States for one new subscription. Guaranteed to reach customers in good condition. Plants are extra rooted, and positively true to name. Will be mailed at any time after April 10. Plants raised in Ohio.

Offer No. 13.

STRAWBERRIES

Below mentioned collection of 36 Fine Plants will be sent, postpaid, for one new subscription. Grown in Maine.

New Seedling No. 4, 12 plants.
12 plants of the celebrated Brandywine,

And your choice of 12 plants of any one of the following most popular standards: Bubach, Haverland, Warfield, Beverly, Parker Earle, Lovett, Princeton Chief.

Of Seedling No. 4, grower says: This is of exceedingly fine quality—the best of anything I have ever tasted, and so say they all who have sampled it. Good form, medium size, very productive, and a most remarkably strong and healthy grower. An A1 family berry, and a grand one for a nearby fancy market that appreciates quality. It has a pistillate blossom. Those who avail themselves of the present opportunity to procure this grand berry will be among the wise as, in the course of two years' time, it is likely to be introduced under name at \$2 per dozen.



Grower offers 36 plants in all, in three varieties packed in the best manner, for delivery in April or May, and says: These plants of standard varieties must not be confounded with the common commercial article, but comprise carefully selected stock that has been built up by an attentive selection of the best individual plants each year, for five consecutive years, by one of the most noted growers of fancy strawberries in the Eastern States.

Offer No. 21.

STRAWBERRIES

Your choice of twenty-four (24) plants in two varieties, twelve (12) of each, or 25 of any one. Free by mail for one NEW subscription. Raised in Virginia.

12 Mary (P)	12 Aroma (B)
12 Edith (P)	12 Pride of Cumberland (B)
12 Splendid (B)	12 H. W. Beecher (B)
12 Enormous (P)	
12 Wm. Belt (B)	

The above comprise some of the largest berries in cultivation, particularly Edith. These are all nice plants and true to name.

Offer No. 26.

STRAWBERRIES

Raised in Pennsylvania. Subscriber's choice of any one of these varieties sent postpaid for one new subscription. Order by Offer No. and Letter.

A-15 Glen Mary (P)	I-20 Ideal (B)
B-15 Clyde (B)	J-20 Oriole (P)
C-25 Michigan (B)	K-20 Howell's No. 2
D-25 Wm. Belt (B)	L-10 Plow City (B)
E-25 Champion of England (B)	M-60 Brandywine
F-25 Equinox	N-60 Enormous (P)
G-25 Sparta (B)	O-60 Bisei (P)
H-25 Murray	P-60 Staples (B)
	Q-35 Gertrude

All plants to be freshly dug and well packed in moss; all inferior plants discarded and only the best sent.

Offer No. 9.

STRAWBERRIES

For One New Subscription at \$1.00. Plants raised in Indiana. Order by Offer No. and Letter.

- A.—Postpaid, six plants Ridgeway.
 B.—Postpaid, three plants Ridgeway, three plants Tennyson, three plants No. 1000, six plants Parker Earle.
 C.—Postpaid, three plants Ridgeway and one dozen plants, one variety. Your selection from this list: Brandywine, Clyde, Annie Laurie, Jersey Queen, Aroma, Moore's Prolific, Mary, Premium, Berlin, Tubbs, Parker Earle, Holland, Gen. Putnam, Dew, Columbian, Tennessee Prolific, Lady Thompson.
 D.—Postpaid, three dozen plants, not less than one dozen of a kind, any variety named in C, the Ridgeway excepted.
 E.—By express, at purchaser's expense, three plants Ridgeway, and 100 plants, not more than two varieties. Your selection from this list: Brandywine, Clyde, Dew, Holland, Gen. Putnam, Jersey Queen, Columbian, Lady Thompson, Tennessee Prolific, Annie Laurie, Staples, Parker Earle, Splendid or Isabella.

This is the first season the Ridgeway will be placed on the market, consequently our readers are given an opportunity to be among the first in the cultivation of the promising berry. Description is as follows:

Ridgeway.—Plant large and stocky, possessing the ability to make a large number of strong, healthy plants. Leaf large, broad, heavy and dark green in color. Blossom perfect, a good pollenizer for pistillate varieties, as it remains in bloom for a long time, an ideal plant.

Berry large to very large, the typical form nearly round, largest specimens broadly ovate, but always smooth. Color, as it grows at Rocky Glen, bright glossy crimson, with golden seeds. Firm for so large a berry, and will stand shipping to distant market, except in a very wet time. Quality as good as the best, an almost ideal berry, one that will command fancy prices on any market or suit the most exacting grower, who wishes the very best for his own use and pleasure.

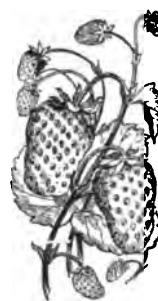
Orders will be filled as early in the spring as conditions are favorable for shipping.



Offer No. 22.

STRAWBERRIES

50 Plants Fountain Strawberry. Raised in Michigan. Sent, postpaid, for one new subscription.



One of the later introductions that is receiving much praise. The Fountain is described as large and handsome, of a deep, glossy, red color, flesh red and solid to the center. Firm and productive. Plant large, vigorous, healthy and hardy, with a perfect blossom. The grower who offers this variety states that it is one of the best all around good berries in his collection of over 100 varieties, and one that is likely to be in great demand in the near future as a choice shipping variety.

Offer No. 23.

STRAWBERRIES

Grown in Michigan. The following collections are offered, postpaid, for one new subscription:

Collection A.	
12 Beder Wood (P)	12 Greenville (P)
12 Lovette (B)	12 Haverland (P)
12 Woolverton (B)	

This collection will be sent as advertised, or will give subscriber the choice of 75 of any one of the above varieties.

Collection B.

25 plants Gold Standard (B).

Grower says: This is a strong growing variety, large round leaves, free from rust, one plant weighs as much as two common plants. The fruits averages from one to one-and-a-half inches, light red in color, and the sweetest berry we ever tasted. Season late. Strongly staminate.

Offer No. 27.

STRAWBERRIES

Your choice of any one of the below mentioned collections, postpaid, for one new subscription. Raised in Ohio.

A-25 Greenville and 15 Lovett.
B-40 Lovett or 40 Dayton Early.
C-20 Bubach No. 5 and 20 Jessie.
D-40 Warfield and 20 Cumberland.
E-20 Haverland, 10 Dayton, 10 Parker Earle.

In the above collections when one is a pistillate sort the other is a perfect bloomer, so that they can be planted together perfectly.

Offer No. 28.

STRAWBERRIES

This collection will be sent for one new subscription. Plants raised in Wisconsin.

25 Plants Sparta.
 6 " Thayer's No. 5.

The Sparta is Wisconsin's premium berry (staminate), very large, beautiful in color, and a great favorite with M. A. Thayer, who introduced it. Thayer's No. 5 is a new seedling, originated on the Thayer Fruit Farms, and this year for the first time sent to any one.

Offer No. 29.

STRAWBERRIES

Sent postpaid for one new subscription. Plants raised in Michigan. Strictly first-class plants, mailed same day they are dug, put up in sphagnum moss, wrapped in oiled paper to retain moisture. Your choice of two kinds, 18 of each; or 25 plants, one kind, good count. No orders filled after April 15th. I offer the following varieties:

Brandywine (B)	Splendid (P)
Greenville (P)	Bisei (P)
Bubach No. 5 (B)	Lovett (B)
Parker Earle (P)	Jessie (B)
Haverland (B)	

Offer No. 24.

STRAWBERRIES

A-50 Plants Brandywine (B)
B-12 " Bismarck (B)
C-24 " Wm. Belt (B)

Order by Offer No. and Letter. Subscriber's choice of any one of these three varieties for one new subscription. All first-class and new varieties. Grown in Michigan.

Offer No. 25.

STRAWBERRIES

We will send Twelve (12) plants, two each of the following varieties: 2 Carrie; 2 Earliest, the earliest berry yet introduced; 2 Equinox, the latest; 2 Clyde, one of the earliest, will do better where land is not too rich; 2 Belle; 2 Evans. One dozen in all of these choice novelties. Select plants and guaranteed true to name. Raised in Virginia. Sent, postpaid, for one NEW subscription.

Offer No. 30.

STRAWBERRIES

Your choice of any one of the following offers, postpaid, for one new subscription. Order by offer No. and Letter. Plants raised in Maryland.

A-4 Hall's Favorite (new).	F-30 Tenn. Prolific.
B-25 Brandywine.	G-35 Warfield, No. 2.
C-30 Haverland.	H-30 Tubbs.
D-35 Hoffman's.	J-15 Ideal.
E-35 Lady Thompson.	K-25 Bubach, No. 5.

Two plants of Hall's Favorite are included in every offer from B. to K.

Grower describes Hall's Favorite as follows: The coming new strawberry. It defies competition. Better than Bubach No. 5.

Offer No. 31.

STRAWBERRIES

Plants raised in Iowa. The below collection will be sent, postpaid, for one new subscription.

One hundred plants of either Haverland, Enhance, Greenville, Beder Wood or Tennessee Prolific, or twenty of each of the above five varieties.

Offer No. 50.

THE COMPLETE VEGETABLE GARDEN.

Plants all ready to set out.



All good plants. Grown in Maryland. Delivery April 15, postpaid. This is an offer we are not able to make our friends every week in the year, and we will be mistaken if this Bargain is not taken advantage of by thousands.

12 Peppers, two kinds.
12 Egg Plants.
12 Cauliflower Snowball.
12 Tomatoes, two kinds, select.
50 Cabbage or Sweet Potato Plants.
50 Lettuce, two kinds.

148 choice vegetable plants, and AMERICAN GARDENING one year, to a NEW name, for only \$1.00.

OUR PREMIUMS ARE OFFERED

with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will,) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

Offer No. 54.

THAT GRAND NEW SINGLE VIOLET PRINCESS of WALES



Away and beyond the best of all the single varieties lately introduced. The Queen of Single Violets. Fragrance equal to Marie Louise. Blooms very large, strong grower and productive. Grower, who is one of our most renowned violet experts, will send, postpaid, for one new subscription,

Eight (8) good rooted plants, with some flowers accompanying same; carefully packed for safe arrival. Plants ready Feb. 15. Grown in New York.

Offer No. 43.

DAHLIAS

The recent revival of interest in this most worthy class of plants, coupled with the introduction of many new and interesting varieties, renders it incumbent on every one to see to it that their garden is supplied with the best obtainable.

Any one of the three collections here offered will be found up-to-date and choicest kinds, and as they come from celebrated growers and prize winners, we can assure our friends we are offering them a remarkably good thing and trust they will not be slow to take advantage of one or more of these offers.



A—Four Superb Cactus Dahlias.

One strong root each, Wm. Agnew, Oriental, Nymphs and Zulu, by mail, postpaid, for one new subscription.

B—Four Show and Fancy Dahlias. (Dwarf)

One strong root each, New Double Tom Thumb, Arabella, Blumen-falter and Lucy Faucett, by mail, postpaid, for one new subscription.

C—Four Pompon or Bouquet Dahlias.

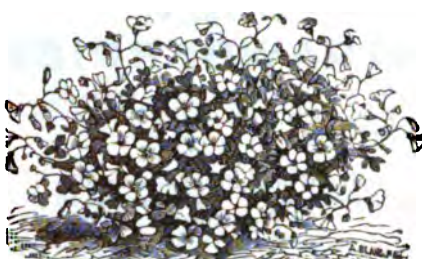
One strong root each, Elegante, Sprig, Ariel and Vivid, by mail, postpaid, for one new subscription.

Any one of these collections is worth over \$1.00 at retail, but will be sent postpaid, carefully packed, and guaranteed to arrive in first-class condition for one NEW subscription to AMERICAN GARDENING at \$1.00 order by Offer No. and Letter.

Offer No. 49.

Sent, postpaid, for ONE NEW subscription at \$1.

SUMMER BEDDING 150 OXALIS BULBS



These bulbs make beautiful borders for summer flower beds, as well as attractive pot plants. The collection includes 150 Bulbs in equal proportions of the four following varieties, named, and in separate packets:

OXALIS DEPPEI ALBA.—White.
OXALIS DEPPEI ROSEA.—Old rose or salmon.
OXALIS ERYTHILLA PURPUREA.—Purple.
OXALIS LASLANDRA.—Crimson. Tall, fine palmate leaves.

Offer No. 48.



Every Gardener Needs a

....GOOD GOOSEBERRY....

And, we will send two one-year plants, of the best new variety known, for one new subscription; safe delivery guaranteed.

THE PEARL GOOSEBERRY.

Read what the Introducer has to say: "The Pearl is a gooseberry grown from the seed of Houghton, crossed with Ashton seedling, by Prof. Wm. Saunders, and worthy of special notice because (1) of its good quality; (2) its size; (3) its productiveness; (4) its freedom from mildew. As a result of my observation I find the quality good, very much like the Downing in this respect, as well as in color marking; but in size it averages nearly double that berry; and that in spite of the prodigious crop under which the bushes are laden. There was a row of some sixty fine bushes one year planted, and most of them were literally bent to the ground with heaps of fruit. The average was eight berries per inch of wood, and on one bush we estimated that there must have been 2,500 berries. Should this productiveness prove constant the berry will be of great value for the market. With regard to the mildew, all I can say is what I have seen, namely: After seven years of trial I have never found any trace of mildew."

Offer No. 57.

Collection of Flower Seeds



Sent, postpaid, for one new subscription to AMERICAN GARDENING. The following list embraces 16 varieties of choice flower seeds; fresh and true to name, eight of which are of 5 cent packets, six of 10 cent packets, and two of 15 cent packets; valued in all at \$1.30. This collection is offered by a reliable grower, in whom we have full confidence.

Alyssum, Sweet	Nasturtium, Dwarf
Asters, mixed	mixed
Cosmos, Large	Poppy, Carnation
Flowered	flowered, mixed
Calendula, Price of	Sweet Peas, Eck-
Orange	ford's mixed
Calliopais, mixed	Heliotrope
Datura, Double,	Larkspur, Dwarf,
mixed	double
Carnation Marguer-	Cobaea Scandens
ite, finest double	Zinnia, Double,
mixed	mixed
Mignonette Machet	Lobelia compacta

Offer No. 42.

For one NEW subscription at \$1.00, receiver to pay express charges, or by mail, postpaid, for \$1.25.

....ONE YEAR OLD.... 25 NIAGARA GRAPE VINES

Comment on this offer is unnecessary, beyond stating the fact never before was such an opportunity offered to start a vineyard at so small an outlay.

Offer No. 40.

THE COMPLETE

Flower Garden



This is a collection which everybody should be sure to obtain. It only requires one NEW subscription to become the possessor of all the plants here mentioned. Ready for delivery May 1st. Postpaid. Grown in Maryland. Save time growing from seed and get this lot all ready to set out.

10 Antirrhinums, choice mixed.	10 Phlox Drummondii, mixed.
10 Asters, mixed.	10 Marigold Eldora.
10 China Pinks, mixed.	10 Scabiosa, mixed, choice.
10 Cosmos, choice mixed.	10 Zinnias, mixed, choice.
10 Petunias, mixed.	10 Scarlet Sage.

100 Choice Flowering Plants and AMERICAN GARDENING, one year, to a NEW name, for only \$1.00.

Offer No. 43.

COLLECTION OF ROSES.

From Maryland. Strong 2-inch pot grown



p'lants. Delivery on and after April 1, postpaid.

One Crimson Rambler

One Perle
One Safrano
One Mme. Camille
One Marie Guillot
One Niphetos
One Bridesmaid

One Meteor
One Papa Gontier
One Hermosa
One La France
One Bride

Surely the good things of this earth are open to everyone who exhibits a little energy. Realize you can obtain the above set of Twelve Magnificent Roses as a premium for one new subscription to AMERICAN GARDENING, and that it will not take you more than a few minutes' work to accomplish this, then send and get your reward.

Offer No. 41.

GREENVILLE APPLE.

(Downing's Winter Maiden Blush).

For one new subscription we will send by express, receiver to pay charges,

Four 3-Year-Old Plants.



Read the description: This fine apple was produced from seed of the Fall Maiden Blush by Jason Downing, in Darke County, O., in the Spring of 1774. It made a vigorous growth, and at the age of 7 years it bore some excellent fruit, from which time it has produced fruit annually. The originator states that in 1888, at the age of 14 years from seed, it yielded 15 bushels of picked apples. Grower has been noticing the behavior of this apple for the past 10 years, growing it both in nursery and orchard, and from the weight of testimony in its favor, has decided to grow it in quantities to supply the increased demand. Description: Fruit large, irregular, sometimes flattened, and at other times slightly elongated, inclining to conic; generally angular, skin light waxen yellow, with a bright red cheek in the sun; stock short, usually projecting half as high as cavity, though in a few specimens it projects to its surface and beyond, inserted in a deep cavity, often surrounded with russet; calyx small, basin of moderate depth, flesh yellowish, crisp, tender, juicy, with a very pleasant, mild, sub-acid flavor. It has a fragrant odor; quality very good. Season, December to April. Tree a good grower and bearer.

Offer No. 53.

HARDY EVERGREENS.



Your choice of any one of the below offers of Hardy Evergreens for one NEW subscription. This is a great big offer for the money, and invaluable to any one wishing to set out a young plantation. Plants from Illinois.

- A-50 Scotch Pine, 6 inches.
- B-50 White Pine, 4 inches.
- C-50 Norway Spruce, 3 to 4 inches.
- D-50 American Arbor Vitae, 4 inches.
- E-25 Red Cedar, 4 inches.
- F-25 Hemlock Spruce, 4 inches.
- G-15 Blue Spruce, 4 inches.
- H-25 Douglas Spruce, 4 inches.
- J-15 Picea Concolor, 4 inches.

Offer No. 58.

CHRYSANTHEMUMS

This collection comprises a very fine assortment of eleven standard large flowering varieties, from 2 1/2-inch pots, good plants, and will be sent, postpaid, for one new subscription; plants grown in Maryland. Ready for delivery on and after April 15. These plants will do well outdoors in mild climate, whilst in more exposed sections to bring them to full maturity in the fall they should have partial shelter.

Mdme. F. Bergmann.—The earliest of all large varieties; color white, of great excellence.

Ivory.—A popular favorite; very dwarf and free flowering.

Miss Minnie Wanamaker.—Pure white Japanese; one of the standard varieties.

Golden Wedding.—The most exquisite yellow Japanese extant.

Eugene Dailledouse.—Monster flowers; yellow Japanese.

W. H. Lincoln.—The champion late flowering yellow; a grand variety.

Col. W. B. Smith.—Japanese incurved bronze.

Mrs. J. G. Whilldin.—Earliest of the Japanese yellows. In flower same time as Mdme. F. Bergmann, Oct. 4 to 7.

V. H. Hallock.—Color rosy pearl; Japanese.

Maud Dean.—The most charming pink Japanese ever introduced; a good market variety.

Cullingfordii.—A reflexed variety of good reputation; color deepest crimson.

Offer No. 61.

COLLECTION OF

VEGETABLE SEEDS.



true to name, and reliable. We feel assured the grower will fill this order to your very complete satisfaction.

Beet, Eclipse.

Bean, Bush Refugee.

Cabbage, Premium

Flat Dutch.

Carrot, Henderson's

Intermediate.

Celery, Henderson's

1/2 Dwarf.

Corn, Crosby.

Cucumber, White

Spine.

Lettuce, Tennis Ball.

Musk Melon, New

Hackensack.

Parasip, Long

Smooth.

Peas, Alaska.

Radish, White Tipped

Turnip.

Spinach, Thick

Leaved.

Squash, Bush Crook

Neck, Yellow.

Squash, Boston Mar-

row.

Tomato, Early Ruby.

Burpee's Bush

Lima.

Offer No. 46.

THE CELEBRATED

GREEN MOUNTAIN GRAPE

One 2 or 3 year vine and one 1 year vine; two vines in all. Sent, postpaid, for one new subscription.



The Celebrated Green Mountain Grape is fast coming to the front and is bound to stay. It is acknowledged to be the earliest good grape on the market. It is the most delicate and delicious grape grown out of doors. It is a strong-growing, healthy vine, an enormous and early bearer, with well shouldered and handsome bunches.

No one grape possesses so many merits as the Green Mountain. The firm making this offer are headquarters for this vine and have over an acre out as a vineyard.

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE

CHRYSANTHEMUMS

NEWEST, EARLIEST, BEST.

In Splendid Assortment of Varieties,



Forms, Substance and Color.

Mrs. Higginbotham. Best of all Ostrich Plumes.
Gloriana. The pretty twisted petalled yellow.
Marie Louise. A grand white.
Pitcher and Manda. A variety of two colors.
Kate Brown. Earliest and best for the garden.
Pres. Smith. A robust pink.
Silver Cloud. Pale salmon.
G. W. Childs. Finest of the reds.
Major Henshaw. The best yellow.
Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

ELLIOTT'S SEED

ANNUAL FOR 1897.

Now Ready. Mailed free on application, by only mentioning AMERICAN GARDENING.

WM. ELLIOTT & SONS,
54 & 56 Day Street, NEW YORK.

Mention American Gardening when you write.

KOSS' SEEDS

Our German and English Catalogue Free to all who need seeds, no matter how much. Wholesale list for Market Gardeners and Truckers. Address THEO. KOSS, 361 Reed St., Milwaukee, Wis. Dealer, Grower and Importer.
Wanted, a few good salesmen.

Mention American Gardening when you write.

THE BEST SEED POTATOES

And Farm Seeds are grown on . . . Michigan New Muck Lands by **HARRY N. HAMMOND, —SEEDSMAN—** —SEEDSMAN—
Largest grower of seed potatoes in America. Prices low. Write him for illustrated catalogue. Free to all. Describes how he grew over 750 Bush. Mamie's Thoroughbred per Acre.
Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.
Mention American Gardening when you write.

Seeds! Seeds!

73d Annual Priced Catalogue of **VEGETABLE, FARM AND FLOWER SEEDS** is now ready and mailed Free to all applicants.
BRIDGEMAN'S SEED WAREHOUSE,
37 East 19th Street, - New York City.
Mention American Gardening when you write.



TRY DREER'S GARDEN SEEDS

Plants, Bulbs and Requisites. They are the best at the lowest prices. Calendar for 1896 mailed free. Address

HENRY A. DREER,
714 Chestnut St., PHILA.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION.

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

THE RULE OF THREE.

Our 1897 CATALOGUE OF SEEDS, PLANTS AND BULBS, prettily illustrated with photo-engravings and pen-drawings from nature; prices lowest for best stock grown.

A superb collection of FIFTY DISTINCT VARIETIES of Flower Seeds; includes a choice selection of Asters, Chrysanthemums, Sweet Peas, Forget-Me-Nots, Pansies, Morning Glories, Nasturtiums, Castor Oil Plant, Sensitive Plants, Poppies, etc., etc.; a collection that will turn any home-garden into a beautiful show of rainbow hues, and furnish a unique study in the many colors and forms of plant life.

ORDER YOUR COLLECTION AT ONCE AND SHOW THIS ADVERTISEMENT TO YOUR FRIENDS.

PITCHER & MANDA, JOHN N. MAY, Short Hills, N. J.
RECEIVER.

Mention American Gardening when you write.

MARKET GARDENERS

GET MY PRICES BEFORE YOU BUY. Catalogue Free.

Try Battles' Early Favorite Cauliflower, Trial Packet. 10 cts.

GROWER OF FARM AND GARDEN SEEDS.

✱ **FRANK H. BATTLES, Rochester, N.Y.**

Mention American Gardening when you write.



Buy direct and pay but one profit. No nursery carries a more complete assortment of the best in

Fruit and Ornamental Trees, Shrubs, Plants, Roses, Vines, Bulbs, Seeds.

Don't buy trash. Don't pay two prices. But send for our free catalogue today, it tells it all, an elegant book of 168 pages prettily illustrated. Seeds, Plants, Bulbs, Small Trees, etc. sent by mail postpaid. Larger by express or freight. Safe arrival and satisfaction guaranteed. 43d Year, 32 Greenhouses, 1000 Acres.

THE STORRS & HARRISON CO.,

Box 120, PAINESVILLE, OHIO.

Mention American Gardening when you write.

years ago Socrates said

"GARDENING is the source of health, strength, plenty, riches and honest pleasure." For a successful garden you want the best seeds that grow. Our **GARDEN AND FARM MANUAL** tells all about them. It is free to seed buyers. Write now.

JOHNSON & STOKES, 217 and 219 Market Street, PHILADELPHIA, PA.

Mention American Gardening when you write.

WE OFFER AMONG MANY NEW THINGS

The Blumarch Apple—Bears splendid fruit on 2-year grafts. A remarkable new fruit.
Hedysarum Multijugum—A new Mongolian Shrub of great beauty.
Lord Penzance's Hybrid Sweetbriars—Worthy a place in every garden.
Viburnum Tomentosum—We consider this the finest shrub grown. Very rare.
Picea Concolor—An improvement on the Blue Spruce.
The Weeping Spruce.
Clematis Panticulata—Without an equal as a hardy climber, 30 cts.
Magnolias, Japan Maples.
The best stock of Herbaceous Perennials in the country.
Rhododendrons and Azaleas at lowest prices quoted.

For all these, and full advice and plans for planting grounds and gardens, write us.
New Catalogue mailed for 10 cts.

THE SHADY HILL NURSERY CO., 102 State St., Boston, Mass.

Mention American Gardening when you write.

Seeds to Burn Landreth's Seeds

FOR A PERIOD
OF SIXTEEN YEARS
THE PURCHASERS OF

have been protected by our Dated Papers, and our BURNING SYSTEM, which gives your Local Merchant the Privilege of Burning his Stock Left Over at the end of the season, thus assuring to his customers Fresh Seed Every Year. D. Landreth & Sons are not Seed Merchants depending upon others for their supplies, but are Seed Farmers and Grow their Own Stocks from the Most Perfect Types and under the experienced eye and direction of members of the Firm. This work has been going on since 1784, and the business is now conducted by the Third and Fourth Generations. This in itself is a Guarantee that the Seeds are as good as seeds can be made. Ask your local Merchant for LANDRETH'S. Observe the Date on each Packet, and if he does not keep Landreth's on sale, send us a Postal for our CATALOGUE which contains Truthful Descriptions and Sound Practical Information and we will fill your order direct from headquarters.

Address, **DAVID LANDRETH & SONS, Seed Farmers, Philadelphia, Penna.**

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 112.
COMBINED SERIES VOL. LI.

NEW YORK, FEBRUARY 13, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Amaryllis.....	114	Carrots.....	107	Inquiry Department.....	118	Registration Bureau.....	106
Apples Down South.....	110	Cauliflower.....	107	Lime and Poultry.....	114	Requisites.....	107
Chrysanthemum Lottie D. Berry.....	109	Cucumbers.....	107	Manure for Fruits.....	107	Scale and Thrip.....	118
Arctic flora.....	106	Egg Plant.....	107	Market Reports.....	115	Societies Reported.....	116
Asparagus, Field Planting.....	118	Forcing House.....	107	Novelties Noticed.....	108	Strawberries in Matted Rows.....	105
Bailey, Prof. L. H.....	110	Fruit Garden.....	107	Peppers.....	107	Strain of Seed.....	107
Blackberries.....	107	Fruit Growers of W. N. Y.....	111	Plant Beauty.....	106	Tomatoes.....	107
Cabbages, Tests on.....	107	Gardeners' Mission.....	116	Poultry Notes.....	114	Tools, Quality of.....	110
		Home Plot.....	114	Private Gardeners.....	116	Vegetable Garden.....	107
				Pruning, Winter.....	107		

Illustrations.

Begonia Vulcan.....	109
Biota aurea nana.....	108
Cyclamen, Double.....	109
Daisy, Giant.....	108
Helianthus, New.....	108
Poppy, Double White.....	108
Rudbeckia, Golden Glow.....	108

Strawberries in Matted Rows.

It strikes me that friend Greiner's "Some Notes on Fruits" in your issue of January 30, are somewhat misleading in relation to strawberries when it is said, "in order to have a full crop we must have full matted rows." This statement without any qualification would lead to a heap of trouble and loss; for "full matted rows" with most people would mean all the plants that would naturally root in the average matted row.

Now many other fruit growers as well as I, know from dearly bought experience that in the case of the free running varieties that the strawberry plant itself is the worst weed of the strawberry bed, and if all are allowed to take root they crowd out all hope of first-class fruit and greatly diminish the chance for a full crop. Few, if any of our very best cultivators now allow plants to mat so thickly.

The only "full matted row" that it is safe to depend on is one 18 inches to 2 feet wide, with plants evenly dis-

tributed not closer than 6 inches apart. Such rows yield heavily where plant food and moisture are abundant, and may be formed by striking runners first when wanted, and keeping the rest cut off, or by letting plants mat at will in the old way, then trimming out the surplus in early September.

According to Prof. Hutt, Warfield ranks first in yield; here in the East this variety is a tremendous plant maker, and if allowed to mat freely is a moderate yielder of inferior berries, while in narrow rows or well thinned, matted rows it is fine. Clyde and Isabella are both enormous yielders of berries of great size; they are also great plant makers, and will not do their best in "full matted rows." Plants need light, air, and moisture, and it is not reasonable or fair to expect a strawberry to do its best when overcrowded and thirsty. For my plant trade I grow many acres of strawberries in thickly matted rows, and whatever are not sold are left for fruitage. My brother, just across the way, on similar land, and with the same varieties in thin mat-



FIG. 35.—NEW GIANT MARGUERITE: SLIGHTLY REDUCED. (See page 108).

ted rows beats me in yield and quality of fruit every time.

The Tennessee strawberry, I note, is spoken of by a few as not a great yielder, and by many others as one of the best early varieties; it is another great plant maker, and I think that those who prize it so highly are those who do not attempt to fruit it in "full matted rows."

J. H. HALE.

South Glastonbury, Conn.

That Plant Registration Bureau.

After reading the many excellent contributions to your journal on this subject, I am fully convinced that, as Mr. Corbett says (page 36), "the person who neglects to secure official recognition will be disregarded by enlightened buyers."

But can we not already secure official recognition? To be sure, we have no "registration bureau," but we have a Division of Pomology, and any one who discovers or originates a new fruit or vegetable or nut or anything of the kind would certainly be more than foolish if he did not submit it for inspection before he introduced it. There is no way that I can see to register such a thing as an apple, strawberry or potato; it has to have some distinguishing characteristic before it can be done. Can you so minutely describe a strawberry as to distinguish it under all conditions from any other? Merely registering Bouncer, Greenville or Gandy will not help the sale much nor protect the public from fraud, as, while the variety may be all the originator or the registration bureau claims it to be in their respective localities, when taken away it may not compare with others. The Albemarle or Newtown pippin apple is a great success in some portions of Virginia, but when taken elsewhere how does it behave? The bureau could certainly say it was of the best quality and brought the highest prices known, but would this help the average grower if he could not grow it? The chemist who analyzes a particular brand of fertilizer knows it contains so much phosphoric acid, potash or ammonia, but how is the registration bureau to be able to do more than simply register the name of a new fruit, and full description as seen in a particular specimen? Good or bad qualities, soil, climate and other conditions make such changes it would hardly be a safe undertaking.

As the matter now stands, we can send a new fruit to the United States Pomologist, and if it be deserving he will describe it in his annual report as promising or desirable, and this certainly is an advantage as far as it goes. Any intelligent grower or originator of new fruits, flowers or vegetables will thus submit samples.

Mr. Ridgeway is certainly correct when he says substantially that station reports count for little. The worst strawberry fraud we have had in many years was the Van Deman, "fully tested" and favorably reported by almost every station in the United States, yet when planted commercially not one grower in ten made a success of it; and a strawberry can be tested in a few years, but a pear, peach or apple cannot.

I don't want to be understood as throwing cold water on the proceedings, but we must have a better plan than has been suggested so far. No one would be more glad than I to see originators liberally rewarded for all they have done, and I know they rarely, if ever, realize any fair compensa-

tion for their labors. The skill and labor expended to produce a new fruit, flower or vegetable are greater than to invent an electric motor or a mowing machine, but the compensation does not stand in like proportion.

A few years ago I wrote a letter to the "Country Gentleman" on the same lines as Mr. Ridgeway's in regard to trial grounds. Every intelligent, up-to-date grower must have such, else how is he to know what to plant? The man who would plant a peach or pear or apple orchard on this peninsula and select the varieties that were standard only twenty years ago would, to use an everyday expression, "not be in it" now.

Twenty years ago the bulk of the trees in a peach orchard here would have been Troth's Early; now it is never planted. The Kieffer pear has displaced almost every other variety, and the old Wilson strawberry cannot be found outside a few nursery catalogues. We must have our own trial grounds, and they do not cost much.

Del. CHARLES WRIGHT.

Horticulturists Lazy Club.

Many of the more important papers and journals of interest to the horticulturist and florist are received at the Lazy Club room, Cornell University, and that the attention of the members may be called to as many of the leading articles as possible, a member is appointed each week to review the publications received, and report at the following meeting.

Arctic Flora.

At a meeting on Jan. 25, J. O. Martin gave a sketch of his recent trip to Greenland. A party from Cornell, accompanied Lieutenant Peary in his expedition to Greenland the past summer. They landed July 7 and remained at various points along the coast in all about two months.

In substance the speaker said: The northernmost station inhabited by white people is Upernavik. This is in latitude 74.10. The climate here is very rigorous, and the arctic sun shines only about three months, setting in September. The soil is very shallow and is found only in hollows and crevices between the rocks. All the herbage is much dwarfed, the tallest growth being not more than sixteen or eighteen inches high, and it attains this height only in the most sheltered and favored places. Species of the willow are quite common, and these are frequently found with branches five or six feet long, but of a trailing habit.

Of the 379 species of plants which have been reported from Greenland, the Cornell party collected about one hundred species in the short time which they were there. Among them, the willow, heath, saxifrage, sedge, poppy are the most common.

The growing season extends over a period of six or eight weeks. The plants, however, make the most of this short time and grow with remarkable rapidity while the favorable season lasts, though some species take the precaution to flower and ripen their fruit before making growth. By the first of August many of the plants were past full bloom and some had even gone to seed.

Mr. Martin does not agree with the commonly accepted notion in regard to the intense brilliancy of the Arctic flowers, but thinks that they are no more bright than those with which we are more familiar. Possibly the contrast of the colors of the flowers with their bleak surroundings has given rise to the common idea. One of the photographs represented the Arctic poppy, *Papaver nudicaule* var. *arcticum*, with its blossoms growing up through the snow.

The summer temperature as recorded by the party ranged from 26 to 56 degrees Fahrenheit above zero. The frost never leaves the ground beyond the depth of a very few feet.

H. P. GOULD.

Plant Beauty.

At a recent meeting of the Massachusetts Horticultural Society, Mr. Henry T. Bailey, State Supervisor of Drawing, lectured on this subject. The hints contained in the following abstract will be of value as guides to those who use flowers as indoor decorations:

"Plant beauty is of two sorts, beauty of color and beauty of form. In some plants, like the calla, beauty of form predominates; in others, like the paeony, beauty of color; in still others, like the gladiolus, the lines of stalk, flower and bud are as noticeably lovely as their colors. Plants conspicuously beautiful for their form should not be gathered together in tight bouquets; each should be enjoyed by itself or with two or three companions so grouped in a vase or other receptacle that the beautiful lines of each are enhanced by those of the others. Plants of lovely color, on the other hand, are more effective when massed. One snowball is insignificant; a bushel basket full of branches crowded with the balls of creamy white glowing against the rich green of their foliage is highly effective. In the arrangement of flowers of beautiful form, we have much to learn from the Japanese.

"The Studio for October and December, 1896, has suggestive articles with more suggestive illustrations of the fine art of flower arrangement as practised by the floral artists of the Sunrise Kingdom. Mr. Conder's book on the subject will repay thoughtful study. Even the Japanese prints, now so easily obtainable, are not to be despised by the wide-awake florist.

"Form beauty is dependent largely upon contrast, proportion, and curvature, and the grouping of plants or sprays is to be governed by the law of balance.

"Beautiful color has such qualities as purity, gradation, depth; and when colored flowers are massed, harmonious relations of the different hues should be secured.

"There are five typical color groups or harmonies. The first may be called a contrasted harmony. All green leaved plants with white flowers are in this group. The second is dominant harmony, produced by combining tints and shades of one color, as for example a head of hyacinths or a bunch of double violet asters with no green foliage in sight. This combination of tints and shades, so common in the decorative arts and in dress goods, is rarely found in nature, and is least satisfactory as a harmony. The third is analogous harmony, composed of related hues of color. All green-leaved plants with yellow flowers are in this group. A bunch of gladioli tinted with violet-red, crimson, rose, scarlet, and salmon, forms an analogous harmony of exquisite beauty. The fourth is complementary harmony—a harmony brought about by the juxtaposition of complementary colors. A violet-red camellia seen against its glossy green leaves is a complementary harmony; so also is a bunch of violets with their rich yellow-green leaves. The fifth is perfected harmony; a color group composed of analogous hues combined with a color complementary to the general effect of all the group. For example, the gladioli forming an analogous harmony if placed against a background of old *Ampelopsis* leaves, of rich bluish green color, would be greatly enhanced in color effect, and the whole would form a perfected harmony. A bowl full of pansies is in perfected harmony. The analogous group runs through varying hues, from pure yellow in the flower centers to the yellowish-green of the foliage. The complementary to the effect of this group is to be seen in the rich purple of the petals.

"The American people are becoming more sensitive to beauty every year. The florists who furnish flowers to decorate their homes and halls can do much to elevate public taste. A really beautiful thing is always attractive. What was true of Emerson is true for us all. Speaking of beauty he said:

"When first my eyes saw thee
I found me thy thrall."

It costs no more to make a beautiful bouquet than to make an ugly one, and ultimately he who produces beauty gives the greater pleasure and receives the larger reward."

The Vegetable Garden.

Egg Plant, Tomatoes and Peppers.

If not already started these should now be sown in flats or pans. We prefer to cover such seeds with clean sand, as they will then come up more evenly. Cover with a pane of glass, over which should be placed a piece of brown paper, to be removed after germination takes place. The glass should be reversed daily, so that the accumulated moisture on the underside can dry off. It is a good plan to plunge the flats to the top in a bottom heat of about 70 degrees. Care should be exercised in watering these plants while small. The best method is to immerse the pan or flat in a tub containing sufficient water to reach three-fourths of its height, allowing the water to soak upwards.

Carrots, Beets.—A mild hot bed made with one foot of hot manure, covered with six inches of good rich loam is admirable for an early crop of these. A few seeds of Early Forcing Carrot can be sown broadcast, and the seedlings when large enough thinned out to two inches apart, the largest to be retained and the roots used in succession as ready to give room to the others.



FIG. 36.—NEW HELIANTHUS. (See page 103.)

Early Egyptian beet sown in the same manner should be thinned out to three inches apart, and the plants may be readily transplanted into other beds for succession. Ventilate freely every fine day.

Early Spinach.—This may be sown as directed for carrots, but if space be not available it will grow in a cold frame in a sheltered corner, if protected during frosty weather. This will give a crop much earlier than from outside sowings. A three-inch potfull of nitrate of soda to a sash well mixed with the soil before sowing the seed will induce a vigorous growth.

Mint.—A few roots of this planted in the hot bed will be useful before Easter.

Spring Catalogues.—These are now distributed and should be carefully examined, otherwise something wanted will be overlooked. The best varieties suited to our wants and locality must be selected. To avoid the rush seed should be ordered at once. It is better to have a supply on hand on time than risk any delays when the planting season opens.

Garden Requisites.—For convenience it is necessary to have many sundries on hand. Tomato supports of some kind should

be secured; the seed stores now supply a very convenient wire support. Powder bellows distribute hellebore and tobacco dust better and more economically than the hand. Raffle for tying, insecticides, fertilizers, nitrate of soda, wood ashes, plaster, soot, etc., all will be needed later on, and supplies should be got in.

Out of Date.—The case of a nearby farmer which has just come to my notice is worthy attention. He has for years been growing vegetables to sell in the villages, and although possessing, right on his own premises, the materials ready to make a complete hot-bed, it never occurred to him that by utilizing these he could raise all his own plants, having always purchased them from a greenhouse. Thus, a good percentage of his profits were lost to him. Had he invested one dollar a year for a good gardening paper, and set aside one hour of one evening weekly to its perusal, he would have learned much to his own advantage and profit. It does not pay to be lacking in mental capacity, as, without a knowledge of the best and latest methods of culture, no amount of industry or hard work will make the business successful.

W. M. EDWARDS, R. I.

house, was eminently satisfactory. Great care should be exercised in selecting seeds for winter forcing crops, as the expense connected with the work is too great for worthless varieties to be grown.

Cauliflower.—Keep the soil stirred about the plants. They are moisture-loving plants. If allowed to dry, buttons will result. Cauliflower as a rule does not amount to much in the house after March; but a hotbed should be made at once and nice young plants set in it. A useful crop will result in April or the first part of May. Cauliflower will also make rapid headway in a frame, especially where there is a little bottom heat.

Tomatoes.—It may be interesting to the readers of American Gardening to know why I claim Sutton's Best of All to be superior to Lorillard. In a few words the reasons are: It matures more quickly than Lorillard. We had Sutton's carrying fifty perfect fruits to the vine, when Lorillard did not average more than twenty-five. This was in the month of January, which is the crucial month. A good free-setting tomato for winter forcing is worth having.

W. TURNER, N. Y.

The Fruit Garden.

Manure for the Bearing Trees, and they all need it every year. If you have not given the annual coat, it may be applied at the first opportunity; a little snow will not be in the way, and labor, horses and carts are more readily secured now than later. Have you noted the contrast between fruit on a Bartlett pear growing in cultivated ground and getting its due allowance of food and that on another tree that does not, and even also shows misfeeding? Both styles can be seen without traveling far.

Peaches.—The many sudden changes of temperature experienced this winter are likely to seriously affect the fruit prospects. The pruning of the trees should be left to the very last possible moment.

Blackberries.—The pruning of the laterals is often overdone (to make the lines look well), and so we get more wood than flowers. Leave the laterals quite long—fifteen to twenty inches—and cut out the small canes, unless you want to plant another line. The time to decide on the number of canes for bearing next season is when cultivating in summer.

The Fruit Cellar.—This will need attention more frequently as the days lengthen, and there are greater variations in outside temperature. Than the cellar few places connected with the garden are more interesting when every corner is kept snug and clean, or more disgusting when rotten fruit is visible.

Winter Pruning.—When there is a foot or more of snow on the ground a man does not feel like whistling when pruning, even if the temperature is above the freezing point, and neither do I think pruning necessary work when the wood is frozen and the pruner's feet very little better, for there are plenty of days for the work when it will be better for both. Don't hurry too much. There are a few other items which can be attended to just now; such are seeing if there are any tools, etc., needed for the summer, light ladders, saw benches, berry baskets, hand barrows, stakes for trees, lists of fruits wanted. We are getting into the time of year when there has to be some hustling done in other than the fruit departments.

J. HOLLOWAY, L. I.

The Forcing House.

Cucumbers, from this time on, will make rapid growth. Still, when the vines are making rapid headway and probably a little soft tissue, care must be exercised in regard to airing, etc., otherwise mildew will set in, and that means disaster. It is poor policy to allow the temperature to rise above, say 65 degrees, without having a chink of air on, it does not matter whether the crop be cucumbers or any other.

Strain of Seed.—All growers will agree that Telegraph is one of the very best varieties for winter forcing, if the true Telegraph can be had. Why is there so much inferior so-called Telegraph cucumber seed put on the market? I have seen cucumbers forced on and off for twenty years, and know a good strain when I see it. If the true strain be not in the seed disappointment will follow. I do not know that I ever had stronger growing vines than this winter, but the fruit was of a mighty poor quality, though plentiful. I would much rather have had half the quantity and perfect quality. The treatment is not to be blamed, for a plant of Sutton's Progress cucumber, growing in the same

Tests on Cabbages.—Three varieties were grown at the Maine station to test the effect of size of seed on the heads. In two varieties the larger seed was found to produce much heavier heads. Tying up the outer leaves was found to have no influence upon the maturity of the head, while it caused a marked decrease in size, the moisture collecting within the leaves almost invariably caused the heads to decay. Mulching the plants with swale hay produced heads slightly larger than were borne by unmulched plants. But little effect on the size of the heads was produced by deep cultivation, but the plants appeared to mature more uniformly than when shallow cultivation was given.

Novelties of the Season.

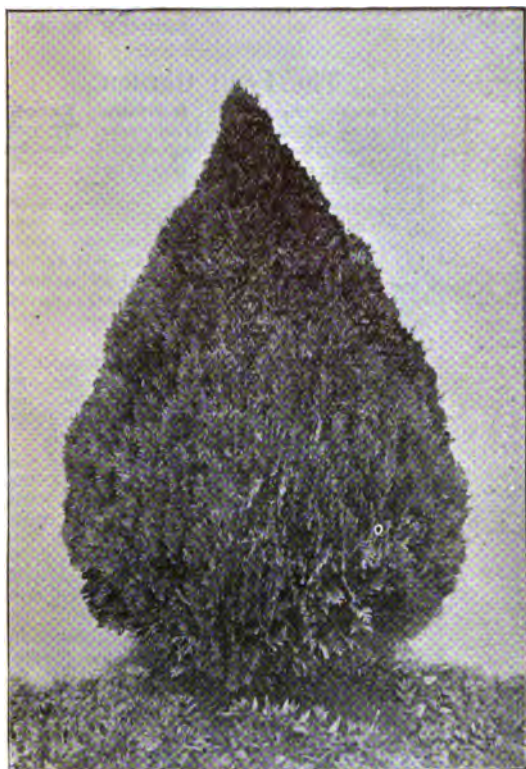
In this issue we continue the presentation of a selection of the Novelties of the Season, as seen in the various trade catalogues and lists. The present series will be followed up by others during the next few weeks, when fruits and vegetables will also be included. The descriptions given are those of the introducers.

THE NEW GIANT CALIFORNIAN DAISY.

(*Chrysanthemum Frutescens Giganteum*.)

This is one of the best Californian novelties of recent introduction, and is truly a giant in size and in every way superior to all the older varieties now in cultivation. The habit of the plant is very compact and symmetrical. The individual flowers are gigantic in size, measuring fully $4\frac{1}{2}$ inches in diameter. The petals are of good substance and are arranged in two rows around a bright yellow center. It is a very free flowering variety and the flowers last a long time in perfection. Was awarded a first class certificate by the New Jersey Floricultural Society, November 10, 1896. (Fig. 35.)

From the Catalogue of Garrett & Rose, Jersey City, N. J.



Double White Fringed Poppy.

This splendid flower is the outcome of the labors of an enthusiastic flower lover who has been skillfully and patiently at work on it for years. Starting with the old Double White Carnation Poppy, he has increased the number and length of the petals and their purity of color, at the same time diminishing their width until he has produced an immense, dazzling white flower, so double and yet so finely divided that it resembles a ball of silk floss. It is rare to find a plant coming so absolutely free from variation as this does, and it is evident that there has been great care used in its development. It is a most distinct and evident improvement on any form of Carnation Poppy in cultivation, and will be welcomed by all flower lovers. (Fig. 37.)

Introduced by D. M. Ferry & Co., Detroit, Mich.



Rudbeckia Golden Glow.

This is a form of *Rudbeckia laciniata* with perfectly double flowers from 3 to 4 inches in diameter and of a rich golden-yellow color. The plant is a hardy herbaceous perennial, and once planted will continue to grow and bloom indefinitely without further attention. (Fig. 39.)

From Catalogue of G. W. Childs, Floral Park, N. Y.

BIOTA AUREA NANA.

This is a seedling of *Biota semper aurea* and originated ten years ago in our grounds. The original plant measures only 36 inches in height, is of most perfect form, and surpasses all the other varieties of *Biota aurea* so far introduced. During Fall and Winter the foliage assumes a beautiful golden color, and in Summer is of bright green. It has also the merit of being perfectly hardy in the latitude of New York. Nothing is more desirable in the way of a dwarf conifer. It has also proven valuable as a pot plant. (Fig. 38.)

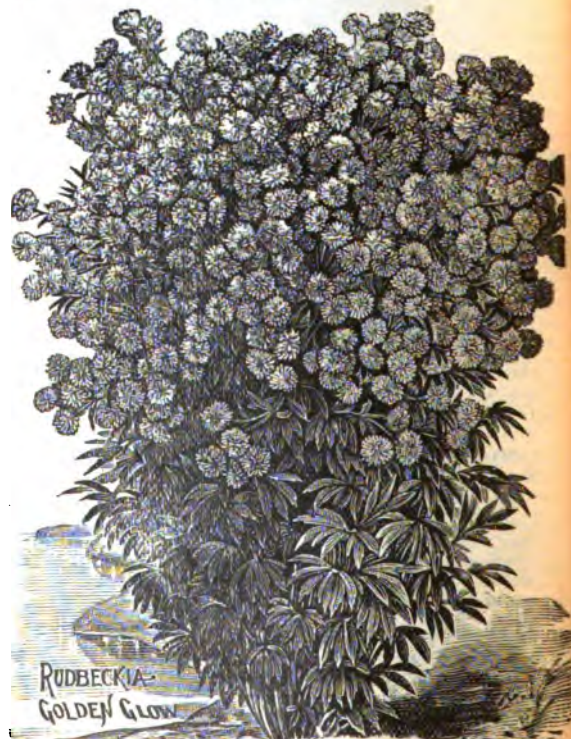
From the Catalogue of P. J. Berckmans, Fruitland Nurseries, Augusta, Ga.

New Chrysanthemum-Flowered HELIANTHUS

The new chrysanthemum-flowered helianthus has an entirely different appearance from the old helianthus that has been so popular for many years as a garden plant; the blooms do not have that appearance of the common sunflower, the flowers opening from the center with a long narrow petal, similar to the chrysanthemum, and keeping this resemblance until fully opened. The petals are long enough to completely hide the small, green foliage on back of bloom, which makes it not unlike the "Lincoln chrysanthemum," only the color is a clear orange.

The photograph was taken of one plant grown from seed planted in May. This helianthus was awarded a certificate of merit by Massachusetts Horticultural Society. (Fig. 36, page 107.)

From the Catalogue of W. W. Rawson, Boston, Mass.





Double, Large-Flowering CYCLAMEN.

Cyclamens are among the most beautiful Winter and Spring flowering plants for the window and greenhouse. Not only are the flowers of striking beauty, but the foliage is also highly ornamental. This new double-flowering strain is even more beautiful, each flower having usually eight to ten petals, often twelve to fifteen, which are more spreading than in single varieties. There is the same range of colors, crimson, pink, white, spotted, etc., and, like all double flowers, they remain much longer in perfection than singles, the season of blooming lasting fully three months. The strain is not yet quite fixed, but produces a sufficient proportion of doubles to justify us in offering it this season. (Fig. 40.)

From the Catalogue of Peter Henderson & Co.



THE NEW BEGONIA VULCAN.

(This will be botanically known as *Begonia Semperflorens Atrococcineum*.)



This new variety originated at FORDHOOK FARM. It is a seedling of the well-known BEGONIA VERNON, which is so popular all over the world as the best variety for bedding on account of profusion of bloom, beautiful foliage, and hardy growth. The many good qualities of Vernon are intensified in the Vulcan, which might be called appropriately the new Scarlet Vernon Begonia. Planted side by side, the Vulcan is similar in growth and free-flowering character, while it completely eclipses the Vernon in the rich brilliancy of its flowers. Each plant is covered with flowers, which are of the most intense fiery scarlet color, even the stamens being tipped with bright red. The entire plant is so brilliant that our head-gardener says, "It looks like a mass of burning coals." BEGONIA VULCAN comes perfectly true from seed and stands the most intense heat of summer, growing vigorously, without wilting, even in hot weather. (Fig. 41.)

From the Catalogue of W. Atlee Burpee & Co.

CHRYSANTHEMUM Miss Lottie D. Berry.

This variety was certificated under the name of Garret A. Hobart. It is a large, pure white incurved Japanese; very full and double, borne on a good, strong, stiff stem, well furnished with foliage up to the flower; blooms in mid season, and is a first-class keeper. It secured the certificate of the Chrysanthemum Society of America, November 7, 1896. Our illustration shows the character and symmetry of the flower to perfection. (Fig. 42.)

*From Catalogue of Pitcher & Manda, Inc.,
Short Hills, N. J.*

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1904.

PUBLISHED BY

A. T. DELAMARE Ptg. & Pub. Co. Ltd.
ROSE AND DUANE BROS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

The Apple THE apple is the most highly esteemed of all Down South. fruits. Those who have enjoyed early life on the farm cannot forget the old apple trees that were a part of the home. We remember every tree in the orchard, but most vividly those that stood near the house. How we admired them in the spring time, when the flowers, with petals of delicate pink and white, almost covered the branches. It was in their crotches, too, that the robins made homes and reared broods of little fellows which we watched with peculiar interest. When loaded with ripe fruit the trees had special attractions to the occupants of the farm. They were not only objects of beauty, but who can describe the feeling of satisfaction and contentment that took possession of one when, with a keen appetite, he visited the favorite tree, plucked a handsome specimen and enjoyed its delicious flavor! And our minds are filled with pleasant memories of the long winter evenings spent before a cheerful fire in the happy farm home, with basket after basket of luscious red apples from the well-stored cellar.

What fruit is more useful than the apple? How could we get along without it? Apples in their natural state, apples stewed, apples baked, apple jelly, apple pies, apple marmalade, apple butter, apple cider, apple vinegar, are among the var-

ious culinary uses of this fruit. And yet there are farms which do not produce enough apples for home consumption. Not long since a prominent agricultural writer advocated that it was better and cheaper for the general farmer to buy the fruit necessary for his family. This plan is absurd to people who are accustomed to growing all the fruit they want in the home garden and orchard.

But does it pay to grow apples for market? is a question that a great many people are now asking. That depends on the locality and the man behind the business. We would not recommend the extensive cultivation of apples in all sections of the South. We would not advise a man to engage in this enterprise who has already proven his inability and lack of energy in caring for the family orchard. If his trees are sickly, thick-topped, unsymmetrical in form, and full of dead limbs, while the soil is badly infested with weeds and briars, it is safe to conclude that such a person would not make a success of orcharding. If, on the other hand, he carefully cultivates, prunes, fertilizes, and sprays the few trees he may have, resulting in a good yield of fruit, this person would be running no risk in setting a large orchard for commercial purposes, provided good judgment is used in the selection of varieties, and business tact and skill in the sale of the fruit.

There are many paying apple orchards in the South. We know of some that yield handsome returns. A general collection of summer, fall, and winter sorts is grown to supply the local demands, and summer apples for shipping north. Hundreds of new orchards have been established in the more mountainous sections during the past few years. If these plantations receive the proper care they will doubtless prove remunerative.

Garden Tools.

This, being the winter of our discontent, is a most opportune time to overhaul our tools before the busy season opens. In my experience during the last few years I find the quality of the tools now made inferior in material, although improved in form, as compared with those of a decade ago. The average steel spade of to-day is more generally soft, easily bent and wears dull. The spades of twenty years ago were better; usually the face was made of hardened steel, the back was made of soft iron, and as the latter wore away from the steel facing the more the tool was used the sharper it became. It was a delight to work with such a tool. Do we not to-day find grass sickles made of tin or soft iron? Many will not hold any edge at all. Pruning knives used to be made of well tempered steel that would hold a good edge for a considerable time, an important matter in many operations of the garden. Most of those now made are soft and useless, though expensive enough, but the "stuff" is not in them.

I see no reason why the verge edging knife should have the crescent shape on both edges. It is right

enough for the cutting edge, but it is often necessary in edging tough or dry sod to press it down with the foot, and there being no foot rest, or even a straight edge, the only thing that can be done is to press the foot on the inside curve, and hack our souls (soles) in the bargain. We have no power whatever on the tool, the handle being made only of a straight stick. I wonder why some are not made with a cross or box handle, similar to that of a short handled fork.

For opening drills and hoeing small stuff, as onions, lettuce, I have always preferred the triangular shaped hoe. It has three corners and as many edges. With one of the corners we can most effectually hoe up the weeds on a gravel walk. Yet we seldom see such a hoe used. I could not buy one last year. It is a useful tool, and if its merits were known it would become popular.

Now let us take such tools as grass edging, lopping and clipping shears, hoes, iron rakes. In dry weather the handles will drop off even if soaked in water. I see no reason why a small rivet could not be put in when the article is made to save the worker trotting off to the blacksmith's shop when busy, thus causing waste of time and vexatious delays.

A year ago we had some brush and roots to dig up. To facilitate the work we bought two grub hoes that were, from all appearances, strong enough to grub up oak trees. They might just as well have been made of pewter. They were so weak and poor that, although costing \$1.25 each, we did not get twenty-five cents' worth of work from them. They were made by a New England firm, and I consider to place such tools on the market is fraudulent.

Tools are not purchased to look at, but to do work. Inferior or badly tempered tools are dear at any price. Are the best methods of tempering a lost art? It being the duty of the gardener in the matter of tools, as well as many other items, to guard the interests of his employer, he will, therefore, for future reference make a note of any inferior tools that may have been purchased. W. M. EDWARDS, R. I.

L. H. Bailey, the well known professor of horticulture at Cornell University, has possibly done as much as any man to attract general attention to scientific horticulture. It is with pleasure we learn that the trustees of the Veitch Memorial, of London, England, have this year awarded Prof. Bailey one of their silver medals for distinguished services to horticulture "in recognition of his efforts by means of his lectures and his writings, to place the cultivation of plants on a scientific basis; to promote the extension of horticultural education, and by numerous trials and experiments, to improve and render more productive, plants grown for economic purposes."

The Veitch Memorial is a fund raised by popular subscription to the memory of J. G. Veitch, the celebrated plantsman, of London, who was instrumental in introducing many valuable plants into commerce. For some years after its foundation, the fund was used in giving medals for various competitions at horticultural exhibitions of prominent Societies, which practice is still indulged to some degree. This medal is of bronze. A few years ago, the trustees decided upon the course of annually presenting large silver medals to one or more men who, by their labors, had rendered signal services to practical horticulture. Mr. A. F. Barron, then of the Royal Horticultural Society, was selected as the first recipient of the award, *ex honoris causa*, which now, we believe, comes to America for the second time. Professor Sargent, of the Arnold Arboretum, having received the medal last year.

Western New York Fruit Growers in Council.

(Continued from page 90.)

Pruning Peach Trees.

The discussion on pruning peaches did not bring out anything new or startling save Mr. J. S. Woodward's warning against the scheme of an Ohio nursery firm which is canvassing portions of New York State for the sale of peach trees, offering to do the pruning for a year or two, with the guarantee that trees thus pruned by them will be absolutely safe from the attacks of the yellows. He states that no system of pruning is a protection against the disease.

Canker Worm.

Professor Lowe of Geneva Station stated that much injury had been done in many orchards by the canker worm; some orchards had been almost ruined. Spraying had been delayed too long and should have been commenced quite early in the season. Paris green and lime is recommended. The addition of the lime makes the poison spread better over the surface and adhere more closely to the leaf. Some samples of Paris green were found to be badly adulterated even to as high as 40 per cent. Professor Jordan again offers to analyze samples free of cost for any one in the State who may send them to the station. The ammonia test, however, is simple and safe, and can be made by any one who uses Paris green. The unadulterated green dissolves perfectly in strong ammonia. The earthy matter usually selected for an adulterant remains as setthings.

Embellishing Home Grounds.

Mr. E. A. Long spoke of the great quantity of embellishing material, consisting of native growths, by the hundreds and thousands. The causes of barrenness of many homes in ornamental growths which might make them spots of beauty are, firstly, lack of knowledge of the embellishing material suitable for the climate and soil, and, secondly, cost. A large number of shrubs and trees, hardy at the north and of easy culture, is available at a minimum cost. (Perhaps Mr. Long will give the lists in full.) Treat these as you would potatoes; dig around them, hoe and weed them, etc. You want two main features, the lawn and the beds. The beds are tilled; the rest is lawn. But first convert the whole ground into a lawn. Then cut the beds into the lawn, making a well-defined edge and the bed slightly rounded.

Insects Injurious to Nursery Stock.

Victor H. Lowe spoke about three important insects injurious to nursery stock, namely, the peach tree borer, the woolly aphis of the apple and the San Jose scale. The way to deal with the peach borer is to dig it out when it first appears in spring, and trees should be watched at that time for the purpose; for the two other insects the trees should be pruned where branches interlace and be then thoroughly sprayed with strong kerosene emulsion.

Experiments with Fertilizers.

Dr. Caldwell, the chemist of Cornell University, stated that few experiments in this line are recorded. As a source of nitrogen, nitrate of soda is one of the cheapest, and is very quick acting. It should be used more in this country, and will be when growers learn to make their own mixtures. Oil meal, at present prices, is also a good and cheap form in which to apply nitrogen. He gives the following formulae:

For light soils	1,000 lbs. basic slag.
	500 lbs. kainit.
	1,000 lbs. oil meal.
For heavy soils	1,000 lbs. acid phosphate.
	180 lbs. muriate of potash.
	1,000 lbs. oil meal.

Two entirely new ideas in applying fertilizers to fruit trees were mentioned. One is to dig out a wide trench, ten inches deep, around each tree, mix the fertilizers with a portion of the soil, throw this mixture back into the trench, and then fill up with the other part of the soil thrown out. By this method the plant food is put just where it is most desirable to have root develop and feed. The other idea, although on first sight it may remind one

of a humbug much mentioned a dozen years ago, may yet open up new possibilities in feeding trees. A little above the surface of the ground a hole, 1 1/4 to 2 inches through, is bored into the body of the tree and about two-thirds through, slanting downward at an angle of about 45 degrees. Through this opening the tree is fed with a substitute for plant sap, prepared by dissolving nitrogen, phosphoric acid, potash, iron, etc., in proper proportions. Dr. Caldwell says he can see no chemical obstacle to this plan, although there may be physiological reasons for its non-operation.

In the discussion following Dr. Caldwell's address Professor Jordan spoke in favor of the home mixing of fertilizers. Cultivators are using what manufacturers are putting in their hands. The manufacturers do not know any more what you and your particular soils need than the man in the moon. Progress must come through home study. As a source of nitrogen cotton seed meal is cheap. The nitrogen in it only costs 12 or 13 cents a pound. Nitrate of soda is good for a portion of the nitrogen needed. Fruit growers have paid manufacturers 17 cents a pound for nitrogen, 5 to 6 cents a pound for potash, and 6 to 8 cents a pound for phosphoric acid.

In response to Mr. Willard's question about the availability of basic slag, Dr. Caldwell says it is a somewhat uncertain quantity, because it has not yet come into general use in this country, while large quantities are used in Europe.

Professor Clinton of Cornell tells of a crop of crimson clover, sowed Aug. 1, which by Nov. 3 had made \$18 worth of nitrogen per acre, figured on the basis of 12 cents per pound for organic nitrogen. On hard clay, or dry knolls, where crimson clover will not thrive, he would first sow rye and plough this under. The clover would then grow all right. Professor Beach (Geneva Station) says he loosens up the ground by sowing a mixture of Canada peas and buckwheat, while Professor Roberts recommends barley and peas for the same purpose.

Trimming Standard Pear Trees.

Mr. C. M. Hooker's way of trimming standard pear trees is to let them grow pretty freely, heading say three or four feet high, thus making them half standards every year. During winter very strong or excessive growth is cut back about one-half. W. C. Barry is in favor of rather severe pruning. The fruit spurs are often too numerous. It is just as bad to have too heavy a yield as to have one too small. What we want is the proper amount every year. This we can secure by proper pruning. He promises to give an object lesson in pruning for next year's meeting. Winter Nells is inclined to overbear and to bring small pears. By proper pruning large specimens can be secured.

Five Best Pears for Fall and Winter.

Mr. Hooker named the following four as his choice: Bartlett, which always stands at the head; Duchesse, Anjou and Clairgeau. For the fifth he thinks there are many of equal value from which to select. Members present named Lawrence, Bosc, Louise Bonne de Jersey and others. Lawrence and Clairgeau should always be well headed back. On direct request Mr. S. D. Willard gave his opinion of the Kieffer. He stated that we plant for money, not for taste, and more money has been made per barrel from the Kieffer than from any other pear. But it seems we have now come to the point where we are going to have more Kieffer pears than the world wants, and he would not advise any one to plant largely of that any more. He has never heard of the San Jose scale touching a Kieffer.

Thinning Apples.

Professor Beach, of the Geneva station, says we now begin to fear superabundance of apples more than we do insects' attacks. Severe thinning in 1896 would have increased the crop of A No. 1 fruit, decreased the proportion of inferior apples, relieved the trees, and left them vigorous enough to produce fruit buds for next season. In experiments made last season at the station three methods were tested. The first one consisted of the simple removal of inferior fruit; the second, in addition to this, the thinning of the remain-

ing specimens to a uniform distance of four inches; the third, in leaving the good specimens, after the removal of the inferior ones, six inches apart. Baldwins, thinned after the first method, gave 16 per cent. less apples, but 10 per cent. more A No. 1 fruit; Baldwins, thinned to four inches apart, gave 26 per cent. less fruit, but 22 per cent. more A No. 1, and Hubbardstones, thinned to six inches apart, gave 25 per cent. less fruit, but 17 per cent. more A No. 1. Greenings set a fair crop only and needed no thinning. One tree, from which all the inferior specimens were removed, gave 6 per cent. more fruit altogether, and 10 per cent. more A No. 1 fruit. All grades of fruit where thinned were decidedly superior in size and color. The color does not depend alone on the amount of sunlight, but to a large extent on the amount of the available food.

The second method of thinning seems superior to the first, and to pay well for the difference in labor. If we thin at all we should make a good job of it. The chief objection to thinning is the expense of the operation, when apples are so low in price. But the methods often recommended, as, for instance, that of thinning with a garden rake (by Green), or shaking and clubbing off (by Greiner), are too crude. Where thinning is needed most is on the lower or under branches. This can be done while standing on the ground, or from step ladders, and at moderate expense. Mr. Beach says he is in favor of the practice, but the question is one for every fruit grower to decide in his particular case.

Mr. Willard mentions the results of judicious thinning, as (1) improvement in color; (2) in quality; (3) probability of an other crop in sight, at least on trees which had the fruit thinned to six inches apart. By thinning we have disposed of the excessive tax upon the vitality of the tree and curtailed excessive seed production. There is a positive gain in four lines which makes the question one worthy of consideration. We would have improved our chances of profit if we had removed the whole crop off one-half the trees and one-half the crop off the other half of the trees.

Mr. Collamer says he has practiced thinning apples right along and it has paid him every time. The cost is less than the gain in good apples.

Professor Roberts considers the question practically settled by California experience. A Chinaman thins the peaches on ten trees per day and receives \$1 for the job. The increased price of one barrel of apples or one basket of peaches will pay for thinning the fruit on the ten trees.

Election of Officers.

The officers for 1897 were elected in the usual informal way by committee and ballot cast by the secretary. They were almost without exception re-elections as follows: President, W. C. Barry, Rochester; vice-presidents, S. D. Willard, Geneva; George A. Sweet, Dansville, Irving R. Smith, Syracuse, and Claudius Hoag, Lockport; secretary and treasurer, John Hall, Rochester; Executive Committee, C. M. Hooker, Rochester; C. W. Stewart, Newark; Nelson Bogueau, Batavia; E. A. Powell, Syracuse, and H. S. Wiley, Cayuga.

Committee on Native Fruits—W. C. Barry, Rochester; Prof. L. H. Bailey, Ithaca; E. A. Bronson, Geneva, J. S. Woodward, Lockport, L. Woolverton, Grimsby, Ont.

Committee on Foreign Fruits—George Ellwanger, Rochester; J. H. Babcock, Lockport, John Charlton, Rochester, W. P. Rupert, Seneca, George H. Moody, Lockport.

Committee on Nomenclature—W. C. Barry, Rochester, S. D. Willard, Geneva, D. Bogue, Medina, S. A. Beach, Geneva.

Committee on Ornamental Trees and Shrubs—George H. Ellwanger, Rochester, George G. Atwood, Geneva, Irving Rouse, Charles Little, Robert Ades, Rochester.

Committee on Entomology—M. V. Slingerland, Ithaca, C. M. Hooker, Rochester, J. F. Rose, South Byron, R. C. Hewson, Penn Yan, C. H. Stewart, Newark.

Committee on Garden Vegetables—C. H. Perkins, Newark, Abram Frank, Irondequoit, Prof. W. H. Jordan, Geneva, M. V. Slingerland, Ithaca.

Committee on Chemistry—Dr. G. C. Caldwell, Ithaca, Dr. S. A. Lattimore, Rochester, Dr. L. L. Van Syke, Geneva, Prof. J. P. Rober s, Ithaca.

Committee on Flowers and Bedding Plants—James Vick, Rochester, Patrick Quinlan, Syracuse, Virgil Bogue, Albion, C. W. Seelye, Rochester.

Committee on Grapes and Small Fruits—George C. Snow, Penn Yan, J. D. Cook, South Byron, Frank Lewis, Lockport, T. S. Hubbard, Geneva, W. D. Barus, Middle Hope.

County Committees: Cayuga—H. S. Wiley and J. M. Mersereau, Cayuga; H. S. Anderson, Union Springs.

Chautauqua—John W. Spencer, Westfield; George S. Josselyn, E. H. Pratt, and Louis Roesch, Fredonia, C. S. Curdick, Portland. Erie—Eugene Willett, North Collins, Calvin Nichols, Willink.

Genesee—Irving D. Cook, South Byron, Hon. Eli Taylor, East Elba, William Page, Bethany Center, A. B. Rathbone, Oakfield.

Livingston—J. F. White, Mt. Morris, George A. Sweet and H. R. McNair, Dansville.

Monroe—C. G. Hooker, P. C. Reynolds, Michael Doyle, Rochester.

Niagara—George H. Moody, Lockport; Willard Hopkins, Lewiston; Henry Lutts, Youngstown, Hiram Gregory, Lockport.

Onondaga—Samuel J. Wells, Fayetteville; Wing R. Smith, Syracuse, M. H. Oschner, Eastwood, J. A. Root, Skaneateles, F. N. Giddings, Baldwinsville.

Ontario—E. A. Bronson and C. K. Scoon, Geneva, W. P. Rupert, Seneca, C. H. Darrow, Geneva.

Orleans—Virgil Bogue, Albion, Julius Harris, Ridgeway, D. Bogue, Medina, J. Wood, Knowlesville.

Oswego—L. J. Farmer, Pulaski, George A. Davis, Mexico.

Seneca—E. C. Pierson, Waterloo; J. F. Hunt, Kendala; Nelson Smith.

Steuben—Trevor Moore and H. O. Fairchild, Hammondsport.

Tompkins—Fred Robinson, Trumansburg; Prof. I. P. Roberts and George H. Hook, Ithaca.

Wayne—Byron J. Case, Sodus; C. W. Stuart, Newark; L. Yeomans, Walworth; C. H. Perkins, Newark.

Wyoming—J. D. Sherman, Castile; Augustus Tabor, Perry.

Yates—T. M. Chadwick, Eddytown, G. C. Snow, Penn Yan, Lyman Reader, Starkey, W. A. Ansley, Milo Center.

Pedigree Strawberry Plants.

Pedigree plants or animals are those having a known line of ancestry—presumably good ancestry.

New varieties of strawberries originate from seed sown by man or nature. A variety thus originated propagates itself by means of runners which grow out from an old plant, take root and form young plants. A pedigree strawberry plant, as I use the term, means usually, but not always, one of the above kinds (for the ancestry of some of the best varieties is not known), which has been still further improved by repeatedly selecting plants noted for general excellence as fruit bearers, from whose runners young plants are obtained to set all new fields.

From these young plants, the most excellent ones, are again in fruiting time selected the most excellent ones, and so on indefinitely. But the berries should not be allowed to remain on these plants an hour longer than is necessary to prove the fruitfulness and general excellence of the plant. The berries should always be pulled off before they ripen or the seeds mature, which is the process so exhausting to the plant.

It is denied that this selection does any good at all, and asserted that one plant of any given variety is just as good as any other plant of that variety. That the assertion is erroneous, I know from actual and repeated tests. I have long followed this plan of selection, and proven that it does tell strongly in the improvement of a variety, provided of course that it is intelligently and persistently carried out. In fact improvement in plant or animal can come in no other way. To assert that all strawberry plant of any given variety are equally good, no matter how the one may have been allowed to run down by neglect, or the other bred up by careful selection and high culture, is an error, and an error of a very harmful kind. It is as erroneous as to hold that one herd or strain of Jersey cows is as good as any other herd or strain, although one might have been highly and judiciously fed and bred from only the best cows, and the other herd or strain had been starved and bred from scrubs for twenty generations.

The fact is that all varieties of strawberry plants as soon as originated begin a gradual process of change. It may be slow, but it is sure, and almost inevitably tends to deterioration.

My plan is to arrest, and even to some extent reverse, this process of deterioration by raising young plants from old plants of conspicuous merit. O. W. BLACKNALL.

Now Hood's Sarsaparilla

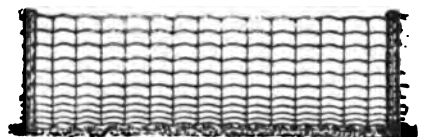
Is a good time to put your physical system in good order by purifying your blood and building up your health to avoid sickness. Take

The best—in fact the One True Blood Purifier.

Hood's Pills do not cause pain or uric. All druggists, 25c.



Mention American Gardening when you write.



PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

SPRAY PUMPS AND THEIR USES

12 KINDS AND PRICES

being the contents of an illustrated book on the subject. Tells WHEN, WHERE AND HOW to Spray

Valuable for mules for insecticides, etc., sent FREE for the asking.

BOULDS MFG. CO., 11 Ovid St., SENECA FALLS, N. Y.

Mention American Gardening when you write.

CYPRESS

IS MUCH MORE DURABLE THAN PINE.

CYPRESS SASH BARS

UP TO 32 FEET IN LENGTH OR LONGER.

GREENHOUSE

AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book "CYPRESS LUMBER AND ITS USES." Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO., NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

1,000 Peach Trees One year, from bud to 2 to 3 ft., mostly branched, with freight prepaid to any station east of Miss. River for \$20; or 500 for \$12. Sample prepaid, 25c. Cities listed trees proportional prices. R. & JOHNSTON, Box 24, Stockley, Del.

Mention American Gardening when you write.

100 BEST EVERGREEN SEEDLINGS

delivered free by mail, only \$1. 100 best evergreens 1 to 5 ft. delivered east of Rocky Mts. only \$10. Write for free catalogue and price list a 50 big bargains, selections from complete nursery stock. Cash paid for getting up clubs or to mailmen with or without experience. Address

D. HILL
EVERGREEN SPECIALIST, DUNDEE, ILL.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.



We have the largest and finest Collection of PALMS, ORCHIDS, FERNS and FOLIAGE PLANTS for Conservatories. Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting Places and furnishing stock (free).

SIEBRECHT & SON'S,

New Rochelle, N. Y.

Mention American Gardening when you write.



Is he going to have a fit? No. He has seen Green's sacrifice prices, and they fit him. Cherry trees \$5.75 per 100; Plum trees \$7.25; Dwarf Pear \$6.00; Apple \$6.00 per 100. Catalogue, also copy of "Fruit Grower" free.

GREEN'S NURSERY CO.
Rochester, N. Y.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION.

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

The choicest MAGNOLIAS, JAPANESE MAPLES and other TREES & SHRUBS

are accurately described in our New Catalogue. Profusely illustrated, including three lithographs. Contains prices of large and small trees, specimens for immediate effect; and special prices for quantities. A Guide to Tree Planting. The most complete catalogue of its kind ever published. 6 cents in stamps.

THOS. MEENAN & SONS,
Germantown, Philadelphia.

Mention American Gardening when you write.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Worden grape is taking the place of the Concord in many places.

It is evident that plants have peculiarities similar to those of animals.

A well pruned and well cared for peach orchard is a beauty to behold.

Do not plant the blackberry on soil which cannot be thoroughly drained.

London and Miller's Red Raspberry.—I should like to hear the experience of some of the readers of American Gardening with these.

Chicory can be grown on a small scale and the dried roots mixed with coffee.

Mulch the Quince.—It is said that it is not the top, but the root of the quince which is the most tender; hence the necessity of a heavy mulch around the trees.

Novelties.—No money consideration should induce a grower to introduce a variety of small fruit which is not in some point superior to varieties already grown.

Peach Borers.—Some one thinks the borer is less liable to attack vigorous trees. Is it not a fact that most insects attack trees which make a feeble growth sooner than those of strong vitality?

Making Boxes, Etc.—We will have more time to make berry boxes, crates and packages now than later on. One grower makes his boxes in winter, cleans out the divisions in his granary and puts up in neat layers as many thousands as he wants to use at picking time. He thus never gets short of boxes, as he figures on making up enough to have some left over for another year.

Roses can be bought so reasonably now; why not order a dozen assorted varieties and make the children a present of them for their flower garden?

Evaporators.—Every fruit grower should have an evaporator to dispose of his surplus fruit.

Wood Ashes for Berries.—Now is a good time to haul on ashes and scatter them over the ground where the new strawberry patch is to be set; provided the surface is level. If hilly wait till spring, when the ashes can be worked in by the cultivator.

Habit Is Strong.—We might as well get in the way of doing our garden work promptly, neatly and thoroughly as to be slack with it.

Gooseberries should be trimmed so that air and sunshine can get among the branches. It is a mistake to let them fill up with wood and cause a dark shade which will be a harbor for insects and an invitation for the mildew to step in.

Early Pollenizer.—I used to like Jessie strawberry for fertilizing pistillate varieties, but the spring frost is about sure to blast most of its blossoms; hence others more hardy take its place.

Victoria Currant.—One reason why this keeps its fruit looking so nice for a considerable length of time is that its foliage stays on longer than that of some other varieties, and so protects the fruit from sunscald.

Salt for Radishes.—One of my neighbors says the way he grows such crisp radishes and keeps them so free from worms is, he sows salt, and plenty of it, over the ground after it is prepared for sowing them, sows broadcast, rakes in and lets the plants take care of themselves until time to market.

Lucretia Dewberry.—One of the catalogues in describing this says it is as hardy as the Snyder Blackberry. I am inclined to think the author put it a little too strong. The Lucretia Dewberry proves to be more tender than Snyder, but is desirable because it can easily be protected.

New Strawberry Culture.—I am anxious to try the new method of growing strawberries recommended by L. J. Farmer. I doubt its being very practical, but will sport its real merits as soon as thoroughly tested.

C. C. NASH.

WHEN the army worm appeared last summer, *The Rural New-Yorker* readers were promptly told all about it, and they saved their crops by knowing how to fight them; you may want to know how to fight some other pest next year. It will tell you. We can send it and AMERICAN GARDENING both one year for \$1.80 and your money back in three months for *The Rural*, if you want it. Address *The Rural New-Yorker*, New York, for free sample copy.

FOR \$4 we will send *Leslie's Weekly* (formerly *Frank Leslie's Illustrated Weekly*) and AMERICAN GARDENING to any address, one year. *Leslie's* is one of the most attractive of New York's numerous illustrated weeklies, and its subscription price alone is \$4 a year; therefore, it will be seen that our offer is a very liberal one. Address your orders to AMERICAN GARDENING. Sample copies of *Leslie's* on application.

Business Cards.

Cards will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. J. O. Forsyth Johnson, P. O. Box 1697, New York City

DISCOVERED A face wash that will remove that greasy complexion and leave it soft and white in 10 minutes after washing, and in a week remove all pimples, blackheads and tan. Restores the skin without irritation. Perfectly harmless; contains no poisons. Costs but five cents to prepare enough to last six months. Send and full directions, 30 cts. Mrs. B. HUNTER, 4215 Evans Ave., St. Louis, Mo.

Mention American Gardening when you write.

B KEEPERS!

SEND FOR sample copy of
CLEANINGS IN BEE CULTURE.
A Handsomely Illustrated Magazine and Catalogue of BEE SUPPLIES. Valuable book on Bee-keeping FREE to each one who mentions this paper. THE A. I. ROOT CO., Medina, O.

Mention American Gardening when you write.

The American Kitchen Magazine

A magazine for every up-to-date house-keeper. The suggestions contained in a single number are worth more than a year's subscription. Price, \$1.00 a year. Sample copies free. SPECIAL.—We will send AMERICAN GARDENING and AMERICAN KITCHEN MAGAZINE, both one year, to any address, for \$1.50.

AMERICAN GARDENING, P. O. Box 1697, N. Y.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.60.

THE OHIO FARMER is a large, 30 page weekly, \$1 per year. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for illustrations, Correspondence and Market Reports than any other of its class.

It is the Best and Costs no more than others. Send for a SAMPLE COPY to THE OHIO FARMER, Cleveland, O.

IF THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1, 1897, 14 months, if ordered at once. Address all orders to AMERICAN GARDENING, P. O. Box 1697, New York

• A GOOD • Pruning Knife.

YOU HAVE NEED OF ONE?

Send \$1.00 to the New York Farmer, Port Jervis, N. Y., and the knife will be sent, postpaid, as well as the paper for one year.

The New York Farmer

is a wide-awake, up-to-date journal, looking after the interests of the agricultural population, keeping well in the foreground in all matters pertaining to agriculture, the dairy, poultry, etc., and furnishes, in addition, much valuable literature for the home.

Send 5 weeks for 10c. Specimen copy free.

NEW YORK FARMER, Port Jervis, N. Y.

Mention American Gardening when you write.

One reason why Scott's Emulsion cures weak throats, weak lungs, makes rich blood, and strengthens puny and delicate children is because all its parts are mixed in so scientific a manner that the feeblest digestion can deal with it. This experience has only come by doing one thing for nearly 25 years.

This means, purest ingredients, most evenly and delicately mixed, best adapted for those whose strength has failed or whose digestion would repel an uneven product.

For sale by all druggists at 50c. and \$1.

GRAY HAIR MADE DARK

By a harmless Home Wash. Also makes the hair grow. Full directions and recipe for 25 cts. Mrs. A. HUNTLEY, 4215 Evans Ave., St. Louis, Mo.

Mention American Gardening when you write.

"FLOWER QUERIES" New book on floriculture 10 Chapters, written in questions and answers, discussing 500 floral topics. Price, 25 cts. The COLUMIER, Box A, Chatham, N. Y. Mention American Gardening when you write.

SONGS FOR THE HOME

IN BOOK FORM

MINSTREL SONGS

A collection of famous minstrel and plantation songs, 215 pages, large sheet-music size. All the old-time favorites included. 94 compositions.

Price, Paper, \$1.00
Boards, \$1.25 Cloth, Gilt, \$2.00

NEW HARVARD SONG BOOK

The latest compilation of merry college songs. A splendid volume containing all the gems from college hall and campus.

Price, \$1.00, Postpaid

GOOD OLD SONGS

A new volume of famous songs. They are all good songs, but hardly old songs, for to-day there is no charm so potent to touch the heart as the gems contained in this book. For young and old.

Price, Paper, \$1.00
Boards, \$1.25 Cloth, Gilt, \$2.00

Popular Song Collection

One hundred and forty-four pages of popular, yet high-grade songs, such as musical people will admire. An excellent volume for the home.

Price, Paper, \$1.00
Boards, \$1.25 Cloth, Gilt, \$2.00

SONG CLASSICS

For high voices. A collection of choice lyrics by the best modern composers. 151 pages. Large sheet-music size. Home or concert use.

Price, Paper, \$1.00
Boards, \$1.25 Cloth, Gilt, \$2.00

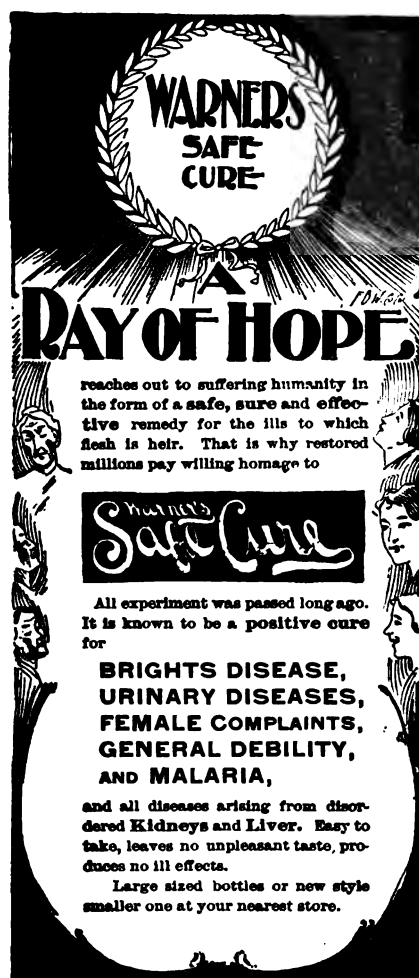
OLIVER DITSON COMPANY

453-463 Washington Street

NEW YORK BOSTON PHILADELPHIA

C. H. DITSON & CO. J. E. DITSON & CO.

Mention American Gardening when you write.



**WARNER'S
SAFE
CURE**

**AT
RAY OF HOPE**

reaches out to suffering humanity in the form of a safe, sure and effective remedy for the ills to which flesh is heir. That is why restored millions pay willing homage to

Warner's Safe Cure

All experiment was passed long ago. It is known to be a positive cure for

**BRIGHTS DISEASE,
URINARY DISEASES,
FEMALE COMPLAINTS,
GENERAL DEBILITY,
AND MALARIA,**

and all diseases arising from disordered Kidneys and Liver. Easy to take, leaves no unpleasant taste, produces no ill effects.

Large sized bottles or new style smaller one at your nearest store.

MONITOR INCUBATOR
Illustrated Catalogue for stamp.
Medal and Diploma Awarded at the World's Fair
A. F. WILLIAMS, 76 Race St. Bristol, Ct.

Mention American Gardening when you write.

AMES FREE & useful articles for only 4mo. subs. to Poultry Keeper at 25c. Every poultry raiser wants this leading poultry paper. Sample free. Address POULTRY KEEPER Co., Box 89 Parkersburg, Pa.

Mention American Gardening when you write.

BETTER THAN A DAIRY FARM
is a poultry farm. More money and less labor and expense. All proofs in our NEW POULTRY GUIDE FOR 1897, 100 pages printed in colors sent for 15 cents. Address JOHN BAUSCHER, Jr. Box 38, Freeport, Nl.

Mention American Gardening when you write.

POULTRY BOOKS. ABC Poultry Culture, 25 cts.; 500 Questions and Answers, 25 cts.; Poultry House Plans, 25 cts.; Pigeon Queries, 25 cts.; Fancy Poultry, 1 year, 50 cts. All \$1.00. Any 2 books, 40 cts.; 3 for 50 cts. J. DARROW, CHATHAM, NEW YORK.

Mention American Gardening when you write.

HATCH Chickens BY STEAM—
With the MODEL
EXCELSIOR Incubator
Simple, Perfect, Self-Regulating.
Thousands in successful operation. Lowest priced first-class Hatchers made.
GEO. H. STAHL,
114 to 122 N. 6th St. Quincy, Ill.

Mention American Gardening when you write.

INCUBATORS
The OLENTANGY Incubator has proved to be the best. Have taken prize after prize. Brood-ers only \$5.00. Before buying elsewhere, send for free description and testimonials. Also breeder of 40 varieties of high-class poultry. 110 yards, 110 houses. Address
G. S. SINGER, Cardington, O.

Mention American Gardening when you write.

We find that good returns come from advertising in American Gardening.
H. H. BERGER & CO.,
San Francisco, Cal., Jan 28, 1897.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Value of Fancy Fowls.

The question as to what is a fair value to place on a thoroughbred fowl is one that is oft recurring. Often the seller doesn't know, especially if he be a newly fledged fancier. Still oftener is the buyer at sea. He knows that he wants good birds, but he does not know good birds, perhaps, when he sees them. If the fowls have been reliably scored a recognized scale of values may be applied to them. In good hands 85 to 88 point birds are classed as culls. Those showing 90 to 92 points may run from \$2 to \$10 each according to breed and sex. Ninety-four point birds may bring from \$6 to \$15, if the owner knows how to work them off. Above 94 points it is a matter of how strong is the desire of the few buyers who can pay the price. A little more than a year ago \$50 and \$75 was repeatedly refused for one of the first prize winners at New York.

Snow as Poultry Food.

Inquiry is often made as to whether snow when taken into the crop is injurious to the fowls. We do not need to be told that extremely cold substances taken into the human stomach chill the whole system. Given exposure added and fatal results may supervene. Reasoning from analogy, and knowing that fowls are peculiarly susceptible to the effects of chilling, how can we come to any other conclusion than that they are decidedly better off without snow and ice, particularly as a diet?

A Unique Forget-Me-Not.

An apparently revolutionary plant among the varieties of *Myosotis* appears this season under the subtitle of *rosea stricta*. As pictured, the plant is nearly cylindrical, strictly upright in growth, entirely innocent of anything that might be called grace, but thickly covered with bloom; it is called a plant of striking beauty. Quite as much of an advance, perhaps, but in another direction, is the new sort known as *Distinction*, which, unlike other forms of the Alpine sorts, blooms the first season from seed. It is said to force well, and to bloom all winter after having done duty on the veranda during the summer. Do not amateurs generally leave the forget-me-not too much to the garden?

Twiners and Trailers.

It is not too soon to be thinking of material for the veranda baskets and boxes, especially if these are to be raised from seed. Among the dependable things are *Petunias*, *Verbenas*, *Thunbergias*, *Lobellias* and *Nasturtiums*. To these may be added the *Kenilworth ivy*, *Lantana*, *Torenia*, and for shaded places *Mimulus*. All these may be raised from seed, but they must be started early if they are to be satisfactory. Most of them come from cuttings also. The *Lantana* is an especially good plant for outdoor work, where it is too seldom seen. A new sort, having an unusual disposition to trail, which is now offered, may prove helpful toward bringing this plant into recognition as a subject for baskets and veranda boxes.

Blooming an Amaryllis.

It is possible that those who may have berated themselves on account of the ill behavior of some precious amaryllis may not be so wholly to blame as they have thought. Very often the bulbs sold are barely of blooming age, and they cannot always be called well ripened. If a properly ripened bulb has the bud formed within its circling walls it must be very bad treatment indeed, from which it will emerge failing to bloom. As a sample of the rapidity and sureness with which these bulbs come into bloom, it may be noted that a Johnsoni bought from the dealer and potted during the second week in December was in full bloom on Jan. 23. Of course, the bud was all ready to push at the time of potting.

Naked Pills

are fit only, for naked savages. Clothes are the marks of civilization—in pills as well as people. A good coat does not make a good pill, any more than good clothes make a good man. But as sure as you'd look on a clothesless man as a mad one, you may look on a coatless pill as a bad one. After fifty years of test no pills stand higher than

**AYER'S
Cathartic Pills**
SUGAR COATED.

The Best Fern.

That beautiful fern called *Adiantum Farleyense* is often referred to as the queen of maiden-hairs. When at its best, words cannot adequately describe its beauty. But it needs more heat than many who essay its culture realize. A newer form, known as *Adiantum Capillus-veneris imbricatum*, is sometimes, but of course wrongly, called the hardy *Farleyense*. It seems to be worth attention and trial by those who may not have succeeded with the older form.

Protect from Dampness.

Among all the conditions of which we must say "Shield the fowls absolutely from these if you wish them to prosper," none demands more emphasis than this; for it is a fact to which those long in the work bear universal testimony—that dampness alone may nullify all other attention that may be lavished on the birds subjected to it. It is, too, one of the most difficult things to overcome wholly. Tightly closed houses and earth floors tend always in the fatal direction. Conversely, dry raised floors and daily fresh air with sunshine are always helpful.

Lime and Poultry Droppings.

On page 42 was a paragraph on this subject, and a comment from a reader brings out a fact often noticed, viz., that one is almost sure to say too much, or too little. If the conservative note on page 42 be carefully scanned, it will be seen that neither lime nor land plaster was recommended. This was simply for the reason that the writer neither believes in nor advocates their use. Science, speaking usually through the mouths of the large number who read the various poultry papers, but do little thinking or observing for themselves, may say that lime frees the ammonia from the droppings, while gypsum fixes it. Yet there are many who find by experience that lime is a good thing in the poultry house; and one of our best poultry papers says, editorially, that in six years' use of lime no odor has ever been noticeable in the houses; if there were escaping ammonia this could not be true. Those who are pronounced in favor of lime are careful to say that they use it in the air-slaked form. Possibly others may not have done this. It is not an easy matter to stand up in opposition to the whole army of poultry experts, especially when they believe themselves to be backed by science, but for ourselves, we have no good word for gypsum. The ill-odor in our fowl houses has never been so pronounced as when using gypsum as a supposed deodorizer! In using coal ashes on the platforms we dispose of a waste product with one handling, in a way to make it of present and future value. This we consider the essence of good gardening, or, indeed, of good business generally, where there is waste to handle.

MYRA V. NORRIS.

WHOLESALE MARKET REPORT

New York.

The demand in the cut flower market fell away in a most disastrous manner during the latter part of last week and prices ruled very low. It is expected that the Bradley-Martin ball and other social functions this week will change the conditions and make the averages of this week much higher.

The market in fruits and vegetables generally is much firmer and stock of all kinds is moving in favor of the producer. This is as we predicted last week. The frost in Florida has wiped out the greater part of the fall plantings, and what stock is coming in now is from the extreme South, and the quantities are not sufficiently large to largely influence the market.

Asparagus is arriving regularly, but quality is poor.

Hot house lettuce is, generally speaking, so poor just now that select Florida is over-selling it. Quantities have to be sold at from \$1 to \$2 per barrel, with extra fancy at 75 cents per doz., as top notch, while select Florida are making as high as \$2.50 to \$3.50 per half basket.

Radishes have slackened up in price; what were quoted at \$4 per 100 bunches are now selling \$2.50 and \$3.

Cucumbers, fancy stock, are still making \$2 and \$2.50 per dozen.

Mushrooms are still hanging fire and a clearance has not yet been effected; but it is hoped that this week will about see the end of the surplus, after which the market will get back to a more normal condition.

Some very fine cauliflowers are coming in from Long Island growers. These are selling from \$6 to \$8 per barrel for fancy, and \$2 to \$3 for seconds.

Hot house strawberries have improved in price and are again back to \$4.50 per quart.

Hot house grapes (European) \$1.25 to \$1.50 per lb.; domestic grapes, N. Y. Catawba fancy, per 4 pound basket, 12 cents to 15 cents per pound; second, or inferior, 8 cents to 10 cents per pound.

Apples are steady at last week's quotations. The receipts and exports for the week ending Feb. 6 were as follows:

Receipts for week.....	27,680
Receipts since Sept. 1.....	1,032,948
Receipts same time last year.....	586,884
Exports for week.....	7,939
Exports since Sept. 1.....	498,630
Exports same time last year.....	244,708

Ginseng.
Prime dry root is in moderate supply, and steady at \$2.75 to \$3.75 per pound.

Apples.
Spitzenburg, fancy, per bbl.....2 00@2 50
Baldwin, Vt. and northern, fancy.....1 50@2 00
Baldwin & Greening, Vt., ordinary.....1 00@1 25
Baldwin, w'n N. Y., fancy, per bbl.....@1 37
Gre'e, w'n N. Y., p'me@f'cy, per bl.1 25@1 50

Vegetables.
Beets, Florida, new, per bush, crate.....@1 00
Cauliflowers, California, per crate.....2 00@2 50
Cauliflowers, Florida, 1/2 bbl. basket.....1 50@3 00
Cabbages, per 100.....3 00@4 90
—Danish, per 100.....5 00@6 00
—Florida, per barrel crate.....1 25@1 50
Celery, flat bunches, per doz. bunches.....75@1 50
—California, large, per doz. stalks.....60@ 90
—State, fancy large, per doz. stalks.....50@ 70
—Average best, per doz. stalks.....25@ 40
—Small to medium, per doz. stalks.....12@ 20
Carrots, unwashed, per bbl.....@ 60
Onions, Eastern white, per bbl.....4 00@6 50
—Eastern red, per bbl.....3 25@3 50
—Eastern yellow, per bbl.....3 00@3 25
—State and western, yellow, per bbl.2 25@2 75
—Canadian, red, per bbl.....2 75@3 00
—Bermuda, per box.....@ 2 75
Peas, Florida, per crate.....2 00@4 00
Peppers, Fla., per crate or carrier.....2 00@3 00
Parsnips, per bbl.....75@ 90
Squash, Marrow, per bbl.....1 25@1 50
—Hubbard, per bbl.....1 00@1 25
Spinach, Norfolk, per bbl.....50@1 25
Turnips, Canada, Russia, per bbl.....60@ 70
Turnips, J'y and L. I., Russia, per bbl 50@ 75

Philadelphia.

There has been a wonderful improvement in this market during the latter part of last and the early part of this week and all kinds of stock have been moving more readily.

That the cold snap has not extended so far South as was anticipated is evident from the arrival of Florida vegetables during the past few days; the weather has also been milder here, and all kinds of vegetables have been in demand.

Prices are much firmer; apples have advanced and many are still held at higher figures than quoted here; selling prices have been:

Spitzenburg, fancy.....	2 25@2 50
Kings, fancy.....	2 00@2 25
Baldwins, fancy.....	1 60@1 75
Baldwins, fair to good.....	1 30@1 50
Greenings.....	1 40@1 60

Strawberries have fallen off very much; those arriving are mostly of inferior quality and go to the street men. Good fruit has been

selling at \$1.00 per qt. The general opinion is that no quantity of good fruit will arrive from Florida for five or six weeks yet.

Mushrooms have sold better and remain firm at 20 to 25c. per lb.

Hothouse tomatoes continue in fair supply and of fair quality; color not quite so good as last week; these bring 25 to 30c. per lb.

Vegetables.

Beets, Florida, new, per 100 bunches.....	4 00@6 00
Brussels Sprouts, per qt.....	7@ 10
Cabbages, new, Florida, per crate.....	2 50@3 00
Cauliflowers, per basket, Florida.....	1 50@2 00
Celery, extra, per doz. stalks.....	50@ 75
Kale, Norfolk.....	75@1 00
Lettuce, Florida, per 1/2 basket.....	1 50@2 50
Spinach.....	1 50@2 00
Tomatoes, Florida, fancy.....	2 50@3 00
Tomatoes, Florida, fair.....	1 50@2 60

Onions have moved much better; the best seller has been Yellow Globe Danvers, N. Y. stock; these sold at \$3.00@3.50. White are not so plentiful, and average \$4.50@6.00. Red are rather scarce this week; they have sold at from 3.25 to 4.00. There are very few Western onions to be seen.

There were no peas or string beans to be found on the market this week, and hothouse vegetables are very scarce. The lettuce now arriving from Florida is very good, and but few baskets remain unsold. Cabbage is the only vegetable that is not selling freely.

Catalogues Received.

W. W. WILMORE, Denver, Col.—Price List of Dahlias, Cannas, etc.

C. N. FLANSBURGH, Leslie, Mich.—Price List of Strawberry Plants.

J. A. MCDOWELL & CO., City of Mexico.—Trade Catalogue of Cacti, Orchids, Bulbs, etc.

THE GEO. H. MELLE CO., Springfield, Ohio.—Illustrated Catalogue of Roses and other plants.

ONE YEAR FOR 10 CENTS

We send our monthly 10-page, 48 col. paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents. If you send the names and addresses of six lady friends, WOMAN'S FARM JOURNAL, 4212 Evans Ave., Saint Louis, Mo.

Mention American Gardening when you write.

RADISH, Deep Scarlet Forcing, Oz., 10 cts.; lb., 60 cts. Cauliflowers, Early Erfurt, Pkt., 25 cts. Asters, Queen of Market. Mixed, best Aster for early cutting, Pkt., 10 cts.; 1/4 oz., 60 cts. Write for sample. The seeds are grown right in Woodhaven and are of superior quality. Beware of cheap seeds.

Carnations, rooted cuttings, now ready.
H. BEAULIEU, Woodhaven, N. Y.

Mention American Gardening when you write.

More Potash

in the fertilizers applied on the farm means larger and better yields of crops, permanent improvement of the soil and

More Money

in the farmer's pocket.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

ELLIOTT'S SEED

ANNUAL FOR 1897.

Now Ready. Mailed free on application, by only mentioning AMERICAN GARDENING.

WM. ELLIOTT & SONS,
54 & 56 Dey Street, NEW YORK.

Mention American Gardening when you write.

MARKET GARDENERS

GET MY PRICES BEFORE YOU BUY. Catalogue Free.

Try Battles' Early Favorite Cauliflower, Trial Packet, 10 cts.

GROWER OF FARM AND GARDEN SEEDS. ✱ FRANK H. BATTLES, Rochester, N.Y.

Mention American Gardening when you write.

Before buying Seeds you should write for

BURPEE'S FARM ANNUAL 1897

Tells the plain truth about The BEST SEEDS that Grow! Hundreds of illustrations with remarkable NEW Novelties, painted from nature. "The Leading American Seed Catalogue." Mailed FREE to all.

W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

WE OFFER AMONG MANY NEW THINGS

The Bismarck Apple—Bears splendid fruit on 2-year grafts. A remarkable new fruit.
Hedysarum Multijugum—A new Mongolian Shrub of great beauty.
Lord Penzance's Hybrid Sweetbriars—Worthy a place in every garden.
Viburnum Tomentosum—We consider this the finest shrub grown. Very rare.
Picea Censcolor An improvement on the Blue Spruce.
The Weeping Spruce.
Clematis Paniculata—Without an equal as a hardy climber, 80 cts.
Magnolias, Japan Maples.
The best stock of Herbaceous Perennials in the country.
Rhododendrons and Azaleas at lowest prices quoted.

For all these, and full advice and plans for planting grounds and gardens, write us.

!New Catalogue mailed for 10 cts.

THE SHADY HILL NURSERY CO., 102 State St., Boston, Mass.

Mention American Gardening when you write.

WEEBER & DON,

Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Illustrated Catalogue

of Vegetable and Flower Seeds

NOW READY.

EVERY GARDENER SHOULD HAVE ONE.

Free on Application.

Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at two cents per word each insertion, payable in advance. The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

NEW GLADIOLUS. Leaflet free. Norman Cole. Glens Falls, N. Y.

STRAWBERRY PLANTS for sale. Catalogue free. Charles Howard, 2 Johns, Md.

FOR GROUND TOBACCO STEMS, write Henderson-Hughes Tobacco Co., Danville, Va. (Agents wanted.)

15 CONCORD GRAPE VINES, postpaid, \$1.00. Replace free one year. W. J. Martin, Blakesburg, Iowa.

DON'T PLACE your orders for Berry plants until you send for my price list. H. H. Aultfather, Box C, Minerva, O.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedsman, Rochester, N. Y.

HOW TO GROW RHUBARB in the field and greenhouse. Price fifty cents postpaid. Fred. S. Thompson, Station D, Wis.

CAULIFLOWER ECLIPSE, the earliest cauliflower, packet 25 cents. A small sample free. H. Beaulieu, Woodhaven, L. I.

THE RIDGEWAY, a new strawberry of great merit. For price of plants and free catalogue, address M. H. Ridgeway Box 292, Wabash City, Ind.

MIXED SEEDLING GLADIOL. Blooming bulbs of fine strain, \$1.25 a hundred. Expressage to be paid by purchaser. Mrs. George Such, South Amboy, N. J.

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 718 Wharton St., Philadelphia. Three shipping points, can save you freight.

STRAWBERRY PLANTS. Try the Margaret Fountain, Michigan, Clyde Glen Mary. Headquarters for Ganey, Brandywine Marshall, Parker Earle and all choice standards. Catalogue free to all. C. N. Flansburgh, Leslie, Mich.

GLADIOLI, CANNAS, CLIVIAS, Bouchet and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings, Cannas, Italia, Austria, and best standards. New Hybrid Clivias, Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.

20 ACRES rich, level farm land, free from rocks and swamps, and especially adapted for truck, fruit, cotton and tobacco raising, for \$500, payable \$10 down and \$1 or more weekly. Convenient to great eastern markets. In thickly settled section of Virginia. Genial climate all year. Splendid water. Schools, churches, stores, mills and desirable neighbors. Deed free and title guaranteed. No malaria, mosquitoes, blizzards or floods. Taxes and freight rates low. For further information write to D. L. Risley, 211 S. 10th St., Philadelphia, Pa.

PAPERS, MAGAZINES, ETC.—We will make you liberal concessions when you order other periodicals for the year, whether in connection with your own subscription or not. Send us your list for estimate American Gardening, P. O. Box 1897, New York.

MAMMOTH RHUBARB or Wine Plant, \$1.25 per Doz. by mail. F. H. Llewellyn, Olean, N. Y.

GLADIOLUS BULBS, 40 named kinds, each different, not labeled, \$2.40 postpaid. Price list free. John Fay Kennell, Rochester, N. Y. Box 405.

PHOTO, 5x7, of celery with paper tubes on and two girls who grew it. First at State and County Fair. You big men make a great fuss about growing celery. Try of information 10 cents. Richard Branson, Syracuse, N. Y.

PRIVATE GARDENERS.

Honor to Whom Due.

On page 77 your correspondent, Mr. Napier, alludes to having charge of the house of grapes in Polmont, Scotland. I say, give credit to whom credit is due; I have known Mr. Murray, superintendent gardener at Park Hall, Polmont, for years, and it is but little over two years since I last met him. Mr. Murray is a famed grape grower, and while Mr. Napier or another might have been his foreman, he never had entire charge. When I was a bit younger I was foreman under gardeners when they came to the front in producing first class grapes, but it was not I that deserved the credit. D. MURDOCH, Marion, Mass.

Poughkeepsie, N. Y.

The Dutchess County Horticultural Society met in the Court House Thursday, Feb. 4. There was a large attendance. The following committee was appointed to take in charge the arrangements for the next exhibition: James Blair, W. G. Gomer-sall, Harold Cottam, Thomas Harrison, Peter Devoy, James Sloan and I. L. Powell. An appropriation of \$50 was made to secure the services of essayists when considered advisable. William J. Stewart, of Boston, was elected an honorary member of the society.

I. L. Powell, of Millbrook, N. Y., read an excellent paper on "Herbaceous Plants." The society now numbers 97 members, and has about \$500 in the treasury.

In the evening the second annual dinner was held in the Nelson House. The tables were elaborately decorated, conspicuous among the flowers being three baskets of orchids from Thomas Emerson (the center basket of Cattleya blooms was, owing to the excellence of the varieties, perhaps one of the grandest ever put on a dinner table), and a large bunch of Lily Dean carnation from J. N. May, of Summit, N. J.

P. O'Mara, of New York, acted as toastmaster in his usual able manner. President George Siltford replied for "Our Society," mentioning the phenomenal growth of the association during the short period of its existence, since January, 1895. "The Horticultural Press" was responded to by James Withers, of the American Gardening, who explained the relation of the press to the trade and their mutual helpfulness.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT per word each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER, a German man, married, 30 years old would like to take care of a gentleman's private place. Best of references. Address C. A. care of American Gardening.

GARDENER and Florist, 30 years of age, single, German, 15 years' experience, wishes to take charge of gentleman's place, first-class references. Address L. D., care American Gardening.

BY women, each with an infant or young child, situations in the country (general housework, plain cooking, etc.) in New York and adjacent States. Small wages expected. Railroad fare paid by Association. Apply State Charities Aid Association, 106 East Twenty-second St., New York City.

GARDENER and Florist's assistant, English, 35 years of age, single, 3 years' experience at florist work, also 3 years' at kitchen garden, understands growing vegetables in greenhouse, good references, desires situation with florist or market gardener near New York. Address A, care American Gardening.

HEAD GARDENERS.—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of graperies, greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 35 & 37 Cortlandt St., New York.

SITUATION wanted.—First-class Gardener with diploma from both sides of the Atlantic, will guarantee financial success in producing choicest roses, also mushrooms under glass, in same building, and heat, thereby saving expense in labor, space and fuel; forcing vegetables under glass and European grapes specialties; thorough artist at table decorations; good landscape gardener; best city references. Wm. Thompson, 741 First Ave., N. Y. City.

Boston, Mass.

The chief exhibitor at the exhibition of the Massachusetts Horticultural Society on Jan. 30 was Oakes Ames (Carl Blomberg, gardener), who sent a handsome vase of Bride and Bridesmaid Roses, and smaller vases of Anna Olivier, Perle des Jardins and Lamarque Roses, a vase of twelve varieties of Cyripediums, Odontoglossum Roezlii alba and Cat'leya Tranae, also Mahernia glabrata; Clematis Mme. Lemoine, Chrysanthemum frutescens, Acacia pubescens, Antirrhinum majus, and Camellias. James Comley exhibited fine specimens of President Clark Camellia, a beautiful pink seedling Azalea and California Violets. William Wallace Lunt exhibited a seedling Cyripedium bearing his name; it is a hybrid between C. insignis Maule and C. Boxallii stratum, originated by H. Low & Co., of London. P. E. Simpson (J. H. Hemingway, gardener) showed a plant of the Farquhar Violet.

Lenox, Mass.

The regular meeting of the Lenox Horticultural Society, held Feb. 6, was marked by a fine display of carnations, which included two new varieties, Mr. Hugh Graham's "Victor" and Mr. Cook's "Nivea," the former gaining a first class certificate and the latter "special mention." Mr. William Griffin exhibited well grown examples of Albertina, Scott, Emily Pierson and Brutus. For the collection he was awarded a first class certificate. Mr. A. H. Wingett exhibited some extra fine blooms of Bouton d'Or (first class certificate), and Mr. George H. Thompson showed a nice vase of Tidal Wave (diploma). Mr. A. J. Loveless showed Browallia, a very pretty, purple-flowered annual (first class certificate), and a well flowered spray of Desmodium Nobile (album). Mr. E. J. Norman read a paper on the history of orchids, treating chiefly upon the dates of introduction of the different species and of the early futile attempts at their cultivation; also telling something of the conditions under which they grow in their native countries.

At the meeting on Feb. 20 Rev. W. T. Hutchins, of Sweet Peas fame, will read an essay on "Sweet Peas."

Private Gardeners' Mission.

BY P. O'MARA.

(Continued from page 97.)

While on the subject of size I am reminded of reading recently in an old magazine the following: "It is a prevailing and most erroneous opinion that the enjoyments derivable from a garden are just in proportion to its magnitude. So far from this being the case, it may be said to be a fact that it would confer a most essential service to the science of gardening, either to lessen by one-half almost every ornamental garden, or allow double the amount of labor to that usually bestowed upon them. In ninety-nine gardens in every hundred it will be found that their extent is such, compared with the labor allowed for keeping, that the time and attention required for the nicer operations of the art are almost, if not wholly, absorbed in the manual labor demanded in keeping in repair the beds, grass, walks, etc. This ought not to be. The pleasures and enjoyments of a garden by no means depend on its extent, but on its high state of culture and keeping." This was written nearly fifty years ago in relation to American gardens and is applicable in a great measure to-day. Its incontrovertible truth and sound common sense appeal to the veriest tyro in the craft and it should be part of the gardener's mission to keep this before the minds of such employers as require to be reminded of it. You all know that no practical man should attempt more in horticulture than the labor allowed can cope with. Laudable ambition to do much with little is to be admired, but it rarely succeeds in horticulture, and if when occasion required it the gardener would take a firm stand, explain the situation to his employer in an intelligent, forcible manner much of the poor results from insufficient help would be avoided. The untrained eye—and the eyes of many proprietors are

untrained—may not be able to see wherein labor could be profitably employed, and where, if rendered necessary by circumstances, a saving in labor could be effected. It is here where the trained skill of the professional gardener should assert itself, and in ninety-nine cases out of a hundred, if the case is put in its proper light by him, he can improve the situation some, even if he is unable to have things done just as they should be.

A gentleman who owns a large place on the Hudson River and who has traveled abroad extensively once said to me that we were now about fifteen years behind Europe in gardening. I mention this to show what is the opinion of one who had evidently watched gardening on both continents. His own place is well kept, and in his immediate neighborhood are some fine estates. It was a broad statement, and like others of its kind opens up a wide field for discussion. It will be generally conceded by most men capable of judging that we are at least that much behind in some things and far more in many, while it would not be hard to select others where we are on equal terms if not ahead. With varying conditions of soil and climate every practical man knows that an exact comparison is impossible, but the question is rather should we remain under the influence of any country, or should we rather define our own orbit, accepting what is useful and rejecting what is unsuited to our conditions? The professional gardener above all others occupies the place in ornamental horticulture which enables him to decide this question. In our vast country, with professional gardeners scattered from the Atlantic to the Pacific and from Hudson Bay to the Gulf of Mexico, there should be keen eyes to select what is best adapted to meet varying conditions, and if varieties are not yet produced suitable to meet requirements he should use his skill to produce them. The native flora of the world has been pretty well explored, and now hybridization more than ever must be looked to for supplying new and improved forms. This is a fair field for the professional gardener, and it is his mission to test its resources. It is a field in which honor is to be found, wherein he may win imperishable laurels, wherein he has the opportunity to benefit himself peculiarly and confer a benefit on millions now and on untold millions yet to be. It is not a field that he should surrender to the commercial florist and nurseryman. It is, in fact, a field to which they invite and welcome him. He has already done much in it, but there remains yet much to be done. Let us take a glance at what the professional gardener has already done. I wish that I could give a complete list of contributions to American horticulture from this source, but reliable information is difficult to obtain, as I found from experience.

Full fifty years ago the Massachusetts Horticultural Society offered a prospective prize of a gold medal for the best seedling garden rose. The honor of winning that prize belongs to Mr. Michael Walsh, gardener to Jos. S. Fay, Esq., of Wood's Holl, Mass., who won it with his magnificent seedling introduced this year by Peter Henderson & Co. under the name of Jubilee. In this connection I do not think it amiss to say that the commercial florist or nurseryman who obtains a new variety from a gardener should give him due credit for raising it by announcing the fact in the published description. It is only fair and giving honor where honor is due. The carnations Lizzie McGowan and Louise Porch were raised by a gardener, Mr. Carl Schaeffer, then at Orange, N. J., now at Tuxedo Park, N. Y. Alexander MacPherson, then gardener to John Burke, Esq., raised the canna Nellie Bowden, which for a pure yellow, when viewed in a mass, was in its day considered good and is not without merit even yet. That grand nymphaea O'Mahana, raised by my friend Peter Bisset, gardener to Gardiner Greene Hubbard, Esq., Washington, D. C., and which he honored me by naming after me, is a variety of which he may well feel proud. John Fraser, of Baltimore, Md., contributed some fine seedling abutilons to horticulture. The coleus Golden Bedder, one of the best contributions to American horticulture, a "sport" from "The Shah," was raised by Richard Johnston, then gardener

to Mr. Bowie Dash, Kingsbridge, New York city, and introduced to commerce by Mr. F. R. Pierson, to whom I am indebted for full information concerning this still very useful plant. The coleus Mrs. D. I. Haight was raised by Mr. John Logan, Goheen, N. Y., gardener to the lady whose name it bears. The achyranthus Gilsonii was raised by a gardener whose name it bears, and who I am informed was a colored man. The purple salvia Mrs. Mitchell was raised by I. H. Slocum, New Haven, Conn., gardener to Hon. Charles Mitchell. The canna Mrs. Fairman Rogers was raised by Mr. James Cowles, and canna Robert Christy was raised by the gentleman whose name it bears, still gardener to J. Peabody Wetmore, Esq., Newport, R. I. Mr. Jackson Dawson, of the Arnold Arboretum, who may be classed among professional gardeners, has done yeoman service for American horticulture, not the least of which was the production of the now famous Dawson rose. To enumerate all he has done would make an interesting chapter in itself, if I had the material, but his work on Rosa Wichuriana and multiflora japonica should receive special praise. Mr. William Falconer, lately gardener to Charles A. Dana, Esq., Glen Cove, N. Y., has rendered inestimable service to American horticulture by developing many plants that would have otherwise remained in obscurity. His name is indelibly linked with the horticulture of this day, not alone by his practical work but also by his invaluable contributions to its literature. Mr. William Dogue, the public gardener of Boston, Mass., has raised some fine seedling coleus. In new chrysanthemums the gardener has played a prominent part. T. D. Hatfield, gardener to Mr. Walter Hunnewell, Wellesley, Mass., originated Lady Playfair, A. H. Fewkes, Walter Hunnewell, J. Pithers, Frank Hatfield, Eldersdown, Signal Light, Columbia, Mrs. T. D. Hatfield and Sundew. John Marshall, gardener to Mr. Trenor L. Park, Purchase, N. Y., received a certificate last fall for his fine chrysanthemum Mrs. Trenor L. Park. Wallace G. Gomersall, gardener to Professor Winthrop Sargent, Fishkill-on-Hudson, N. Y., raised good varieties in Wodene-the and Mrs. J. R. Van Duzer. Joseph Monahan, gardener to Mr. Charles Trotter, Germantown, Pa., received a certificate last fall for a chrysanthemum, Thomas Monahan, also for another new seedling, Miss Helen Trotter. His father, to whom he succeeded, raised some of our best varieties, including E. H. Fittler, Mrs. J. G. Whilldin, Black Beauty, Molly Bawn, Sugar Loaf, Mrs. W. H. Trotter, Goliath and El Dorado. James Brydon, gardener to Hon. John Simpkins, Yarmouth, Mass., has raised some fine chrysanthemums, and last year obtained a certificate for another, named Quito. Robert G. Carey, gardener to T. C. Price, Esq., Chestnut Hill, Philadelphia, Pa., the raiser of Liberty, Oakland and other fine varieties, received a certificate for his new seedling, Robert Edgerton, last year. Richard Gardener, Newport, R. I., formerly gardener to Cornelius Vanderbilt, Esq., has raised some good varieties. James Comley, gardener to the late F. B. Hayes, Esq., raised some good sorts, including one called F. B. Hayes, for which he received a medal at the New York show in 1895. He also brought a fine collection from Japan, some of which have been introduced into commerce. Another claim he has on horticulture in the production of his fine rose Oakmont. No mention of the work done by gardeners in this line would seem to me to be complete without reference to the raiser of that grand variety, Mrs. Jerome Jones, viz., H. A. Gane, West Newton, Mass. He is not a professional gardener, but many wish he could be named in the ranks. However, his gardener, John Hargadon, is entitled to some praise. Last year his new seedling, Marcia Jones (exhibited by T. H. Spaulding), was certificated in Boston and Philadelphia. John Farrell, gardener to William Barr, Esq., Orange, N. J., raised Baronald, which subsequently was found to be synonymous with G. F. Moseman. Miss Alice Broome, Mrs. William Barr and John Farrell were also raised by him. He has also raised other meritorious and unique sorts, which Mr. Barr prefers to keep as his private property.

(To be continued.)

CALIFORNIA LANDS ARE RICH

and only \$35 to \$55 per acre AT ESCONDIDO. Grow fine oranges, lemons, olives, prunes, apples, hay, grains, etc. Best summer and winter climate in U. S. Send stamp for list. Pamphlet to Escondido Land & Town Co. at Escondido, Los Angeles or San Diego, Cal. Mention American Gardening when you write.

"Strawberry Plants That Grow."

Standard sorts; \$1.50 to \$2.50 per M. Best Rasp. and Blackberry plants, \$3.50 to \$5.00 per M. My "1897" catalogue mailed free. C. E. WHITTEN'S NURSERY, Bridgman, Mich. Mention American Gardening when you write.

HALL'S FAVORITE. THE COMING NEW does competition; the best introduced for years. Forty other kinds pedigree plants. Raspberries, Blackberries, Asparagus roots etc. Hear quarters for Second Crop Seed Potatoes, double crop and earlier than other seed.

Descriptive Catalogue Free.

J. W. HALL, - - Marion Station, Md. Mention American Gardening when you write.

ALL THE LATEST NOVELTIES

AND PLANTS THAT CAN'T BE HAD ELSEWHERE. Cactus, Italia and Austria, at \$1 each. New Roses, New Fruits, New Shrubs, New Bulbs. 10 Cacti for \$1.—5 for 50 cts. Book on Cacti 116 pages, 120 cuts, 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free. A. BLANC & CO., - Philadelphia.

Mention American Gardening when you write.

KOSS' SEEDS

Always Give Satisfaction. Our German and English Catalogue Free to all who need seeds, no matter how much. Wholesale list for Market Gardeners and Truckers. Address THEO. KOSS, 361 Reed St., Milwaukee, Wis. Dealer, Grower and Importer. (Wanted, a few good salesmen.)

Mention American Gardening when you write.



FLORA of JAPAN & CALIFORNIA

Chinese Narcissus, over 100 varieties of Lily Bulbs, Camellias, Palms, etc. HARDY PLANTS, Japan Maples, Iris K., Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan. Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above. H. N. BENDER & CO., San Francisco, Cal. (ESTABLISHED 1887).

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.

Mention American Gardening when you write.

....2,000,000....

Strawberry Plants

FOR SALE.

Eighty varieties. Catalogue Free.

It Tells How to Raise a Big Crop of Berries.

E. J. MULL, Olyphant, Lack's Co., Pa.

Mention American Gardening when you write.



WE grow TREES, PLANTS

and vines; all kinds; 100,000 FRUIT TREES. Millions of fruit and vegetable plants; evergreens, shrubs and shade trees. Stock first-class. Prices low. Our 1897 catalogue free. T. J. DWYER, Orange Co. Nurseries, Cornwall, N. Y.

Mention American Gardening when you write.

Fruit Growers Make Money.

READ



Dunkirk, N. Y.

SAMPLE FREE, 50 cts. per year. Embroiders Monthly Grape Belt. Mention American Gardening when you write.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

**We cannot undertake to reply by mail.*

Grafting Japan Maple.

[Give directions for grafting Japan Maples.—G.]

—The choicest varieties of Japanese Maples are grafted in winter, on stock of Acer polymorphum, by whip grafting.]

Propagating Privet from Cuttings.

[I have a fence of California Privet, four years old about five feet high, from which I wish to take cuttings this year. Please give directions as to the time of planting, length of cuttings, and treatment, etc.—G.]

—Take wood of last summer's growth and cut into lengths of ten to twelve inches, cutting the tops in a slanting direction and the bottoms straight across. As early in spring as the ground can be worked, open with the spade a line having one side almost perpendicular and about five inches deep. Lay the cuttings four or five inches apart against the side, pressing the ends down, fill slightly and tread firmly with the foot, then fill up to the level.

Raising Lettuce in Hotbeds.

[Please inform me in your paper about lettuce in hotbeds. I want to start them now. The beds are deep; from 1½ to 2 feet. Is that right? I have plenty of horse manure.—V. A.]

—For making hotbeds for lettuce, etc., the month of February is a suitable time. Good

results can be had from hotbed frames from now on; frames should not be less than two feet in depth, and two and a half feet is not too much. Such a frame allows sufficient manure to be used to hold the heat for a considerable time, for which purpose horse manure is best; or horse manure and leaves. In making a hotbed, it is best to put in a layer of material, then firm it down. I don't know of any better way than tramping regularly over the frame with the feet. If the manure be not firmed all over the beds alike, hills and holes will be the result when the manure begins to heat. The manure can be brought up to within five inches from the sash. It does not matter how firmly the bed is made, the manure will sink down, but if it has been firmed all over alike, it will sink evenly. Soil should be put on soon enough to get thoroughly warmed before planting. Six inches of soil is sufficient. This may seem to be a full frame, but it will sink down and leave head room enough for lettuce, radishes, etc., and the result will be better when the plants are near the glass. Hotbeds do not require much water. When the soil shows signs of needing water, I have found it a good plan, if weather will permit, to take off the sash when rain falls, but never allow the plants and soil to get saturated. Lettuce enjoys fresh air, and if kept too close will damp off; air should be given on every chance. Lettuce can be planted five or six days after making the beds, and should they get hot keep a chink of air on all night.

Budding vs. Grafting.

[Whether is budding or grafting attended with the greater degree of success on the plum, cherry and peach; if grafting is more successful, what kind of grafting do you approve of, and what is the best time to bud the above fruits? Where can I procure seedling apples to graft on?—J. D., Ont.]

—Budding is practiced for all kinds of fruit trees in preference to grafting. The latter practice is used more in grafting large trees with choice varieties. The time to bud is when the bark will lift freely from the wood, and buds can be procured for insertion, which will range from July to the middle of September. J. D. would get many points from The Nursery Book, by L. H. Bailey (supplied from this office for \$1.00). Apply to the nearest nurseryman for information about seedling stock.

For a Showy Garden.

[Between my dwelling and the street in front is a lawn about fifty feet in width. In this lawn are five circular beds in which I wish to plant flowers; the centers of these beds are on a straight line that is parallel with the street. The beds are ten feet in diameter. I want to put in these beds such flowers as commence blooming early, continue blooming until autumn frosts, and make a fine display throughout the season. I am well pleased with such flowers as Celosia, Gaillardia, Petunia, Phlox, Salpiglossis, Salvia, and Zinnia, and want such others as are not expensive, and will not require much care. Are any of the fine Chrysanthemums so hardy that they can remain, uninjured, in the ground where the temperature occasionally gets as low as twelve degrees below zero?

The grass in my lawn is not near so regular as I desire it. There are many small bare spots. Give directions for getting it in really nice condition.—S. G. Johnson, Va.]

[The list named embraces the choicest annuals. So it seems that there is nothing to do but either try them again, or else go in for foliage plants such as Crotons, Sanchezias, etc., but they are more expensive. You could use Cannas in the newer kinds; at least two beds could be filled with them, and be bordered with Pennisetum longistylum (one of the Hare-tail grasses). Pompon Chrysanthemums will stand the temperature spoken of, but you get no results from these till fall, and then they are grand. If the position is not too hot and exposed, Fuchsias and Tuberous Begonias suggest themselves, or Begonia Vernon and B. Erfordia. For the grass, see Care of Lawns, in our last volume, pages 334 and 370.]

Field Planting of Asparagus.

[Give directions for planting one acre of asparagus, the preparation of the soil, the width of row, variety, age of plants, number to an acre, exposure of land, and manner of cultivation.—Charles B. Long, Mo.]

—The first requisite for asparagus is deeply cultivated and well enriched soil. Being naturally a maritime plant, it prefers soil near the salt water, or land that has been at some time under salt water; it also does well where there is a shale subsoil, possibly owing to the moisture which ascends from such. But almost any land can be made to produce satisfactory crops by liberal dressings of animal and straw manures, and good dressings of common salt from time to time. For your section, we should think that the Palmetto would be the best variety to grow. Two-year-old plants are the best to set out. For one acre, you would need 11,000 plants, and these would be set out one foot between each plant in the row, with four feet space between the rows. This system gives an opportunity, if need be, to secure a crop between the asparagus.

Scale and Thrip.

[I have a number of Opuntias infested with scale. Will frost kill them? They are on a hardy Opuntia as well as on two tender varieties. If in scraping off the scale I do it outdoors on a mild day, will they be killed by subsequent freezing? What are thrip like? My Pereskia and Epiphyllums have a small, long slim, black insect on them, in summer time, which is exceedingly difficult to get rid of. The leaves or stems turn brown where they have been. Are they thrip? How should I get rid of them?—F. S. C.]

—Thoroughly wash the Opuntias with whale oil soap, kerosene emulsion, or fir tree oil. Scraping will injure the tissue. It is thrips on the Cacti; washing will remove them; they do not like water. If it should be Mexican thrip they are harder to destroy. But the XL vaporizer, an English preparation of nicotine, has been successful in destroying these on orchids in the conservatory of Mr. Hicks-Arnold in this city.

Fruit Prospects of Eastern Alabama.

(To P. A. W. A.)—The location you name is favorable to grape growing; provided a local market can be found for the crop, or is it to be made into wine on the spot? If it is intended to ship to the New York or Eastern markets, it would, we fear, be a losing venture to enter into fruit raising.

A Winter Bath in White River

WHAT CAME OF BREAKING THROUGH THE ICE IN A WISCONSIN RIVER IN FEBRUARY.

From the Chronicle, Chicago, Ill.

Five years ago last winter there was considerable commotion on the banks of the White River, Wisconsin, as a young man named E. N. Halleck, had broken through the ice, and was for some moments lost to view. It was not long, however, before Mr. Halleck came in sight again, and by artistic means was fished from the fluid and restored to society. If the ducking had been all, it would have been well, but unfortunately, the young gentleman contracted a heavy cold, resulting in chronic rheumatism, complicated with disease of kidney and urinary organs.

"For six months," writes Mr. Halleck, "I was laid up, and not able to do anything. During this time I suffered with pains in the stomach and small of the back, and headache, urination was frequent and painful, my heart's action was increased, and I had aches all over my body, and was generally used up. Then I was able to go out, but was a confirmed invalid, and for nearly four years I was in that condition, and expected then that I should always be disabled for nothing that I took gave me any relief.

"In December, 1895, I read an advertisement about Dr. Williams' Pink Pills, and on speaking of it to Mrs. A. E. Derby, she strongly urged that I should take them, as she said she believed they would cure me. I had been under physicians' care for over two years, but as they did me no good I did not ask their advice about taking these pills, but laid in a supply and began to take them. In about ten days I began to experience substantial relief, and continued to take them for four months, by which time I was

cured. The first benefit I obtained was a less frequent desire to urinate, and lessening of that dreadful pain in the back, which ceased altogether very soon. My stomach became comfortable, and my heart's action normal. After the first break my recovery was rapid, and to-day I flatter myself I am a sound man, and able to attend to my business better than I ever could before."

(Signed) E. N. HALLECK.
I, E. N. Halleck, do hereby certify, that the foregoing statement signed by me is true.
E. N. HALLECK.

STATE OF ILLINOIS, } ss.
COOK COUNTY, }

I, John T. Derby, a Notary Public in and for the County and State, do hereby certify that E. N. Halleck, whose name is signed to the foregoing statement, is personally known to me, and that he did in my presence and of his own free will and accord, sign and swear to the same.

[SEAL.] JOHN T. DERBY, Notary Public.
Dr. Williams' Pink Pills for Pale People are not a patent medicine in the sense that name implies. They are first compounded as a prescription and used as such in general practice by an eminent physician. So great was their efficacy that it was deemed wise to place them within the reach of all. They are now manufactured by the Dr. Williams' Medicine Company, Schenectady, N. Y., and are sold in boxes (never in loose form by the dozen or hundred, and the public are cautioned against numerous imitations sold in this shape) at 50 cents a box, or six boxes for \$2.50; and may be had of all druggists or direct by mail from Dr. Williams' Med. Co.

OUR PREMIUMS ARE OFFERED

we expect them to obtain the new subscriber and retain the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. New names sent in direct are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

In our issue of February 6 we published Premium Offers, embracing a vast assortment of Standard, Fancy and Novelty Collections in Seeds, Fruits, Flowers and Vegetables, to which we invite the careful attention of every one of our readers, in the hope that, becoming interested, they will seek to earn these premiums and so increase our subscription list.

The Premiums offered are all of exceptional value; there is nothing bordering on the sensational in the various announcements, and great pains have been taken to secure offers from reliable growers and specialists. As we have previously stated, the publishers of AMERICAN GARDENING neither buy, sell, nor in any way do they trade in the stocks offered, except to mail the orders as received to the growers or dealers making the offers. This arrangement makes it satisfactory to our advertisers, who, in turn, being thus afforded an opportunity to introduce their specialties to likely new customers, at practically no cost for advertising in any of its ramifications, are thus enabled to give values which are unprecedented in the annals of Premiums Offers.

If you are interested, and want more copies of our issue of February 6 for yourself or your friends, kindly drop us a postal card; it will receive prompt attention.

SPRAYERS EXP. PAID
Any Point.
We are the largest Sprayer Co. in U. S. Get our Catalogue and compare it with others.
KNOX SPRAYER CO. 94 West St., Pittsfield, Mass.

Mention American Gardening when you write.

Seeds! Seeds!

73d Annual Priced Catalogue of
VEGETABLE, FARM AND FLOWER SEEDS
is now ready and mailed Free to all applicants.

BRIDGEMAN'S SEED WAREHOUSE,
37 East 19th Street, - New York City.
Mention American Gardening when you write.

THE BEST SEED POTATOES

And Farm Seeds are grown on
Michigan New Muck Lands by
HARRY N. HAMMOND, —SEEDSMAN—
—Decatur, Michigan.
Largest grower of seed potatoes in America.
Prices low. Write him for illustrated catalogue.
Free to all. Describes how he grew over
750 Bush. Massey's Thoroughbred per Acre.
Mention American Gardening when you write.

PRICES FROM OLDS' CATALOGUE.

POTATOES. PER BUS.	30 BU. ORDERS. PER BU.
Carman No. 1.....\$1.40	Lincoln Oats.....45c
World's Fair.....1.50	Silver Mine Oats.....55c
Great Divide.....1.50	Mandchouri Barley.....55c
Carman No. 3.....1.90	2 BU. ORDERS. PER BU.
Banner.....1.90	Reed's Yel. DentCorn.....\$1.17½
Thoroughbred.....2.00	Iowa Silver Mine Corn.....1.75

CHOICE VEGETABLE AND FLOWER SEEDS, 3c per pkt. and up, with liberal discounts and premiums. Half-price on \$5.00 orders. Send postal for Illustrated Catalogue.
L. L. OLDS, CLINTON, ROCK CO., WIS.
Mention American Gardening when you write.

PREMIUM AMERICAN PANSY SEEDS

and plants grown by W. Toole, Pansy Specialist, Baraboo, Wis. 35 varieties and mixtures of Pansies. Hesperian Pansy, 25c. per pkt.; trade pkt., 50c. Selected mixed, pkt., 10c.; trade pkt., 20c. Extra choice mixed, pkt., 10c.; trade pkt., 20c. My Pansies have never been equaled at any show where competing. Complete directions "HOW TO GROW PANSIES," sent free to any address with catalogue of Pansies and other seeds and plants by

WILLIAM TOOLE, Pansy Specialist, Baraboo, Wis.
Mention American Gardening when you write.

Seeds at half-price
Garden Flower Field.
What others sell for 5, 10 and 15c., we sell for 2½c., 5 and 7½c. Full sized packets. By the oz., 1-lb. and pound almost as low. Quality the best; same as been sending out for years. All kinds of Trees and Plants. Our beautiful illustrated catalogue of 112 pages, describing everything, mailed free.
THE LOVETT CO., Little Silver, N. J.

Mention American Gardening when you write.

STRAW
RASPB
BLACK
GOOSE
DEW

ASK WM. C. BABCOCK, BRIDGMAN, MICH.,
For prices of strong **STRAWBERRY PLANTS**, dug out in solid blocks, not from between the rows, true to name. Competition Defied. **QUALITY** considered. Complete Stock of **COURANTS AND GRAPES**. (Mention this paper.)

Mention American Gardening when you write.

BERRY PLANTS

5,000,000 Strawberry Plants, 100 varieties, including Carrie, the queen berry ever introduced; Edith, the largest; Equinox, the latest. We carry the largest and best stock in the United States. The King Red Raspberry, the brightest and best red ever offered. 1,000,000 Wakefield Cabbage Plants. Also, tobacco dust. Send for free wholesale price-list free.
THOMPSON'S SONS, Originators of the Strawberry, Rio Vista, Va.
If you cut this adv. out and send with 50 cents, we will send free, by mail, 12 plants each of Rio Bise! Tennessee and Lady Thompson.
Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All of our pots from 1 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pans.
THE WHILDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
{ Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.
Mention American Gardening when you write.

GLASS For Greenhouses, Grap- eries, Conservatories, GLASS Hothouses and Hotbeds. GLASS VANHORNE, GRIFFEN & CO.

Importers of French Glass. 13, 15 & 17 LAIGHT ST., AND NEW YORK.
52, 54 & 56 VARICK ST.,
Mention American Gardening when you write.

GARDEN CROPS
of every kind may be greatly increased in quantity and improved in quality by liberal use of **NITRATE OF SODA**, either singly or in combination with other fertilizers. Best results from **EARLY VEGETABLES** are impossible without the use of nitrogen in soluble form. **NITRATE OF SODA** is the most soluble, cheapest and most reliable source of nitrogen. Your soil may contain all the other fertilizing elements in sufficient quantity and fail to yield good crops because it is deficient in nitrogen. Over this deficiency by using **NITRATE OF SODA**. All about its source, use and the profits resulting therefrom in book on "FOOD FOR PLANTS."
Sent FREE. Address.....**S. M. HARRIS, Moreton Farm, P. O., N. Y.**
Mention American Gardening when you write.

The Savannah Line

1400 Miles at Sea and a Week's Board, \$36.

For a short time the Savannah Line will sell First Cabin Tickets calling for transportation 700 miles each way, unexcelled meals and accommodations aboard steamer, transfers in Savannah, and two days' stop at choice of three first-class hotels at Savannah; in all, nearly a week's board in addition to transportation, etc., for THIRTY-SIX DOLLARS.

Through Tickets to JACKSONVILLE, ATLANTA, and all Points South.
Steamers sail Tuesdays, Thursdays and Saturdays, from New York, and every four and five days respectively from Boston and Philadelphia, (see sailing cards.) Electric Lights kept up all night so that passengers can turn them on or off at pleasure.

UNSURPASSED CABIN ACCOMMODATIONS, SEA SPRAY BATHS AND ALL CONVENIENCES.
Send three two-cent stamps for Savannah Line News, and beautifully illustrated book, something new, to **RICHARDSON & BARNARD, Agents, 20 Atlantic Ave., Boston, Mass.; M. C. HAMMOND, Agent, Pier 18 S. W. Foot Spruce St., Philadelphia, Pa., or**

G. M. SORREL, Manager, New Pier 36, N. R., New York;
Mention American Gardening when you write.

Ocean Steam-
ship Co. of
Savannah &
New England
& Savannah
S. S. Co.

Second Crop Potato Seed—Surpass all others in yield. **OKKIS A. BROWNE.**
Cape Charles, Va.

Mention American Gardening when you write.



TRY DREER'S GARDEN SEEDS

Plants, Bulbs and Requisites. They are the best at the lowest prices. Calendar for 1896 mailed free. Address

HENRY A. DREER,
714 Chestnut St., PHILA.

Mention American Gardening when you write.



are necessary if you wish an Up-to-date Garden

My New Seed and Plant Book for 1897, pronounced by all who have seen it the best of the year, mailed free to all gardeners who mention this paper. It contains everything worth growing, old or new. You need it if you want 10 cents worth or \$10 worth of Seeds or Plants. Address

W.M. HENRY MAULE,
1711 Filbert Street, Philadelphia, Pa.

Mention American Gardening when you write.

GREGORY'S HOME GROWN SEEDS

are known the country over to be exceptionally reliable. They have a reputation of forty years back of them. They are sold under three warrants. It would not be wise to plant without consulting Gregory's Vegetable and Flower Seed Catalogue for it describes with engravings several new vegetables of great merit to be found in no other. Catalogue sent free to anyone anywhere.

J. J. H. GREGORY & SON,
MARBLEHEAD, MASS.

Mention American Gardening when you write.

3 NEW AND POPULAR FLOWERS.

New Star Petunia. An exquisite variety for garden or pot culture, each flower having distinct white star-like stripes on rich purplish-red ground. The flowers, about 2½ inches across, almost hide the plant from view for months.

Double Calliopsis. Handsome double variety. Flowers golden yellow color, wine-maroon spots. Have the perfume of the Violet; of the Violet; of the beauty of the pansy.

Sweet Scented Pansies. One packet each of these New and Popular Flower Seeds sent by mail, postage prepaid, and three months' subscription to the

AGRICULTURAL EPITOMIST. 4 FOR 10 CTS

The Agricultural Epitomist now goes regularly into the homes of over 120,000 Practical, Prosperous and Progressive Farmers of the United States and Canada, and is said by them to be the most Practical, Timely and Interesting Farm, Garden and Household Paper published. It treats intelligently upon General Farming and Stock Raising; tells how to make the garden pay; how to raise Poultry; treats on Floriculture; and its Household Department, known as "Chatter Corner," is alone worth a year's subscription to any live household. This offer to furnish a packet of each of the above described new and popular flower seeds and three months' subscription to the Agricultural Epitomist, all for 10 cents, is made for the purpose of introducing the Epitomist into new homes, believing that where it is read for three months, it will be found so valuable and interesting as to secure for us in nearly every case a yearly subscription, the regular price of which is 35 cents. The money we will receive from this offer will not be sufficient to more than pay for the advertising, to say nothing of the Flower Seeds and three months' subscription. Send 10 cents in silver or stamps, upon receipt of which the Flower Seeds and Epitomist will be promptly forwarded. Address - EPITOMIST PUBLICATION CO., Indianapolis, Ind.

Mention American Gardening when you write.

LORD & BURNHAM CO.,

HORTICULTURAL ARCHITECTS AND BUILDERS

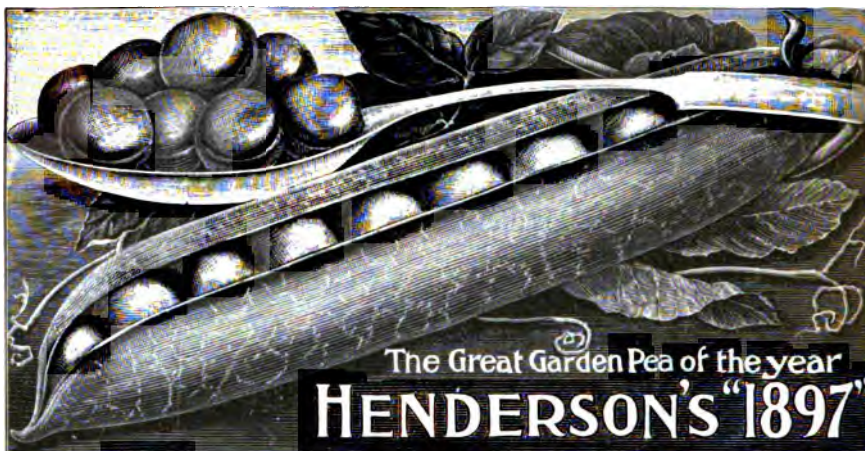
STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair. Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York
Mention paper.



We are Anxious for a Name

Worthy of this **SUPERB NEW PEA** ("1897")

And will pay for it **\$200.00**

Because we are anxious to attain, among garden Peas, the highest possible rank, we have decided to offer the name sent in this year that we shall consider the most appropriate for the Pea who intend to suggest a name should read "1897" Pea. The package of "1897" Pea contains a coupon with blank space for name suggestion, and as their order calls for packages. Coupons may be returned to us any time throughout the year, but not later than October 1, 1897. The prize money to be remitted by us during December, 1897.

DESCRIPTION OF HENDERSON'S NEW "1897" PEA

The ideal garden Pea should combine extreme earliness, quantity and quality. We have long had many varieties that possessed one, and often two, of these most essential characteristics, but until the advent of our "1897" none that possessed all three, and, what is more wonderful still, that it should have all these features in the superlative degree. We have grown it in our Trial Grounds for the last two seasons, and find in earliness and yield it leaves nothing to be desired, while its delicious flavor is such that that epicure would indeed be hard to please whom it failed to satisfy. Our Catalogue, offered below, describes it in more extended detail.

Henderson's "1897" Pea will be delivered free to any Post-Office in the United States, at following prices (when more convenient buyers may remit in stamps), 20 cents per package; 3 packages for 50 cents; 7 packages for \$1.00. (Every package containing a coupon as stated above.)

NOW THEN about "JUBILEE" CATALOGUE which we will send FREE

With every order from this advertisement. Every copy of our "Jubilee" Catalogue of "Everything for the Garden" costs 25 cents to produce, but with every order from this advertisement for "1897" Pea we will send a copy without charge. Prepared to commemorate the fiftieth anniversary of our business, scores among the thousands who have already seen it have told us that it is the most beautiful and interesting Seed and Plant Catalogue ever issued. It is a magnificent work of 170 pages, on which are displayed over 500 illustrations of the principal products of our Gardens and Greenhouses. Also 6 full-sized colored plates, which in artistic beauty have probably never been equaled, certainly **FINALLY**—we bring this most liberal of offers to a close when we promise to send our "Jubilee Surprise Souvenir" without charge to all who, in ordering from this advertisement, will state they saw it in this publication.

PETER HENDERSON & CO.

35 and 37 Cortlandt Street, NEW YORK

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 113.
COMBINED SERIES VOL. LI.

NEW YORK, FEBRUARY 20, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Am. Horticultural Society..... 126	N. Y. Free Seeds..... 128	Morning Glory, Japan-ese..... 125	Roses, New..... 121, 124	Vegetable Garden..... 123
Apples, Scab on..... 134	Fruit Trees, Planting..... 123	Novelties, Some..... 124	Roses, New Rambler... 123	Violet, Mrs. J. J. Astor 126
Asparagus..... 123	Henshaw, Samuel..... 133	Poultry Manure..... 134	Roses, Wichuraiana Hybrid..... 124	
Casabanana..... 123	Herbs..... 123	Poultry Notes..... 130	Russian Fruits in Ia... 120	Illustrations.
Club Root in Roses..... 127	Home Plot, The..... 130	Private Gardeners..... 132	Society Reports..... 133	Henshaw, Samuel..... 133
Conn. Pomologists Meet 122	Inquiry Department... 134	Quinces..... 123	Sterilizing Soil..... 127	Morning Glory, Japan's 125
Crimson Clover..... 122	Lawns and Potash..... 127	Readers' Notes..... 126	Strawberries for Succe-sion..... 123	Rose, Carmine Pillar.... 124
Fruit Garden..... 123	Market Reports, N. Y. and Philadelphia..... 131	Rhubarb..... 123	Timothy, Sowing..... 134	Rose, Yellow Rambler.. 125
Fruit Growers of W.		Rose Carmine Pillar... 124		Roses, Hybrid Wichura-iana..... 121



Some New Roses.

It was but a natural thing that the so-called Memorial Rose (*Rosa Wichuraiana*) should be used as one parent in the production of a group of new Roses; its striking distinctiveness and adaptability to the "wild garden," its free flowering qualities, all were factors to this end.

During last summer we had occasion to call attention to the results obtained by crossing this with some Hybrid perpetual

variety of garden rose, and we now place before our readers representations of some of the best of the progeny thus raised, for some, if not all, of which we venture to predict a happy future.

Than the Rose no flower flourishes so much in popular favor, and there is to-day a noticeable and growing tendency for owners of gardens to look more favorably on sections other than the Teas and H. Ps.

Connecticut Pomologists Meet.

The sixth annual meeting of the Connecticut Pomological Society was held at Jewel Hall, Y. M. C. A. Building, Hartford, Conn., on Feb. 9 and 10, President J. H. Hale presiding. Those present appeared to be hungry for hard practical discussion.

Secretary's Report.

The report of the secretary, G. S. Butler of Cromwell, was as follows: He thought a membership of 400 is necessary in order to secure the full benefits of association. It was not thought that the State, which shows a disposition to retrench expenses, will be willing to afford assistance. There has been an increase of more than 75 per cent. during the year in the paying membership. Last August the summer meeting was held at the farm of J. C. Eddy in Simsbury, which proved to be a tip-top affair. The receipts for the year amounted to \$113. The paying membership at the present time is 107. There has been a membership of 162 in the past.

Treasurer's Report.

R. A. Moore of Kensington, treasurer of the society, being kept at home through sickness, was represented by the secretary. The receipts from membership fees amounted to \$110. The balance on hand a year ago was \$108.63, making the year's funds \$218.63. The expenses were \$11.65, leaving a balance of \$206.98 for the current year.

Suggestions and Committee Reports.

J. B. Smith of New Britain recommended the offering of premiums for the best acre of orchards. The premium would involve some history of the orchards in the competition. It is desired to find out the effects of pruning, spraying and fertilization. The premium would be \$50. There should also be premiums for fruits grown in the State.

New Fruits.

Mr. N. S. Platt thought the new fruit crop last season was the most scanty that he had ever known. The new Lewis peach was introduced, but not enough is known about it yet to speak of it intelligently. The Grand Duke and the Prince of Wales plums were spoken of highly by the State pomologist. The new grafted chestnuts commanded his approval. In apples, the Princess Louise, which came from Canada, is a fall product; it is fair in quality, and saleable. The Mackintosh Red comes in the early fall; it is a beautiful apple, but will not keep till the cold weather. The Jacobs Sweet is regarded with favor. He thought our cherries are dwindling away, and approved of the president's disposition to revive the cultivation of this fruit.

Fruits at Fairs.

Professor A. G. Gulley, who occupies the chair of horticulture at the Storrs Agricultural College, thought every fruit grower ought to be interested in fairs. For the sake of increasing the spirit of rivalry in fruit growing, if for no other reason, the fairs should be encouraged. The arrangement of fruits in the fairs was explained, showing that great care should be taken in putting the fruit on plates, color and form being regarded, and do not be afraid of putting the exhibitor's name right on the exhibit to help the public and the exhibitor. "It is folly not to do this till the judges have passed," remarked the professor, "for if you cannot find judges sufficiently unbiased to render a proper decision when they know the names of those exhibiting, then I say it is time to shut up shop and wait until you can." He offered some excellent advice to officers who have the management of fairs in regard to the arrangement of classes, advising them to have the varieties grouped together, to have all collections and single dishes in competition also grouped. This would add to the appearance of the display and save the judges considerable walking and annoyance. To secretaries and schedule makers, he said, avoid cumbersome rules and do not use the superlative too much, i. e., "Best" plate of Baldwins, etc. The judges will say whether they are best or not. See that the premium list is explicit and that the rules are lived up to. No exhibitor should be permitted to make two entries in the same class, otherwise the large grower

is enabled to grab all the premiums. All exhibits should be correctly named. Offer premiums for the most correctly named exhibits.

Judges.

Men who take this work upon themselves are not worthless, pay them well. They have reputations to maintain and are worth something more than a dinner (which, by the way, they do not always get.) Judging should be done by score on a scale of points, the day of judging by comparisons is past. There should be but one judge. If possible, the society should have on hand correct fruit models illustrated by two sections, Fall and Winter. After decisions have been made the exhibitors should remain near their collection to help the visitor with information, etc. One gentleman who had often acted as judge, said that from his experience it would be unwise to place the exhibitors' names at first, for the losers would always say the judge was biased. The consensus of opinion was that expert judges would not mind if they did know who the exhibit belonged to and that it would not influence their judgment. Mr. Taber, Poughkeepsie, N. Y., paid a very high tribute to the fruit display at the American Institute Fair at Madison Square Garden last fall. There he said was to have been seen the full advantage of correct naming, and in the display from the Geneva experiment station a man could learn more in a few hours than in a lifetime of reading.

Bordeaux Mixture.

Professor W. G. Sturges, State Experiment Station, spoke of the substances used in fighting insects in Europe since 1763. Sulphur had almost from the beginning been used in some form or other. In 1842 one receipt consisted of sulphur, snuff, nux vomica, cayenne pepper and tar. In 1881 in the famous vineyards of Bordeaux, France, verdigris which had been put on the vines to keep children from stealing the fruit was thus accidentally discovered to have preserved the vines from the ravages of mildew; from this date the use of copper solutions, and in 1884 the Bordeaux mixture was perfected. In order to get the proper mixture, one in which the copper salt remained in suspension the greatest length of time, good lime was a first essential; both constituents should be properly and thoroughly diluted before being brought together. Then bring them together in the shortest possible time. No matter which was dumped into the other if stirred the effect would be the same and clogging would be avoided. His formula was lime 6, copper 4, in 50 gallons water.

Professor Van Deman advised 6-6-50. Professor Gulley recommended 5-5-50. Asked how he would mix the parts so abruptly when out in the field, Professor Sturges said he would advise the use of a pot boiler which should be going briskly. Next have 45 gallons thoroughly diluted with lime, and into this it was easy to dump the five gallons of copper solution. Bordeaux had proved effectual against black knot since 1885. He would use it for plums and strawberries.

Preserving Fertility.

Professor Van Deman showed that, in the main, it was brains, not muscles, that were to do the work for the future, and brains were wanted just now to save both farmers and land from bankruptcy. The farmer must cease wasting his brute force in dragging from the city stable manure which only contained 28 pounds of nutriment in 2,000 pounds bulk. He must get his manures in a cheaper form than that, and he would have to adopt measures to rob the atmosphere of its nitrogen, which existed in such large quantities everywhere and could be had for the collecting. Soil needed to be aerated and supplied with humus, and the moisture needed to be conserved, and this could all be done by the use of crimson clover, or cow pea. The clover roots would go down deep and thus bring into action soils that needed nitrogen, and through the tops and roots supply the same. Then by plowing in the whole green crop the necessary humus would be supplied. In recommending hard wood ashes he did not mean pine wood ashes; they were worthless. Phosphoric acid was needed, and they must seek this

through bone, and that was at command in the shape of South Carolina rock. The supply of this was unlimited, it now being obtained in Florida, Canada and Tennessee. Water was needed to dissolve this, therefore keep the cultivator going and endeavor to provide a dust blanket, to prevent evaporation. Cultivate and smooth down the surface immediately. He here remarked that some men work so hard that they have not time to think, and that was why they overlooked the points elucidated.

Pruning Fruit Trees.

Professor Van Deman said: Head low; peaches at two feet; apples two and a half feet. When these trees get into shape they stand the wind better and fruits are more easily gathered. At the fruiting stage cultivation near the bole of the tree would not be needed, for the shade of the tree would keep down the weeds; the Acme harrow would reach under far enough.

Fertilizers for Fruit.

For strawberries, grapes, etc., Mr. Taber applied phosphoric acid by means of muriate of potash, with ground bone. Crimson clover, rye and turnip were all used as green crop to plough under; by using a reversible sulky plow he was enabled to turn these crops under a foot deep, and could get value back, approximating \$300 per acre. Professor Van Deman said cultivated land was 3 degrees warmer than uncultivated land, and as warmth was of importance to plant growth this was an essential point, and should not be forgotten. Early cultivation was also necessary.

Crimson Clover.

Edwin Hoyt of New Canaan opposed Professor Van Deman in his methods of cultivation and the use of crimson clover, arguing that there was a great waste of time, and that it was the most expensive method possible. Humus does not always guarantee moisture, that, he had proved upon swamp lands in a dry summer on his own farm; in Delaware and other Southern sections perhaps the clover would do well. But in Connecticut crimson clover would not stand the winter, or at most where there would be one success with it there would be nineteen failures. As to clover going down deep and stirring up new matter, he seriously doubted whether there was much down below that was worth bringing up. Professor Van Deman remarked that Mr. Hoyt overlooked the point that the clover roots would bring up soils which would absorb nitrogen; that was an important point. Mr. Hoyt's contention was that commercial fertilizers were cheaper, and he could not be persuaded that the soil benefited further than that you returned to the soil just exactly what the plants had taken out and no more.

Professor Gulley remarked: "That is not so; the soil is being benefited more than that; there is an increase of nitrogen." The question was asked can crimson clover be sown in the spring and be cut the same season? Answer, No. One grower said he had succeeded in doing so. This was said to be the only case known. Mr. Roberts said: Why not pass the clover through the cow? The answer was feeding cows doesn't pay. Mr. Barnes asked whether the mulch, which the green crop when growing provided, was not the most potent factor in producing the results spoken of. Mr. Hoyt replied: "Why, yes; you can scatter dry straw over a meadow and even from that see a difference."

Election.

The election of officers for the ensuing year resulted as follows: President, J. H. Hale, South Glastonbury; vice-president, J. H. Merriman, Southington; secretary, H. C. Miles, Milford; treasurer, R. A. Moore, Kensington; county vice-presidents, W. H. Mansfield, West Hartford, Hartford County; Dennis Fenn, Milford, New Haven; S. B. Wakeman, Saugatuck, Fairfield County; C. I. Allen, Litchfield County; George Webster, Rockville, Tolland County; Lucian Bass, Windham, Windham County; L. P. Smith, Lebanon, New London County; G. S. Butler, Cromwell, Middlesex County.

[The President's address and other valuable matter are held over for want of space.]

The Fruit Garden.

Work, read and inwardly digest.—Keep your eyes open when visiting.

Ask Questions.—Don't be afraid of letting the other fellow see you don't know it all; and there is no better way of taking the stiffness out of the first meeting.

Order List.—Make out your order for fruits, fighting a little shy of the novelties, unless you have a good stock of standard varieties and have the opportunity and room to experiment for the benefit of yourself and others. If there is a nursery within a few miles make a visit and take your list along and see what they can supply. Know what you want and stick to that, rather than buy something said to be "just as good."

Planting, My Way.—For an ordinary nursery tree take two-thirds of a garden barrowload of manure, locate center for tree and have the hole opened three feet wide and a foot deep (more or less, according to the subsoil); now work thoroughly in the bottom half the manure with some of the top soil and tread firm. In the meantime you have seen that the label is all right; cut off any broken roots and mentally pruned the top; next put into the center two or three shovelfuls of soil. Stepping into the hole, a slight movement of the foot will scatter the soil toward the sides, leaving a slightly rounded surface. Having the tree in hand, a quick upward motion, followed by a quicker downward motion of the butt into its place, will practically spread every fine root ready for covering with 1½ to 2 inches of soil. Make firm by pounding. Mix the balance of manure with soil, fill and pound solid to surface. Prune, rake over the surface and mulch. This, followed by the treatment advised in the "Fruit Garden," backed by thorough cultivation, will produce creditable trees. **Joists:** Use only rotten manure, and as close as possible without touching the roots. Bed the roots firmly in the soil by treading and pounding.

Quince.—Most housekeepers call for this spicy fruit once a year, and wonder why they are not as plentiful as apples. But, between borers, fire blight, rust, etc., we seldom see a flourishing tree, or, rather, bush, as they do not often reach 20 feet in height. Quinces like a rich, moist soil, require little pruning and when in bloom rank next to the apple in beauty. Champion has taken the place of Orange here, but it ripens later, which makes it undesirable further North. *Rea's Mammoth*, a seedling of Orange, but larger, is said to do well North.

Correction.—In "Fruit Garden" for Feb. 6 the note on *Spy* should read: "Transplanted in '93. No fruits."

J. HOLLOWAY, L. I.

Strawberries for Succession.—For extremely early, improved Westbrook and Murray's Extra Early, pollenized with Meek's Early every fourth row. These are not only prolific, but are the earliest, the most splendidly colored, and the firmest and best shippers I ever saw. They ripen so early that they can be picked and sold before medium early varieties begin to ripen at all. To follow close on the heels of these I should have Brandywine, Tennessee Prolific, Woolvorton, West Lawn, and Bubach, pollenizing the Bubach and West Lawn with one of the three preceding varieties. These are all superb market varieties and heavy bearers. Then to come next, Aroma and Gandy will give a large crop of the finest late berries. The season can be still further prolonged by having the *Lucretia dewberry*, which ripens just as strawberries are gone.—O. W. BLACKNALL.

Small Fruits on the Farm.—I have known a farmer leave his work and tramp all day over the fields, and return at night with a quart or two of wild strawberries that a fruit dealer would have rejected with scorn. He exhibits them triumphantly, and it is scarcely worth while to tell him that one-half his labor would have set out a strawberry bed that would have furnished him with fine berries every day for weeks.—New York *edger*.

The Casabanana Again.

An intelligent and evidently close reader of *American Gardening* asks for a little additional information regarding the new claimant for notice from those who love vines. In my remarks on the subject in *American Gardening* for Jan. 30 a misprint made the botanical name *Licania odorifera*. It should have been *Sicana odorifera*.

The plant is quite new even here in the South, and when submitted to botanists last year was not identified by any of them. Finally, however, it was brought to the notice of Dr. Morris, of the Royal Botanical Gardens of Kew (England), who was in New York. He saw the fruit and recognized it as that of "*Sicana odorifera*." I know of no other plant of the genus *Sicana*, and it is possible that the plant is otherwise named in some standard botany. An amateur might well suggest that it belongs to the *Cucurbita*. Yes; "*Cucurbita odorifera*" or "*Cucurbita saccharatum*." Internally when ripe it has more of the appearance of *Cucurbita pepo* than any other of the *Cucurbitaceae*. But for the present, at any rate, the name must stand as above given. So far as we know the best authority gives it that name.

"*Inquirer*" asks what is the best soil for *Casabanana*, and will it grow satisfactorily when planted in the open ground, and what is the best support for the vines. A rich, sandy loam is the best soil for it, but with proper preparation it can be made to grow upon most any kind of soil if fairly rich. Very stiff clay is the worst soil, but even it might be so prepared with the aid of a little sand or leaf mold with a little ashes as to fit it for satisfactory growth. Make the soil fairly rich with any good old compost that will not heat up any more or very little. The soil should be deeply broken, and the manure well worked in and three or four feet in every direction from where the plant will stand. Where it is practicable I think it is desirable to use a cold frame to get the plants started early, then as soon as safe remove the glass and let the plant take to its trellis or support. Transplanted plants, however, seem to do as well as those not removed, but a little gain is made in high latitudes (40 to 45 degrees) by using movable frames. Small frames will answer—2x2 or 2x3 feet.

Any good fertilizer will do to enrich your soil with, using say three pounds of such to an area 6 or 8 feet in diameter. This should be well worked in through a depth of twelve to fifteen inches. On soil inclined to be dry it is well to give a good mulch of straw or leaves. Where the plant is simply staked, the stake should be a stout one and as long as possible, larger even than hop poles. The *Casabanana* will grow up and cover a chimney very much like ivy, but its prettiest growth is on a trellis or fence. The past summer one vine planted in the middle of a forty-foot wire trellis (6 feet high) completely covered the trellis and presented a very pleasing appearance with its twenty-five or thirty well grown and richly covered melons suspended every three or four feet along the entire length. I do not care to say anything that would lead any one to expect to find the most wonderful thing in the way of a vine. There are other vines that are prettier and no one should do the foolish thing of destroying any pretty perennial and replacing it with *Casabanana*. But there is one thing about this plant that renders it superior to many other vines. It has an edible fruit, a fruit of wonderful fragrance, after it becomes fully ripe, and it makes an excellent preserve, for which purpose the fruit should be taken before fully ripe. One perfectly ripe "melon" will pervade a large house with indescribable fragrance. The seeds are much like those of squash; color light brown, with a dark brown band near the edge. The above, I think, contains all the information sought by several inquirers in different sections of the country.—Samuel A. Cook, Milledgeville, Ga.

Succession.—It is all important that a strawberry grower should plant varieties that ripen in succession from the very earliest to mid-season, or in many cases very late, because it enables him to sell at a profit a great many more.—O. W. BLACKNALL.

The Vegetable Garden.

Thyme and Sage.—To secure permanency, beds should be renewed every spring; old plants may be divided, and replanted, but cuttings made from the younger growth will root easily; or plants may be readily grown from seed, which is the most satisfactory method.

Fennel.—This is a pretty herb, useful and fine for garnishing; once established, will last for years. It may be propagated by division, and will grow easy from seeds sown in spring.

Mint.—This should have a corner to itself, otherwise it will overrun the patch, and smother any other plants growing near.

Chives.—The green tops of these are much used for flavoring. It starts growing very early in spring; is perfectly hardy, and by its compact and pretty growth, and innumerable purple flowers, makes it a handsome, as well as a desirable, plant for the vegetable garden.

Paralely.—Two sowings of this should be made annually—one early in spring, the other about July 20. Plants from this last sowing make the best plants for transplanting into frames for winter use.

Asparagus.—Those who have a good bed of asparagus can very easily get some heads some two to three weeks before the main crop, by placing an ordinary frame with sash over a part of the bed, closing the sashes early in the afternoons, so as to keep in the heat. If hot manure is banked round the frame, and the glass covered during cold nights, the crop will come in still earlier.

Plantations of Asparagus should receive liberal treatment by a good covering of manure every fall, and when the coarse manure is raked off in early spring. It is a good plan to broadcast a dressing of bonedust and kainit, or nitrate of soda and muriate of potash, at the rate of about 500 pounds each to the acre. When new plantings are contemplated, ground of a sandy texture should be selected, and plenty of manure and crushed bone thoroughly incorporated with the soil. Set out one-year old plants in spring in beds of five feet in width, three rows in each bed, plants 18 inches apart in the rows. This is a convenient width for setting a cold frame on for pushing on in the spring.

Rhubarb.—If the best crowns are covered with barrels or boxes, and these, covered with hot manure, shoots will soon commence to push and give an early supply for use. The small, undesirable variety is still too often seen in gardens; there is better satisfaction in being able to pull large, long stalks, which results from having the best varieties planted. *Linnaeus* is the best early variety; *Victoria* is an excellent later sort. Seeds can be sown on well-prepared ground in spring, in rows one foot apart; thinned out in about six weeks to three inches apart. These, by good cultivation, will make good roots for planting in their permanent quarters the following spring. Plant in rows four feet apart, and three feet apart in the rows. For a small garden it is better to buy a few roots.

W. M. EDWARDS, R. I.

It is amusing to see how some of the catalogues give descriptions of fruits which are far from giving the reader an exact description. One which I have before me describes the *Wager* peach as very large, and as bearing heavy crops. Now the facts are, it is a medium-sized peach, and bears fair crops; is an excellent yellow peach for canning, and will bear some years when many other varieties will not.

If Your Garden Be Very Small, with but a few hills of blackberries in it, try covering the surface of the ground around them, between rows and hills, twelve inches deep with leaves. Your neighbors will be glad to have you take them away after they have raked them into piles from their lawns. At fruiting time, you will be highly pleased with the result, and will wonder that such fine blackberries can be grown.

Novelties of the Season.

(THIRD SERIES.)

In this issue we continue the presentation of a selection of the Novelties of the Season, as seen in the various trade catalogues and lists. The present series will be followed up by others during the next few weeks, when fruits and vegetables will also be included. The descriptions given are those of the introducers.

NEW HYBRID WICHURAIANA ROSES.

(See Fig. 48, page 121.)

The habit of these new roses is the same as that of the *Rosa Wichuriana*, or Memorial Rose. The growth is creeping, and the plants, therefore, can be used to cover the ground, stems of trees, pillars, posts, trellises, or any other purpose desired. They are also suited to pot culture. They are the hardiest roses I know of, and will stand any climate or exposure. They thrive well in the poorest soil or on a gravel bank. The foliage is finely cut, thick of a leathery substance, bright green, shining as if varnished, not subject to mildew or any insect, but keeps its full beauty until almost Christmas. The flowers are produced in the greatest profusion, so that a two or three year old plant will bear several thousand most exquisite blossoms, which are deliciously fragrant and last a long time in perfection.

MANDA'S TRIUMPH.—This rose is of free growth, luxuriant foliage, and produces large clusters of double pure white flowers, two inches in diameter, beautifully imbricated and well formed, very sweet scented.

UNIVERSAL FAVORITE.—This is the most vigorous plant of the set. The long branching shoots are covered with dense bright green foliage. The double flowers are over two inches in diameter, and of a beautiful rose color, similar to the Bridesmaid, and deliciously fragrant. A great variety for any purpose.

SOUTH ORANGE PERFECTION.—This is a gem, growing freely close to the ground, and having multitudes of the most perfectly formed double flowers, about one and a half inches in diameter, soft blush pink at the tips, changing to white. It lasts a long time in perfection.

PINK ROAMER.—This is without question a hybrid between the Sweetbrier and *R. Wichuriana*, and carries these characteristics in bloom, while the growth, which is very rampant, and the luxuriant foliage, partake more of the latter. The single flowers, which are produced in close heads, are nearly two inches in diameter, bright rich pink, with almost a white center, which lightens up the orange red stamens, producing an effect which, combined with fragrance, makes it one of the most valuable roses in cultivation.

The following awards to these new roses have been made: Manda's Triumph, silver medal from the New York Florists' Club; certificate from the New York Gardeners' Society; honorable mention from the Massachusetts Horticultural Society.

Universal Favorite.—Certificate of Merit from the New York Florists' Club.

Pink Roamer and South Orange Perfection were also awarded a certificate by the same Society.

From the Catalogue of W. A. Manda, South Orange N. J.



FIG. 44 ROSE CARMINE PILLAR.

NEW ROSE "CARMINE PILLAR."

A charming picture and a charming rose. This unique effect might be more often seen in gardens, did the owner but think of it. It can easily be had; so can the rose—a splendid rose with single flowers 12 to 15 inches in circumference—of the brightest rosy carmine, and produced so abundantly that last year's shoots, some 10 to 12 feet in length of growth, were covered from base to top with bunches of flowers from each eye or bud, the flowers on the bunches opening in succession. The display was thus kept up for nearly six weeks, during which it was seen by many leading amateurs and others, and pronounced novel and most decorative. Award of merit by Royal Horticultural Society and certificate of merit by Royal Botanical Society. Those who have seen the rose at Kew when in bloom pronounce it a magnificent sight.

From the Catalogue of A. Blanc & Co., Philadelphia.

CHRYSANTHEMUM SYMPHONIA.

The color of this chrysanthemum is a very beautiful shade of carmine pink, reverse soft silvery pink; it is an incurved and very compact well built flower, with the ray petals drooping making it a very artistic and attractive bloom of medium size. As a bench variety this will prove very valuable as it only grows 18 to 24 inches high, with extra stout stem and handsome foliage. In season Nov. 5th to 20th, but can be kept a long time on the plant without damaging its qualities; crown or terminal buds. Gained 80 points at New York; 81 at Chicago.

From the Catalogue of John N. May, Summit, N. J.



New Imperial Japanese Morning Glories.

These grand new morning glories from Japan are remarkable for the large size and exquisite new colors of the flowers, with magnificent foliage, often beautifully blotched. Of strong, robust growth, the vines grow quickly to a height of 12 to 20 feet.

"They are of all shades of red, from the most delicate pink to the most brilliant crimson and maroon, and innumerable shades of blue, from pale lavender to richest indigo and royal purple; also white, yellow, gray, slate, copper color, brown, bronze, almost black, and many other odd shades not found in any other flower. Many varieties have a distinct marginal band of a different color from the rest of the flower, and some are as elegantly spotted with pink, crimson, blue, brown, etc., as the finest gloxinias; others are striped, blotched, mottled, rayed, and shaded in an indescribable manner, often having seven or eight colors and tints in one flower. Many are of very odd and singular forms; some have the petals separate and distinct clear to the base, others have the tube of the flower bent down on itself at a sharp angle, and then bent back again." (Fig. 45)

From the Catalogue of W. Atlee Burpee & Co., Philadelphia.

THREE NEW RAMBLER ROSES.

The undermentioned three new roses promise to be great acquisitions. They are companion roses, "half sisters" in fact, by blood relationship. They were originated by the well-known German rosarian, Peter Lambert, who has produced several other roses of exceptional value.

AGLAIA, or YELLOW RAMBLER is a seedling from *Rosa polyantha Sarmentosa*, Siebold x *Reve d'Or*. This variety has been mentioned in our columns once before, and will probably be the most popular of the three, since it is said to be the first and only yellow climbing rose which has any appreciable degree of hardiness. The introducers say *Aglala* has withstood, unprotected and without injury, a continued temperature of from zero to 2 degrees below, and with slight protection in the Winter it should do well anywhere that other roses succeed. It is therefore a great acquisition to our northern gardens. The color is a clear, decided yellow. The blossoms are of moderate size, cup-shaped, nearly full, of very pretty form, very sweetly scented, and last three to four weeks without fading. (Fig. 46.)

EUPHROSYNE or PINK RAMBLER, a seedling from *Rosa polyantha Sarmentosa*, Siebold x *Mignonette*. Color a clear light red, with numerous golden anthers. A very profuse bloomer and vigorous grower. Similar to *Aglala* in nearly all respects save color.

THALIA or WHITE RAMBLER, a seedling from *Rosa polyantha Sarmentosa*, Siebold x *Paquerette*; pure white. In other characteristics it is very similar to *Aglala*.

The following information is furnished by the introducers:

"These three roses have in common the following characteristics: they are all very strong, rapid growers, making shoots from 8 to 10 feet high in a season. They all bloom in immense pyramidal clusters after the manner of *Crimson Rambler*. Upon *Aglala* have often been counted as many as 150 blossoms in a bunch. And here it is interesting to note the strong probability of blood relationship between these three roses and the now well known *Crimson Rambler*. The *polyantha Sarmentosa*, which, as will have been noted, was the seed parent of the 'Three Graces' was brought by Siebold from Japan, from which country also comes the *Crimson Rambler*. The *Crimson Rambler* has a great many characteristics which tend to show that it was a chance seedling from this *Rosa polyantha Sarmentosa*, and if this is the case, it would complete the connection between *Crimson Rambler* and the 'Three Graces.' This supposed relationship is rendered still more probable by the very considerable similarity between them in wood, foliage, habit of growth and manner of blooming."

Messrs. Jackson & Perkins Co., of Newark, N. Y., are propagating and introducing these roses in this country, as the representatives of the originator, under an arrangement they have effected with Mr. Lambert.



AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY
A. T. DELAMARE PTO. & PUB. CO. LTD.
ROSE AND DUANE BLDG.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates: 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

** OUR friends in the West and on the Pacific Coast especially are warned that DANIEL W. CRANE, late of Soldiers' Home, Los Angeles, Cal., sometime back ceased to have any connection with this office.

Free Seed **A** MERICAN GARDENING has time and Distribution. again, and for several years, drawn public attention to the iniquity of the free seed distribution as practiced in recent years. When Secretary Morton retires from office, the seedsmen of the country will have lost their strongest official champion. What do they propose to do then? Grin and bear it, or, by uniting, force Congressmen to cease their interference with and oppression of a legitimate business.

The Agricultural Appropriation bill was passed by the Senate on Wednesday, February 10. It appropriates \$3,212,942, being an increase of \$57,200 over the bill as passed by the House. The principal item to the increase is \$30,000 for the purchase and distribution of seeds.

If our lawmakers cannot be reasoned into ceasing from interference with the seed business, they must be shamed into it; otherwise, and with the same liberty to continue giving away the people's money, it will not be long before, by force of bad example, the American citizen will expect his Government to supply him free, gratis, on demand, with all the necessities of life; after which,

and quite naturally, he will kick if some of the luxuries be not also thrown in.

But enough words have been used in proving the wrong. The seedsmen must now turn to the people for reparation. At the rate at which the appropriations for free seed are annually increasing, the vitality of the seed trade will soon be sapped, the work of the founders of the industry neutralized, and the United States farmer and gardener relegated to a minor position in the world of agriculture, for the reason that competition has been crushed and the incentive to development and the raising of good seeds utterly thwarted by misdirected governmental paternalism.

There is always hope "that right will prevail" even in countries governed by a despot, and where the aid of enlightened public opinion cannot be enlisted in its behalf. In this country, where the press moulds public opinion, (and with whatever faults it may be charged it is singularly unanimous on behalf of fair play), it need not be the most difficult of undertakings for the seedsmen, through joint endeavor, to interest the Fourth Estate in their cause, and through the press to lay before the masses a vivid picture of the evil now being wrought by this wanton injury to one of the most important industries of the country; and also—to set before the people the train of evils in which all industries may find themselves involved if this free seed distribution be allowed to be persisted in.

Educate the lay press, which in turn will educate the people, who in their turn, not desiring to be classed as paupers to be fed at the public crib, will put a quietus to the political career of every Congressman who thinks he is doing a good thing—for himself—when he votes "yea" to a free seed distribution.

The Agricultural Bill will have to be referred, of course, to a conference Committee. The Senate's amendments will not be agreed to except after that Committee's action, if at all. Meantime there is fair opportunity for making assaults upon the whole system of gratuities.—Feb. 15, 1897.

(Signed) J. STERLING MORTON.

The action of the Senate seems for the time to perpetuate and increase the disbursement of public funds for the gratuitous and promiscuous distribution of garden and flower seeds through Governmental agencies in the United States. * * * The founders never believed it the duty of the Government to give gratuities to its citizens, but they all taught that the citizens should gratuitously give their best energies and services to the Government for its maintenance and economical administration.

Unless a full stop can soon be put to this gratuitous distribution, the practice will grow to an enormity which will eventually destroy the retail seed trade of the United States. No branch of industry can succeed, financially, as a competitor with gratuities.

In 1839 there was appropriated \$1000 for the purchase of "rare, valuable and improved seeds" not common to the country; * * * in the year 1897 there has been appropriated \$150,000. If, during the next 58 years, the sum increases in the same arithmetical pro-

portion as it has since that first \$1000 was invested in seeds for gratuitous distribution, it will aggregate the enormous sum of \$22,500,000.00.—Feb. 12, 1897.

(Signed) J. STERLING MORTON.

New Violet—Mrs. J. J. Astor.

We have received a bunch of blooms of this novelty (so named by permission) from the introducer, George Saltford, the well-known violet grower of Rhinebeck, N. Y., who in the accompanying letter says: "I can guarantee it to be a vigorous grower and free bloomer. The flowers are very large, fully double—borne on long, stout stems, very distinct in color, the red being very pronounced in its composition; it may, perhaps, be described as a red-hellotrope tint. As a distinct break it will interest all violet growers.

Herbs.—There is often a scarcity of herbs, though they are very useful for many purposes; they will grow in any good garden soil, and a corner of the garden should be set aside for them. Some directions for their cultivation will be found on another page of this issue.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

The Gardeners' Mission.—The professional gardeners of America owe a debt of gratitude to Mr. O'Mara for his able paper, the publication of which was commenced in the last issue of your valuable journal. The article should commend itself alike to employer and employe, and help to raise the private gardener to the standard where he belongs.—ROBT. MILLICAN, N. J.

English Potatoes.—I was pleased to read W. M. Edwards', R. I., encomium on the Ash Leaf potato. For information of Jesse Robbins, my plan is to store the tubers so as to secure the first sprouts at planting time, and use when in bloom; afterwards they are too ripe for table use.—H. P.

American Horticultural Society.—My attention has just been directed to an editorial, on page 54, current issue of your excellent journal, on the organization of a Society, in New York, bearing the above title. I most heartily approve every word you say concerning the once great and prosperous American Horticultural Society which I had the honor to serve as secretary for eight years, and for which I prepared and published five volumes of transactions, all that have thus far seen the light of day. When I voluntarily retired from the office of secretary, in February, 1890, there were on the roll of paying members nearly seven hundred. I believe every State and Territory was represented, and many foreign countries, including Brazil, the Canadian Provinces, France, Scotland, England, Russia and Japan. The Society was organized in 1880, and held meetings regularly until 1892, the last meeting being held in Chicago just prior to the World's Fair. The present officers are: President, Parker Earle; Vice-president, John M. Samuels; Secretary, Prof. E. A. Popenoe; Treasurer, J. C. Evans. Why such a Society should die in the hands of such men, I am at a loss to understand.—W. H. RAGAN.

Club Root in Roses.

Steam Sterilization of Soil.

Club root of roses, due to eel worms or nematodes, is very common and often does much injury. There is no evidence to show that the application of chemicals to the soil will have any material effect in holding these parasites in check. Strong solutions of nitrate of soda and kainit will, doubtless, kill some of the nematodes, but they will also injure the young roots. In our experience injury from nematodes can, in large measure, be prevented by proper methods of handling the plants and soil. Where roses are grown on benches, or even in beds, it is possible to keep the plants entirely free from nematodes by using good, fresh soil made from sod and changing it every year. Particular attention should be given to the young plants. The pots should be sterilized every year, either by hot water or by steam, and only virgin soil from a good grass sod should be used for potting. We have tried sterilizing the soil by steam, and, while the work was successful, we do not consider that it pays where much soil is used.

To sterilize soil in any considerable quantity by steam will require a 15 or 20 horse-power boiler. Our plan is to make a frame of 12-inch boards on level ground. The frame is 6 feet wide and usually 12 feet long, although the length is immaterial. On the bottom of the frame, and running the long way, we lay three rows of ordinary 2-inch drain tile. The drain tile are simply laid end to end, no attempt being made to make the joints tight. An inch pipe is run out from the boiler and is branched so as to carry a 3/4-inch pipe into the end of each of the three rows of drain tile. A valve is put on the inch pipe, in order to control the steam. The soil to be sterilized is thrown into the frame till it is filled to the top, but not tramped. When the frame is full of soil ordinary hotbed sash are placed on the top, and, after making all joints tight, the steam is turned on. It requires about two hours to heat the soil through and kill all life. After the soil is cooled it may be thrown out with a shovel and a new lot put in and sterilized, the same as before. We usually add the manure before the soil is sterilized, but if bone or other chemicals are to be put in the soil, we wait until after sterilization.

B. T. GALLOWAY.

New York grape growers recently formed a new organization at Westfield, N. Y., with the intention of controlling the market price of the grapes. The Fruitman's Guide remarks that "only after the millennium will it be possible to fix the price of perishable objects at the growing end of the line," which is a fact.

Attleboro Falls, Mass.—The annual meeting of the Horticultural Society was held at the residence of Mrs. Henry Mason last week, and the following officers were elected for the ensuing year: President, Frank Ricketts; vice-president, Christopher Abbott; secretary, T. S. Thurber; treasurer, E. R. Burgess.

"La Semaine Horticole."—We are glad to welcome to the ranks of horticultural journals this new Belgian weekly, launched under the directing hand of the veteran, Lucien Linden. Our old friends, L'illustration Horticole and Le Journal des Orchidees, are absorbed into La Semaine Horticole, of which the first number appeared on Jan. 30. It is a well printed sixteen page paper, illustrated.

Lawns and Potash.

In your issue for Feb. 6 Mr. John Shore recommends (and rightly so) using wood ashes for lawns, but he does not state what quantity of ashes to employ, and so a word of warning may not be out of place.

Only a short time since, a case was brought to my notice where, on account of wood ashes being recommended for a lawn, a carload was bought, and the lawn "well dressed," with the result that the lawn was almost destroyed.

While potash in the form of wood ash is an excellent manure in the hands of those who know how to use it, it is a dangerous article in the hands of the uninformed. Good wood ashes should be used like black pepper, i. e., put on as much as can be just seen, then stop.

If you have a fire-heap where the weeds, hedge trimmings and rubbish from the garden and house are burned excellent lawn fertilizer is to be found in the ash; not a complete fertilizer, it is true, for it will contain little or no nitrogenous matter, but a very fair amount of all the other elements which go to constitute a manure. If you have time and convenience, by all means screen the burnt rubbish before scattering on the lawn. But it is not absolutely necessary that the mass be screened. By carefully raking the lawn afterwards—that is, when the winds and sun have dried and crumbled the material—all stones and sticks can be cleared from the ashes almost as well as if they had been screened previously, and in very much less time. Much burnt earth accumulates in the fire-heap in the course of a year, so that with this burnt compost there is less fear of burning the grass than when pure wood ashes are used.

Coal ashes, too, make a good and valuable top dressing for lawns, especially for heavy soils; but even on light soils they well repay the cost of screening and scattering over the lawns. One purpose they serve is to act as a mulch, and during hot, dry seasons to prevent the surface soil from baking into crust. The potash, too, that these ashes contain is sometimes considerable, varying in different samples from .25 to 2.00 per cent. Of course, the difference is caused by the varying amount of wood burned in the stokehole fires or wherever else the ashes are obtained.

Probably ashes from the furnaces

of a factory would contain as low as .125 per cent of potash. The ashes of coal are valuable also, on account of the sulphates and soluble silicates which they contain, to scatter in the furrows before planting potatoes, especially on heavy land. The writer has seen splendid crops of potatoes taken from heavy land as a result of using coal ashes alone, where, previous to using the ashes, it was difficult to get a crop of beans or cabbage, even after winter ridging the soil.

Sometimes, on account of the heavy nature of the soil, or because a lawn is low and difficult to drain, it becomes a hard matter to get a good, soft, velvety turf. In fact, such lawns more nearly resemble a pavement or a stubble field than velvet. Just such a lawn I saw changed from a "pavement" to a "velvety lawn" by lifting the turf, forking over the soil and putting on a two-inch dressing of coal ashes, upon which the turf was relaid. A dressing of a lawn fertilizer mixed with coal ashes was also applied to the lawn. The result was a good and permanent sward.

W. G. GOMERSALL.

Seed Germination and Electricity.

The Hatch Experimental Station of the State Agricultural College at Amherst, Mass., has just issued a bulletin in which is a detailed report of a series of experiments of the effects of electric currents upon the germination of seeds and the early growth of plants. Two forms of battery were used and seven varying methods of applying the electric current, while eight varieties of seeds were included in the tests. The application showed a gain in promptness of germination of 32.40 per cent. in twenty-four hours, 21.05 per cent. in forty-eight hours, and 6.33 per cent. in seventy-two hours. A similar series of observations upon growth showed gains for electricity of 17.65 per cent. in twenty-four hours, 11.47 per cent. in forty-eight hours, 2.38 per cent. in seventy-two hours, and 2.38 per cent. in ninety-six hours. It is determined that growth can be best stimulated by application of the current for thirty seconds at hourly intervals.

Time to Prune.—Any time during the autumn, winter, and before the sap begins to flow in the spring, is the generally accepted law; but Professor Slayton, of the Michigan station, states that from experiments, pruning during the winter months was injurious, at least, to apples and pears. The work is best done, he thinks, in October. The movement of the sap then, slight though it is, fills the pores of the wood at the surface of the cut. All cut surfaces of any size should be left for a day or two to dry and then be covered with liquid grafting wax or be painted.

50,000

COPIES OF

AMERICAN GARDENING

WILL BE MAILED TO

50,000 Buyers of Seeds and Plants

SATURDAY, MARCH 13, 1897.

We believe advertisers generally will recognize the value of a thorough representation in this Special Edition, and we herewith solicit your patronage.

Advertising Pays

But Advertising in American Gardening Pays Best.

No advance in rates over our regular charge of 25 cents per agate line will be made. Copy for your advt. in this issue must be in our hands not later than March 6th.

Western New York Fruit Growers in Council.

(Continued from page 112.)

The Plant Food Question.

Dr. L. L. Van Slyke of the Geneva station compares the changes of man's mind to the vibrations of the pendulum. People are always ready to go to the extremes. We have passed, or are passing, through three distinct periods of manure application. The first was the farm-made manure, or nitrogen period. This brought on a comparative deficiency of available phosphoric acid in the soil, and gave rise to the phosphatic stage of manuring. Superphosphates then were believed to be a remedy for all soil poverty, and farmers often used ten times as much phosphoric acid as the crops removed, and it became only a question of time, if this manner of manuring were continued, when the soil would become a phosphate bed. The tendency now is to go to the third, a potash period. This is a natural reaction, and undoubtedly desirable if it be not overdone, especially in fruit growing. Wood ashes often give extraordinary results on heavy clay soil. In all cases where results are obtained most economically by the use of wood ashes it is proper for us to apply them. Dr. Slyke also puts in a word of warning against the "stone meal" and "natural plant food" frauds, and criticises the patent medicine style of advertising employed by the manufacturers of fertilizers, etc. Dissolved S. C. rock should be advertised as such, and not as "dissolved bone."

Willard on the Newer Plums.

S. D. Willard mentions as the result of Mr. Burbank's work the change of varieties now taking place and the introduction of superior seedlings of Japanese sorts mixed with native American kinds. As the leading ones, and most valuable among the newer sorts, he names the following: (1) Burbank, excelling in hardness, good quality and productiveness; excellent for canning; (2) Abundance, which is more generally known, but not equal to the other; (3) Sweet Botan, closely resembling the Abundance, but more productive; (4) Red June, the earliest of those of value, beautiful cherry red, medium to large; (5) Wilcox, cross-bred, of fine quality, large size, hardy, ripening after Burbank; (6) Giant Prune, one of Burbank's creations, requiring further test for productiveness; (7) October Purple, late, promising, has not yet fruited on Willard's grounds; (8) Paul's Early, extremely early, hardy and productive; (9) Field, a seedling of Bradshaw, but ten days earlier; (10) Diamond, tree hardy, ripening late; (11) Prince of Wales, hardy and productive; (12) Monarch, an abundant bearer; (13) Grand Duke, one of the most attractive; (14) Archduke, large, dark, prolific, hardy, a late keeper.

On Mr. Sweet's inquiry about the Willard, Mr. Willard regrets to state that it is one of the meanest of the Japanese introductions; very early. Ogon is of poor quality, but may sell.

Mr. Willard cannot tell the exact degree of cold that the Japanese sorts will endure without injury. A drop of the mercury to 21 degrees below zero, the past winter, made an end to all plums at Geneva. It was the first time that the Japanese were a failure there.

Stocks for Japanese Plums.

For suitable soils, Mr. Willard's peach stocks. Japanese plums on such stocks seem to do better on his grounds, even on heavy soil, when well drained.

Inventory of the Land.

Professor J. P. Roberts of Cornell tells of the vast stores of plant food found in the 2,000 tons of surface soil (one foot deep) found on an acre of average farm land. In an eight-inch layer of surface soil have been found over 3,000 pounds of potential nitrogen, over 4,000 pounds of phosphoric acid, and over 16,000 pounds of potash. There are plant foods enough for many crops, and the wonder only is that crops are not larger. Professor Roberts concludes that plants often suffer from lack of moisture more than from lack of food, and emphasizes the need of cultivation. It is tillage vs. fertilizer. There are great quantities of plant foods, even in the gravel of the soil, and this gravel, if exposed to

Blood Hood's Sarsaparilla

That is pure, rich and full of vitality feeds the nerves and gives strength to all the organs. Therefore keep the blood pure by taking

The best—in fact the One True Blood Purifier.

Hood's Pills do not cause pain or gripe. All druggists. 25c.

GRAY HAIR MADE DARK

By a harmless Home Wash. Also makes the hair grow. Full directions and recipe for 25 cts. Mrs. A. HUFFLEY, 6215 Evans Ave., St. Louis, Mo. Mention American Gardening when you write.

1,000 Peach Trees One year, from bud 2 to 3 ft., mostly branched, with freight prepaid to any station east of Miss. River for \$20; or 500 for \$11.50. Sample prepaid, 25c. Other sized trees proportional prices. R. S. JOHNSTON, Box 21, Stockley, Del. Mention American Gardening when you write.

Are You Interested in Horticulture in the...

THE GLEANER, Austin, Tex.

...WILL TELL YOU ALL ABOUT IT...

Mention American Gardening when you write.

BERKSHIRE. Chester White, Jersey Red and Poland China Pigs. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs. Catalogue. S. W. SMITH, Cochranville, Chester Co., Penna. Mention American Gardening when you write.

"Strawberry Plants That Grow."

Standard sorts: \$1.50 to \$2.50 per M. Best Rasp. and Blackberry plants \$1.50 to \$5.00 per M. My "1897" catalogue mailed free.

C. E. WHITTEN'S NURSERY, Bridgman, Mich.

Mention American Gardening when you write.

STRAWBERRY PLANTS \$3 per 1000. The best plants you ever saw. **RASPBERRIES, BLACKBERRIES,** and other small fruits cheap. **SEED POTATOES** \$1.50 per barrel. New Varieties, true to name, first quality. Northern Grown. Lists free.

JOHN F. DAYTON, WAUKON, IOWA.

Mention American Gardening when you write.

TREES AND PLANTS.

FRUIT AND ORNAMENTAL, DECIDUOUS AND EVERGREEN, OLD STANDARDS AND BEST NEW VARIETIES.

Large supply of SHADE TREES, 1 1/2 to 1 inch caliper.

KEENE & FOULK, HONOLULU, F. SHING, N.Y.

Mention American Gardening when you write.

Borberry, California Privet and Japan Quince

For Ornamental

HEDGES.

HARDY ROSES ON OWN ROOTS.

Write for Prices to FAIR OAKS NURSERY, OAK PARK, ILL.

Mention American Gardening when you write.

MICHIGAN WILD FLOWERS

Are remarkable for their great beauty, number of species, diversity of habit and use. Trees, shrubs, Vines, Climbers, Ferns, Bog Plants and Aquatics, suitable for all locations and conditions.

Send stamp for fine, illustrated catalogue.

THE MICHIGAN WILD FLOWER COMPANY, ROCHESTER, MICH.

Mention American Gardening when you write.

OUR TREES

Etc. advertise themselves. The best always cheapest. Elegant catalogue, magazine size, 168 pages free. Gives the cream of the new and the best of the old in vegetable and flower seeds, fruit and ornamental trees, grapes, shrubs, roses, hardy perennials, bulbs and greenhouse plants. Immense quantities. No finer assortment of fruits in America, with more acres of ornamentals than any other nursery can show. Nurserymen, florists, dealers and planters are cordially invited to call and inspect our stock. Seeds, plants, bulbs, small size trees, etc. by mail, postpaid, larger by freight or express. Safe arrival and satisfaction guaranteed. Send today for catalogue, free, it will save you money.

43d Year. 32 Greenhouses. 1000 Acres. THE STORRS & HARRISON CO., BOX 121, PAINESVILLE, O.

Mention American Gardening when you write.

GOOSEBERRY AND CURRANT—50,000. Other Nursery Stock.

T. G. ASHMEAD, Nursery, Williamson, N. Y.

Mention American Gardening when you write.

MY STRAWBERRY CATALOG

FREE of interest to progressive growers and careful buyers. SEND FOR IT.

C. N. FLANSBURGH, Leslie, Mich.

Mention American Gardening when you write.

GRAPE VINES

Small Fruits. All old and new varieties. Extra quality. Warranted true. Descriptive Catalogue Free.

T. S. HUBBARD CO., FREDONIA, N. Y.

Mention American Gardening when you write.

Hale's Fruits

Are up to date market and family varieties. 1200 acres fruiting fields enables me to sell more dollars worth of fruit annually than any ten other nurseries. Free book tells whole story. I get my money back selling trees and plants at half agents prices.

J. H. HALE, South Glastonbury, Conn.

Mention American Gardening when you write.

A REMARKABLE FRUIT. LOGAN BERRY, large as a blackberry, color of red raspberries, flavor of both. Many other interesting fruit novelties. Trees and plants at very low prices. Our beautiful illustrated catalogue of 112 pages free. THE LOVETT CO., Little Silver, N. J.

Mention American Gardening when you write.

IF IN WANT OF

FRUIT TREES

Currant or Gooseberry Bushes, send for our Surplus List before buying.

H. E. HOOKER CO.

Wholesale Nurseries. Established 1835.

ROCHESTER, - NEW YORK.

Mention American Gardening when you write.

Manwell Strawberry

Is easily in the lead (a staminate). Of large size and firmness unequalled, its color would be hard to improve upon, the quality is superb, while the quantity of fruit it matures is simply immense, the yield being greater by one half than Wardwell, Crescent, P. Earle, Beder Wood, Bubach, or Haviland, and several others that have been in the lead. The proof of its value is its ability to outsell all others on the market, bringing for the season 1/2 more than any other variety. For description see AMERICAN GARDENING, July 4th issue, page 419. I also have the exclusive sale of the Hawkeye Runner Cutter, the best and cheapest tool made, can be used by a 12-year old boy. Send for price list to

ALLEN D. MANWELL,

P. O. Box, 686, VINTON, IOWA.

Mention American Gardening when you write.

the weather, especially during frequent cultivation, is found to be breaking down and liberating the plant foods. At Cornell 350 bushels of potatoes have been grown on common farm soils, without fertilizers, merely by resorting to frequent and thorough tillage. Potatoes like an acid soil. Rye may precede the potatoes, and be plowed under to make the soil acid. Professor Roberts finally warns against the mistake of trying to substitute commercial fertilizers for tillage and moisture.

American Fruit Growers' Union.

A member of the Missouri Horticultural Society addressed the Western New York fruit growers about the merits and aims of the American Fruit Growers' Union.

The problem which this new association is trying to solve is how to market our fruits. The idea is, first, to combine to get lowest rates from the railroads; second, to learn how much fruit is grown, and third, how to market it so that it will not come in competition. The American Fruit Growers' Union is intended to be a central organization to direct and advise shipments. The union has called a meeting for the 2d, 3d and 4th of March next in Buffalo, N. Y.

Fear Culture and Pear Diseases.

Professor M. B. Waite, of the Department of Agriculture, refers to the introduction of oriental pears. These have large thrifty leaves and seem to be perfectly at home in the eastern portions of the United States. Kieffer is a half oriental. The less said about the quality of these fruits the better. The Japan pear seems to be yet in its original and unimproved state, and about 200 years behind the times; but perhaps as good a foundation for improvement as our own pear was originally. Now we can cross the Japanese with the European pear, and try to get the vigor of the one and the quality of the other. Smith and Garber are no better than the Kieffer. Possibly by crossing the Oriental and European pears we may finally get something very desirable. Mr. Waite thinks that the future pears of the East will contain at least a tinge of oriental blood.

The pear scab fungus can be controlled by spraying. For fire blight we have two methods of treatment. One is to surround the trees with favorable conditions to resist the attacks. The other is to kill the microbe. The first method consists of pruning the young tree to produce a proper balance between top and root growth, of withholding stable manure, avoiding or restricting cultivation, on fertile soil of seeding to grass and pasturing. Control of the water supply also gives perfect control of the blight. The remedy is to reduce or withhold irrigation. The microbe can be exterminated by cutting out and burning the affected portions of the tree.

Some "Russian" History in Iowa.

Permit me to correct some errors of history into which Mr. Bomberger has fallen in your issue of January 23. While it may be truly urged that the Russian epidemic has mostly run its course, and is now so much abated that no more space need be wasted upon it, I yet believe it best to correct errors of fact and keep history straight.

Mr. Bomberger believes that the present ill repute of Russian fruits exists because spurious trees were sent out at first by those who now discredit them. He is one of our younger men and being unaware of the early history of these matters is sincere in his mistakes.

In January, 1878, the writer secured an appropriation of \$100 from the State Horticultural Society to buy Russian scions. They were propagated, and in two years were distributed to the foremost members of the society, especially nurserymen who had facilities for multiplying and distributing the trees. None were sent to Mr. Bomberger because we did not know of him then. I received some two hundred sorts of apples then, and soon after some twenty-five sorts of cherries, about as many pears and a smaller number of plums. I helped

make the distribution and know that others had nearly the same, besides trees and shrubs to the number of fifty to seventy-five. Soon after Mr. Budd returned from Russia there were other distributions and many of us made independent importations so that we had plenty of sorts and of undoubted genuineness.

We all propagated and distributed a few but about the time my trees became fit for market I found them so diseased with winter killing, sun scald, blight and the like that I took alarm and burned them by the thousand, and warned others. Others did the same.

Professor Budd raised a question of veracity and honesty. The late Orange Judd made a visit of inspection to my place. I took him into the nursery and with a knife cut open trees showing him their diseased condition until he said he was satisfied and that he could not doubt his own eyes.

Mr. Bomberger fancies a wide difference in the experience of two keepers of experiment stations near Des Moines. In truth, they agree very closely. Both planted Russian orchards. Both lost most of the trees. One grubbed the remnants out, the other let them stand and now exhibits a few plates (quantities) of Russian apples at the fair. Both issue nursery catalogues which agree. Both list one or two Russian apples for summer, one for fall, and for winter not one. There are no winter Russians in Central Iowa.

Most Russian fruits have disappeared from Iowa catalogues except that of the College nursery at Ames, run by "The Originator of the Russian scheme," Professor J. L. Budd. The following resolutions throw a fair light:

Resolutions passed without a dissenting vote by the Southeastern Horticultural Society, held in New Sharon, Dec. 1-3, 1896:

"Report of Committee on Impeding Dangers to Horticulture in Southeastern Iowa:

"Whereas, The universal sentiment, as expressed by the members of this society in their discussions, is that the introduction of most foreign varieties of fruit, particularly those of Russian origin, has been detrimental to the true interests of horticulture, and that all the attempts to grow them profitably have proven failures; therefore, be it

"Resolved, That we recommend to all persons contemplating planting fruits within the limits of this society that they select those varieties only that are known as native varieties, and that have been well tested and have proved their qualities and adaptation to this locality.

In advanced stages of Consumption, Scott's Emulsion soothes the cough, checks the night sweats and prevents extreme emaciation. In this way it prolongs life and makes more comfortable the last days. In every case of consumption—from its first appearance to its most advanced stages—no remedy promises a greater hope for recovery or brings comfort and relief equal to Scott's Emulsion. Book on the subject free for the asking.

SCOTT & BOWNE, Chemists, New York.

"Resolved, That we take this method of warning all persons that foreign varieties of the apple, pear and plum, particularly those of Russian origin, recommended and sold by Professor Budd and sent out from the Agricultural College nursery, at Ames, have, so far as they have been tested in all parts of southeastern Iowa, proved failures, and that we believe that about all the varieties of those Russian fruits so recommended and sold have been tested therein.

"Resolved, That in our judgment, these foreign fruits should be adapted to our conditions by cross breeding and seedling production, to the end that if possible some advantage to horticulture may result.

"Resolved, That our secretary be instructed to forward a copy of these resolutions to the various agricultural papers within the limits of our territory, with a request that they be published for the protection of our people.

"W. S. Fultz, Muscatine; W. Greene, Davenport; C. N. Stewart, Washington; W. T. Richey, Albia; Samuel Rowe, Osceola, committee."

Des Moines, Ia.

C. L. WATROUS.

5,000,000 Strawberry Plants, 100 varieties, including Carrie, the queen berry ever introduced; Edith, the largest; Equinox, the latest. We carry the largest and best stock in the United States. The King Red Raspberry, the brightest and best red ever offered. 1,000,000 Wakefield Cabbage Plants. Also, tobacco dust. Send for free wholesale price-list free.

THOMPSON'S SONS, Originators of the Strawberry, Rio Vista, Va. If you cut this adv. out and send with 50 cents, we will send free, by mail, 12 plants each of Rio Vista Tennessee and Lady Thompson.

Mention American Gardening when you write.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897 FOR
Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." 45 Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

WE OFFER AMONG MANY NEW THINGS


The Bismarck Apple—Bears splendid fruit on 2-year grafts. A remarkable new fruit.
Hedysarum Multijugum—A new Mongolian Shrub of great beauty.
Lord Penzance's Hybrid Sweetbriars—Worthy a place in every garden.
Viburnum Tomentosum—We consider this the finest shrub grown. Very rare.
Picea Cencolor—An improvement on the Blue Spruce.
The Weeping Spruce.
Clematis Paniculata—Without an equal as a hardy climber, 30 cts.
Magnolias, Japan Maples.
The best stock of Herbaceous Perennials in the country.
Rhododendrons and Azaleas at lowest prices quoted.

For all these, and full advice and plans for planting grounds and gardens, write us.

New Catalogue mailed for 10 cts

THE SHADY HILL NURSERY CO., 102 State St., Boston, Mass.

Mention American Gardening when you write.



BROKEN DOWN IN HEALTH AND SPIRITS

—the unhappy and hopeless condition of many a wife and mother in the country home, all because they have not tried a remedy that is within their easy reach. One which has brought more health, happiness and sunshine into life than any remedy ever known. Its name is

WATERBURY'S Safe Cure

It never fails in

BRIGHTS DISEASE, URINARY DISEASES, FEMALE COMPLAINTS, GENERAL DEBILITY, AND MALARIA.

It is a purely vegetable preparation, and numbers its cures by thousands. Try it and walk in newness of life.

Large sized bottles or new style smaller ones at your nearest store.

POULTRY BOOKS. ABC Poultry Culture, 25 cts.; 500 Questions and Answers, 25 cts.; Poultry House Plans, 25 cts.; Pigeon Queries, 25 cts.; *Fanciers' Review* 1 year, 50 cts. All \$1.00. Any 2 books, 40 cts.; 3 for 50 cts. J. DARROW, CHATHAM, NEW YORK. Mention American Gardening when you write.



HATCH Chickens BY STEAM— With the **MODEL EXCELSIOR Incubator**

Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made. **GEO. H. STAHL.** 114 to 122 S. 6th St. Quincy, Ill.

Mention American Gardening when you write.

THE JOY OF SUCCESS

is sure to follow the use of the **New Successful Incubator**. Its just like making any other sure and good investment. Regulates its heating to a nicety; needs no watching; generates its own moisture. Hatches every egg that can be hatched. Sold under a positive guaranty. All about it in Book on Incubation and Poultry. Sent for in stamps. Address **DES MOINES INCUBATOR CO., Box 92, DES MOINES, IA.** Mention American Gardening when you write.

ONE HUNDRED DOLLARS AN ACRE

Can only be made from one source—**POULTRY**. Wheat and corn do not pay by comparison. You may smile, but have you ever tried keeping poultry *right*. The egg basket is a handy source of revenue these hard times. **THE POULTRY KEEPER**, Box 80 **PARKESBURG, PA.** sets a year tells how it is done. Sample free. The paper 1 year and four grand Poultry Books, \$1. Write to-day.

Mention American Gardening when you write.

BIG MONEY IN BLACKBERRIES

NEW METHOOS. Grow 300 Bushels Blackberries per acre. **DOUBLE YOUR CROPS** of Strawberries and Raspberries in Quantity and Quality with less work. Command special customers and dealers and get big prices with everything sold in advance. Be a Leader in the Business. A booklet, which has REVOLUTIONIZED small Fruit Growing, by the proprietor of the largest plantation of Small Fruits in the country. Tells the "when and how" he does it. Send your address on a postal card and get it FREE!

R. M. KELLOGG, Three Rivers, Michigan.

Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

HEAVY FEEDING FOR LAYERS.

A special answer given by a prominent agricultural journal to an inquiry about feeding hens furnishes certainly much food for thought. The inquirer desired the most economical ration consistent with the best results in eggs (just what we all want, in fact). The morning ration recommended consisted of nearly one-eighth meal scraps in addition to the ground grains. Besides this, all the cut green bones that would be eaten readily at noon were advised. Almost any preferred grain to be used at night. At the somewhat common reckoning of a quart of feed per day for every eight hens, this would give quite or nearly a half ounce of meal per hen per day, besides all the green bones she wished to eat at one meal. It would be somewhat surprising to find hens fed throughout the winter in such a heavy ration in full health and numbers in the spring. Danger ahead, here.

SEND FOR THE CATALOGUE.

The easiest and best way for the home gardener to find out what she wants in the way of seeds and plants is by a comparison of catalogues. Questions are often asked concerning places to buy plants, which would be unnecessary if the advertising columns were scanned a little more closely. The columns of American Gardening contain the advertisements of prominent and reliable growers. Send for the catalogues.

CUPID SWEET PEAS.

So general were the complaints last year of the failure of this interesting sweet pea that one dealer offers this year to refund the money to all who purchased seeds of Cupid from him in 1896. But, in order to insure better results this year, a monograph has been published, entitled "Just How to Grow Cupid." The packets of those of this year will be double the size of those of last year, and, as the seed will doubtless be better, it is hoped that much improved results will follow this year's trials. Only good seed will show what Cupid can really do.

FREESIAS FROM SEED.

Last year notice was given to the claim that freesias could be grown to blooming in four months from seed. We now find freesia seeds catalogued with the claim that they may be grown to bloom finely in four months from the time of sowing. The freesia seeds freely, and it can be grown from seed readily enough. Whether it will bloom in so short a time remains to be seen. Some experience in growing seedling freesias leads to the fear that the amateur may not find this claim well sustained in practice. The trial will certainly prove interesting.

ROSE, YELLOW SOUPERT.

One of the interesting plants offered in a limited way last year was this yellow half-sister of Clothilde Soupert. This year it will be quite generally offered, and the price is low. The interest in this plant is partly based on the known good behavior of Clothilde Soupert, and partly on the color. Yellow is an especially popular color at

"It will go away after awhile."

That's what people say when advised to take something to cure that cough.

Have you ever noticed that the cough that goes away after awhile takes the cougher along? *And he doesn't come back!*

Ayer's Cherry Pectoral Cures Coughs.

present, and a hardy yellow rose, blooming from May until frost must be a decided acquisition. The yellow Soupert, or Mossella, is not purely yellow, however, but white, shading in the center to apricot yellow; so that, however good it may be, we may hope that it will lead to something yet better. The Soupert roses are specially recommended for window blooming, in addition to being fine garden sorts.

VARIOUS MIGNONETTES.

Those especially who do not care for the perfume of Mignonettes are likely, through neglect of the plant, to remain in ignorance of its improvement, and of its many good qualities. Good, both in doors and out, fine for cutting and useful for greenery, and blooming extra late in the season, it is really most desirable. It is besides very profuse. Both blossoms and spikes have been largely improved over those of a few years ago, and those who do not grow this plant are losing more than they realize. Some kinds now prominent are: Allen's Delancey, Golden Machet, and improved Victoria. Giant White Spiral, a very free sort, introduced several years ago, is still a good standard sort, but its odor is not pleasing.

MYRA V. NORRIS.

HALL'S FAVORITE. THE COMING NEW **STRAWBERRY**, defies competition: the best introduced for years. Forty other kinds pedigree plants. Raspberries, Blackberries, Asparagus roots etc. Hear quarters for Seed and Crop Seed Potatoes, double crop and earlier than other seed.

Descriptive Catalogue Free.

J. W. HALL, - - Marion Station, Md. Mention American Gardening when you write.

FULTON'S STEAMBOAT 1897 I make a business of supplying private growers, who want the best that can be had, with Strawberry, Raspberry, Gooseberry, and all other kinds of small fruit plants. Yes, and at prices just as low as any responsible grower.

Send for my descriptive price list. **W. B. FULTON.** - - Kirkwood, Ohio. Mention American Gardening when you write.

W. H. HARTMAN,

Successor to Hartman & Rouse.

NURSERYMAN, DANVILLE, N. Y.

SPECIALTIES Standard and Dwarf Pear, Plums, Cherries and Apples. Will be pleased to correspond with dealers and others wanting carload lots or smaller quantities.

Mention American Gardening when you write.

SMITH'S SMALL FRUITS FOR 1897. 100 varieties. The best of the old and new sorts, including the new Egyptian Raspberry, one of the hardest blacks ever produced. Send for list. **B. F. SMITH,** Box 6, LAWRENCE, KANSAS. Mention American Gardening when you write.

WHOLESALE MARKET REPORT

New York.

Cut flowers are very abundant; business generally speaking is anything but brisk, and for such a part of the season as the present prices are very low. Ordinary grades of roses sell at \$2 to \$4 per 100, and fancy grades, \$6 to \$10. Violets are only making from 25c. to 75c. per 100 for special blooms. A dry goods concern this week offered 15,000 at 15c. per 100. Hot house vegetables are averaging low in quality, so that the price is correspondingly low.

The supply of fancy-head lettuce is limited. When strictly high grade, 75c. per dozen was possible; after that down to \$1 per barrel. Cucumbers No. 2, 75c. to \$1.25 per dozen; No. 1, \$2.00 to \$2.25 per dozen, by the box. Radishes, \$2.00 to \$3.00 per 100 bunches. Mushrooms have cleared at last, and the market is consequently a little more steady at figures ruling from 25c. to 40c. per lb.

Apples and Cranberries.

Receipts for the week, ending Feb. 13, on that day:

Receipts of apples.....5,358 bbls.
Receipts of apples for week.....29,746 bbls.
Receipts last week.....27,114 bbls.
Receipts of cranberries.....741 pkgs.
Receipts of cranberries for week.....1,693 pkgs.
Receipts last week.....450 pkgs.

Business this week nominal; prices show a lower tendency.

Spitzenburg, fancy, per bbl.....2 00@2 50
—common to fair, per bbl.....1 25@1 75
Baldwin, Vt. and Northern, fancy.....1 37@1 50
Baldwin & Greening, Vermont, prime.....1 30@1 25
—Western N. Y., fancy, per bbl.....1 25@1 37
—W'n N. Y., fancy, per d.-h. bbl.....1 00@1 12
—Up-river, per bbl.....1 12@1 25
Greening, w'n N. Y., prime to fancy
per bbl.....1 25@1 37
—Up-river, per bbl.....1 00@1 25
Greening & Baldwin, ordinary, per bbl.....@1 00

Grapes.

Catawba, prime to fancy, per 4-lb. basket, 14c. to 18c.

Rhubarb is plentiful.

Vegetables.

Receipts of onions for the week were 3,573 packages, 14 packages in excess of previous week. Market moderately firm. Orange County reds firm at \$3.00 to \$3.25. Connecticut stock hardly good enough to get up to the top notch; yellows, \$2.50 to \$2.75.

Brussels sprouts, per quart.....40 @ 8

Beets, Florida, per crate.....75@1 00

Carrots, per bbl.....75@1 00

Cabbage, Danish, per 100.....4 00@5 00

—Long Island, per 100.....3 00@4 00

—Florida, per crate.....@1 50

Red cabbage, per bbl.....60@ 65

Cauliflower, California, per crate.....2 00@3 00

—Florida, per carrier.....1 00@2 00

—Florida, per basket.....1 00@1 50

Celery, California.....60@ 80

—Fancy, large, per doz. stalks.....50 @ 75

—Average best, per doz. stalks.....30 @ 40

—Small to med., per doz. stalks.....10 @ 25

—Flat bunches, per doz. bunches.....75@1 25

Egg plants, Southern, per bbl. crate.....3 50@5 00

—Plants Southern, per box.....1 25@2 50

Kale, Norfolk, per bbl.....40 @ 60

Lettuce, Florida, per basket.....1 50@3 00

Onions, West. N. Y., yellow, per bbl.....2 50@2 75

—Orange Co., reds, per sack.....2 00@3 00

—Orange Co., yellows, per sack.....2 25@2 75

—Orange Co., white.....3 00@4 50

—Conn., reds, per bbl.....3 00@3 50

—Conn., yellow, per bbl.....2 75@3 00

—Conn. whites.....4 00@6 00

—Havana, per crate.....@2 50

—Bermuda, per crate.....2 50@2 65

Peppers, Florida, per crate.....1 50@2 50

Squash, marrow, per bbl.....1 00@1 25

Spinach, Southern, per bbl.....50 @1 25

String beans, Fla., express, pr. crate 3 00@3 50

—Beans, Fla., freight pr. crate.....1 00@3 00

Turnips, Russia, Canada, per bbl.....65 @ 70

Tomatoes, Southern Fla., per carrier.....1 00@2 00

Philadelphia.

The improvement noted last week continues. Retail men have been buying more freely, and all kinds of stock has moved better.

Many things are now coming in from the injured districts in Florida, but all vegetables from these localities are in poor condition, and in many instances scarcely pay for freight or express charges.

Florida strawberries are of very inferior quality, and are selling at from 40c. to 60c. per quart.

Lettuce is also poor and can be bought from \$1 per basket upward. Expressage on each basket is from 65c. to 75c.

Mushrooms are moving much better, 25c. to 30c. per lb. is now being obtained.

Hot house tomatoes are selling well at 25c. to 35c. per lb. The supply is very limited and more could be disposed of.

There is an entire absence of hot house stock such as Lettuce and Cauliflower. The low prices have probably caused growers to drop these things for this season.

The Jersey farmers are bringing in Sweet Potatoes in large quantities, but are only able to average 15c. per basket.



BRADLEY'S

Vegetable Growers

should always remember that for every crop the BRADLEY FERTILIZERS furnish the best possible plant food, and therefore produce unequalled results, either in the field or under glass.

We prepare Fertilizers for every need, and guarantee their superiority. Every farmer should send a postal card for free copy of "The American Farmer." It's full of farming facts of great value.

Bradley Fertilizer Co., Boston, Mass.
Rochester, N. Y., Cleveland, Ohio, Augusta, Ga.

FERTILIZERS

Mention American Gardening when you write.

GLASS For Greenhouses, Grap-eries, Conservatories, GLASS Hothouses and Hotbeds.

VANHORNE, GRIFFEN & CO.

Importers of French Glass.

13, 15 & 17 LAIGHT ST., AND NEW YORK.
62, 54 & 56 VARICK ST.,

Mention American Gardening when you write.

The apple market continues firm; some excellent fruit is still being obtained from New York State, and is arriving in good condition.

Spitzenberg, fancy.....2 25@2 50

—Fair.....1 50@2 00

Kings, fancy.....2 00@2 25

Baldwins, fancy.....1 50@1 75

—Fair.....1 25@1 50

Greenings.....1 40@1 60

Vegetables.

Beets, Florida, 1st grade very few.....4 00@6 00

—Florida, 2d grade very poor.....3 00@4 00

Brussels sprouts, per qt.....7c@10c

Cabbages, Fla., new, very plentiful,
per crate.....1 75@2 00

Cauliflowers, Fla., per basket.....1 50@2 00

Celery, extra, per doz. stalks.....50 @ 75

Kale, Norfolk.....1 00@1 25

Lettuce, Florida, per 1/2 basket.....1 50@2 00

—Florida, per 1/2 basket, fair.....1 00@1 40

Spinach, Florida, fancy.....1 50@2 00

Tomatoes, Florida, fair.....2 25@2 75

—Florida, fair.....1 25@1 75

Onions, Eastern white.....4 50@7 00

—Eastern, yellow.....3 00@3 50

—Eastern, red.....3 25@3 75

DISCOVERED A face wash that will remove that gray complexion and leave it soft and white in 10 minutes after washing, and in a week remove all pimples, blackheads and tan. Bleaches the skin without irritation. Perfectly harmless; contains no poisons. Costs but five cents to prepare enough to last six months. Recipe and full directions, 25 cts. Mrs. B. HUNTER, 4615 Evans Ave., St. Louis, Mo.

Mention American Gardening when you write.

CALIFORNIA LANDS ARE RICH

and only \$35 to \$65 per acre AT ESCONDIDO. Grows fine oranges, lemons, olives, prunes, apples, hay, grains, etc. Best summer and winter climate in U. S. Send stamp for illus. pamphlet to Escondido Land & Town Co. at Escondido, Los Angeles or San Diego, Cal.

Mention American Gardening when you write.

SEEDS. FREE

if you send 3 correct names and addresses of gardeners or those intending to buy seeds, we will mail FREE OUR NEW 1897 Seed and Gardeners' Guide; tells how to MAKE MONEY on a small piece of land. \$1.00 worth of seeds for 25 Cents. 25 years experience.

JOHN BAUSCHER, Jr., box 902, Freeport, Ill.

Mention American Gardening when you write.

KOSS' SEEDS

Always Give Satisfaction. Our German and English Catalogue Free to all who need seeds, no matter how much. Wholesale list for Market Gardeners and Truckers. Address THEO. KOSS, 361 Reed St., Milwaukee, Wis. Dealer, Grower and Importer.

(Wanted, a few good salesmen.)

Mention American Gardening when you write.

THE BEST SEED POTATOES

And Farm Seeds are grown on . . .

Michigan New Muck Lands by

HARRY N. HAMMOND, —SEEDSMAN—

Decatur, Michigan.

Largest grower of seed potatoes in America.

Prices low. Write him for illustrated catalogue. Free to all. Describes how I grew over

750 Bush. Maule's Thoroughbred per Acre.

Mention American Gardening when you write.

Seeds! Seeds!

73d Annual Priced Catalogue of

VEGETABLE, FARM AND FLOWER SEEDS

is now ready and mailed Free to all applicants.

BRIDGEMAN'S SEED WAREHOUSE,

37 East 19th Street, - New York City.

Mention American Gardening when you write.



TRY DREER'S GARDEN SEEDS

Plants, Balbs and Requisites. They are the best at the lowest prices. Calendar for 1896 mailed free. Address

HENRY A DREER,

714 Chestnut St., PHILA.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO.

Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION.

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

WEEBER & DON,

Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Illustrated Catalogue
of Vegetable and Flower Seeds
NOW READY.

EVERY GARDENER SHOULD HAVE ONE.
Free on Application.

Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advt. and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

NEW GLADIOLUS. Leaflet free. Norman Cole, Glens Falls, N. Y.

STRAWBERRY PLANTS for sale. Catalogue free. Charles Howard, 2 Johns, Md.

STRAWBERRY PLANTS. Circular free. Wm Carson & Son, Rutland, O.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedsman, Rochester, N. Y.

THE RIDGEWAY, a new strawberry of great merit. For price of plants and free catalogue, address M. H. Ridgeway Box 292, Wabash City, Ind.

MIXED SEEDLING GLADIOLI. Blooming bulbs of fine strain, \$1.25 a hundred. Expressage to be paid by purchaser. Mrs. George Such, South Amboy, N. J.

STRAWBERRY PLANTS. Try the Margaret Fountain, Michigan, Clyde, Glen Mary. Headquarters for Gan'y, Brandywine Marshall, Parker Marie and all choice standards. Catalogue free to all. C. N. Flansburgh, Leslie, Mich.

THE GREAT twice bearing French Strawberry "Louis Gauthier." The largest and best berry yet introduced. Parent plants fruit in May-June. Their runners in September. Not more than six, nor less than four to one address. Price 25 cents each. Circulars. Arthur T. Goldsborough, "Weasley Heights," Washington, D. C.

GOLD-COIN VINELESS. I am the originator of this improved strain of the vineless Sweet Potato, and I will send free a full history of it and how it was brought to its present state of perfection, and how to grow them successfully, or for 10 cts. in stamps I will include a sample potato, and the stamps may be deducted from the first order. William T. Simpson, Box 74, Pine Bluff, Ark.

GLADIOLI, CANNAS, OLIVIAS, Souchet and Lemolne's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings. Cannas, Italica, Austria, and best standards. New Hybrid Olivias, Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.

20 ACRES rich, level farm land, free from rocks and stumps, and especially adapted for truck, fruit, cotton and tobacco raising, for \$300, payable \$10 down and \$1 or more weekly. Convenient to great eastern markets, in thickly settled section of Virginia. Genial climate all year. Splendid water. Schools, churches, stores, mills and desirable neighbors. Deed free and title guaranteed. No malaria, mosquitoes, blizzards or floods. Taxes and freight rates low. For further information write to D. L. Raley, 211 S. 10th St., Philadelphia, Pa.

WANTED.

A thoroughly posted man familiar with the propagation and care of Ornamental Nursery Stock.

Also, man for private place, competent to care for vegetable and flower garden, and lawn, and who can drive a horse.

Only sober, industrious parties need apply, stating where last employed and wages expected.

ELM CITY NURSERY CO., New Haven, Conn.
Mention American Gardening when you write.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER, 28, (Scotch) wants position as head or assistant; experienced in all branches; Best references, Address A. R., Box 161, Madison, N. J.

GARDENER, a German man, married, 30 years old would like to take care of a gentleman's private place. Best of references. Address C. A. care of American Gardening.

GARDENER and Florist, 30 years' of age, single, German, 15 years' experience, wishes to take charge of gentleman's place, first-class references. Address L. D., care American Gardening.

SITUATION, as gardener, on private place, wanted by a Dane, age 35, married, but no family. All outdoor gardening and greenhouse culture. Is sober and trustworthy, has been nearly 6 years in present place. Address Scandinavian, P. O., Chicopee, Mass.

SITUATION WANTED by young man, 25, single, as gardener, commercial or private; 5 years with present employer as propagator of general nursery stock; understands grafting, layering, inarching, &c.; good reference; disengaged April 1st. Address, stating wages, F. Jackson, Morrisville, Pa.

HEAD GARDENERS—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 35 & 37 Cortlandt St., New York.

GARDENER wants situation, Scotchman, age 27, married, no family, 13 years' experience in greenhouse, graperies, also in fruit, flowers plants and vegetables, and everything regarding horticulture; would take charge of gentleman's place. Disengaged April 1st. Good references. A. Watson, care of F. De R. Wissmann, Westchester, N. Y.

SITUATION wanted—First-class Gardener with diploma from both sides of the Atlantic will guarantee financial success in producing choicest roses, also mushrooms under glass, in same building, and heat, thereby saving expense in labor, space and fuel; forcing vegetables under glass and European grapes specialties; thorough artist at table decorations; good landscape gardener; best city references. Wm. Thompson, 741 First Ave., N. Y. City.

WANTED.

[Rates, etc., same as in "For Sale" column.]

WANTED, married man, as assistant gardener in greenhouses, on private place. House on place. Address, stating wages wanted, age, nationality and experience, and giving references. I. L. Powell, Millbrook, New York.

ONE YEAR FOR 10 CENTS

We send our monthly 16-page, 40 col. paper devoted to Horticulture, Home Decorations, Fashion, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents, if you send the names and addresses of six lady friends.

WOMAN'S FARM JOURNAL, 4215 Evans Ave., Saint Louis, Mo.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan Ivy, 2 years, \$3.00 per 100.

E. S. PETERSON, Montrose, New York. Montrose Nurseries.

Mention American Gardening when you write.

ASTERS, Queen of Market, the earliest and best, pkt., 100; os., \$1.00. Truffaut's Peony Perfection, pkt. 100; os., 75c. Giant White Comet, pkt., 100; os., \$2.25. Look like Chrysanthemums. **DRACENAS**, fine mixed, pkt., 50; os., \$1.00. **Verbena**, Mammoth, pkt., 50; os., \$1.25. **Phlox Drummondii**, dwarf, fine mixed, pkt., 100; os., \$1.50. Write for sample.

H. BEAULIEU, Weehaven, L. I., N. Y. Mention American Gardening when you write.

B KEEPER'S!

SEND FOR sample copy of **CLEANINGS IN BEE CULTURE.** A Handsomely Illustrated Magazine and Catalogue of BEE SUPPLIES. Valuable book on Bees given FREE to each one who mentions this paper. THE A. I. ROOT CO., Medina, O.

Mention American Gardening when you write.

NEW PINK VIOLET

MRS. J. J. ASTOR.

Similar in form and habit to Marie Louise but more vigorous, stems longer, flowers larger. Price, \$2.00 per doz.; \$10.00 per 100.

Orders booked now and filled in rotation after May 1.

G. SALTFOED, Violet Specialist, RHINEBECK, N. Y. Mention American Gardening when you write.

PRIVATE GARDENERS.

New York.

The regular monthly meeting of the New York Gardeners' Society was held at No. 44 Madison avenue Feb. 13. There was an attendance of forty-six members and friends. The retiring president, Peter McDonald, very gracefully introduced the new president, John Shore. Other officers are: Vice-president, R. Angus; secretary, J. M. Hunter; treasurer, W. Anderson.

The Exhibits.

The display proved to be the largest and best of any yet. A. A. Taaffe, Irvington, N. Y., put up a fine display of the following roses: Beauty, Belle Siebrecht, Bridesmaid, Bride, Perle, Souv. de Wooton, and Mrs. Pierpont Morgan. He also made a remarkable showing of mushrooms. These were of great weight and particularly fine color. A. L. Marshall, Pawling, New York, put up two seedling cannas and some callas of enormous size, some of the spathes measuring fully ten inches in diameter. These were produced from California roots and were, the exhibitor said, planted three in a pot and fed very liberally with either sheep or cow manure water.

W. A. Manda placed on the table Canna John White, and his yellow foliaged Salvia splendens. W. Dickson, Deaf and Dumb Institute, New York city, exhibited what was claimed by all present to be the best bloomed white Cyclamen ever seen in this vicinity. The bulb was said to be two years old and the plant occupied a seven-inch pot. There were eighty-six fully developed blooms, with a large number yet undeveloped. For this a certificate of merit was awarded. A. Wengenter, Bay Ridge, displayed some very fine mushrooms, and, more particularly, a grand lot of Carnations, all of which showed evidence in skill in growing. His new seedling pink, a cross between W. Scott and Mme. Diaz Albertina, showed up to great advantage. Apparently this is a carnation of more than ordinary promise. It has rigid stem, good size and color. (A certificate of merit.)

Mr. Bartholomae, Kingsbridge, made a nice showing of Zonal Pelargoniums, particularly Emerald du Jardin of a delightful pink color; trusses of good size. This is an old, but evidently worthy variety. J. M. Hunter, Hempstead, had a pan of Begonia Eriofolia. Honorable mention was awarded to all exhibitors, excepting the yellow leaved Salvia, which the committee said must be seen bedded out before an opinion upon it could be expressed.

Letters were read from Mayor Strong and C. Mitchell, president and vice-president of the New York Tree Planting Association, relating to the co-operation of the Gardeners' Society with that body. Mr. Mitchell addressed the meeting at length, outlining the work of the association, which, he said, now had a membership of 130. There were five nominations. W. H. Harvey, Port Chester, N. Y., was elected to active membership, and J. A. Manda, South Orange, N. J., as associate member. P. McDonald next read a valuable and concisely worded practical paper on the cultivation of Phalaenopsis.

Madison, N. J.

The monthly meeting of the Morris County Gardeners and Florists' Society was held in Masonic Hall Feb. 10. There was a full attendance and several new members were proposed. Mr. J. N. May gave a most interesting talk about roses, confining his remarks mainly to the present state of the rose market and the comparative stagnation in regard to prices, which were far from satisfactory to the growers. He made some pertinent suggestions for the consideration of rose growers, with a view of better regulating the supply. Unsatisfactory returns were solely the result of the supply being in excess of the demand. There was a remedy in the growers' hands if they would adopt it. It was too much the general practice, after grading the flowers, to ship everything, but it was to the growers' interest to throw away all the low grade flowers. He practiced this himself, and in consequence was able not only to ask but actually to secure better returns on the stock shipped. He spoke highly of the two

roses, Souvernier du President Carnot and Clara Watson. The new Carnations, Lily Dean and Maud Dean, were greatly admired by all present.

Samuel Henshaw.

We present herewith a portrait of the head gardener to the New York Botanical Gardens, whose appointment was noted in our issue of Feb. 6. Mr. Henshaw was born near Manchester, England, and as the son of the successful gardener at the Priory he was brought up to the profession of a gardener, and had to do with the growing of fine fruits and plants in the old style flue heated houses; he subsequently held positions at Hope Hall and Walley Range, near his native spot, and was under Campbell in the Manchester Botanic Gardens; later he entered into the business of a landscape gardener with his father.

In 1868 Mr. Henshaw came to the States as garden superintendent for J. C. Green, S. I., where he remained for twenty years, and made a name for himself as a competent and skillful gardener. More recently Mr. Henshaw again turned his attention to landscape, and is responsible for the ground work and planting in the grounds of Vassar Hospital, Poughkeepsie, N. Y.; parks for Wappinger's Falls, N. Y.; Gilbert College and Gilbert Home, Winsted,



FIG. 47. SAMUEL HENSHAW.

Conn., and the estate of Mrs. Eldridge at Norfolk, Conn.

In the days of the old New York Horticultural Society Mr. Henshaw was well known as an exhibitor.

Boston, Mass.

The prize exhibition of the Massachusetts Horticultural Society on Saturday, Feb. 6, was not exceptionally large, but was remarkable for the extra quality of the exhibits. Two collections of orchids competed for prizes, and other fine and interesting specimens were tabled for inspection. The prizes for the collections called for not less than twenty bottles of named species, and the exhibitors were Mr. E. V. R. Thayer (E. O. Orpet, gdr.) and Mr. John L. Gardner William Thatcher, gdr., who received first and second prizes respectively. Mrs. J. C. Whittin (W. McAllister, gdr.) showed two magnificent specimens of Dendrobium nobile. George McWilliam, gardener to Mr. George M. Whittin, received honorable mention for seedling cypripediums and first class certificate of merit for seedling cypripediums. J. E. Rothwell also showed some fine seedling and other cypripediums. On carnations, William Nicholson had the entire field, with no competition, and received first prize on a fine display, comprising Daybreak, Mangold, Scott, Edith Foster, Della Fox, Freedom, Hector, Eldorado, Thomas Cartledge and Nicholson. Alexander McKay, gardener to David Nevins, carried off the honors, as usual, on violets, with a collection of superb flowers, including Farquhar, Marie

Louise, Swanley White, Lady Campbell, Czar and California. James Comley made a fine display of camellias, named varieties, and received first and second prizes. He also made a fine display of cut flowers, among which were noted some extra fine California violets, lilac, Stenocarpus, Cunninghamii, Polygala Cordifolia and Cœlogyne Cristata. A. Roper showed two vases of seedling carnations, E. Sheppard and Roper's seedling, receiving a complimentary notice on the latter. Other exhibits included Bride and Bridesmaid roses from Joseph J. Comley, freesia from Bussey Institution (Charles J. Dawson, gdr.), Acacia pubescens from John L. Bird and cut flowers from Mrs. E. M. Gill.

One of the most interesting features of the show, and one well worthy of mention was an exhibit by M. H. Walsh, of Wood's Hall, of a dozen specimens of his new seedling hardy white rose, Lillian Nordica. Mr. Walsh received a first class certificate of merit from the society for this rose last summer, and the flowers which he showed last Saturday were from plants which were dug upon Dec. 10 and forced under not the most favorable circumstances. However, they presented the characteristics of the variety to a marked degree, with their long straight stems, rich dark green foliage close up to the flower, which is endowed with remarkable fragrance. This seedling, which is pure white, is from Margaret Dickson, by Mme. Hoete, and is a free bloomer.

Oceanic, N. J.

A well attended meeting of the Monmouth County Horticultural Society was held in Firemen's Hall on Friday, the 5th inst. An interesting paper on annuals was read by Mr. Wellington Kennedy of Red Bank. The committee appointed to make arrangements for holding a public exhibition in the fall, made a brief report, showing the result of labors thus far. Two new members were elected, and three applications for membership received. The business of the next meeting will be shortened to enable the members to enjoy a "smoker," which has been arranged to take place in the hall immediately after the meeting.

To Mr. Napier, for Auld Lang Syne.

Noticing that Mr. Napier was writing you page 77 in connection with Gros Colmar Grapes, I ask you to insert this note, as I would like to hear from him, for auld lang syne (Clinton House).

JAMES RATTRAY.

162 St. George street, Toronto.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

IOWA SEED CO., Des Moines, Ia.—Catalogue of Seeds, Plants, etc., illustrated and descriptive.

THE LENOX SPRAYER CO., Pittsfield, Mass.—Illustrated Catalogue of Sprayers, Insecticides, etc.

JOHN WHITE, Elizabeth, N. J.—Price list of new variegated canna "John White," with colored illustration.

A. BLANC, Philadelphia.—Supplementary Catalogue of Electrotypes of Flowers Plants, and Fruits for 1897.

W. W. RAWSON & CO., Boston, Mass.—Illustrated and Descriptive Catalogue of Vegetable and Flower Seeds, Bulbs, etc.

D. M. FERRY & CO., Detroit, Mich.—Seed Annual for 1897. A descriptive catalogue of vegetable and flower seeds, etc., fully illustrated.

THOS. H. SPAULDING, New York City.—Illustrated Catalogue of Chrysanthemums, Cannas and Begonias; contains an extensive list of novelties.

BASSETT & WASHBURN, Chicago.—Florists' Price List. A weekly publication giving wholesale prices of flowers and florists' supplies, on date of publication.

J. M. THORBURN & CO., New York.—Ninety-sixth annual descriptive catalogue of seeds, fully illustrated; a very complete catalogue, containing valuable information on time of flowering, hardiness, etc., of the plants, etc., enumerated.

One Cent

for a postal card will bring you our new and beautiful Catalogue of the

"Iron Age"

IMPLEMENTS

Cultivators, Harrows,
Wheel Hoes, Seed Drills,
Riding Cultivators,
Potato Planters,
Water Trucks, etc., etc.

BATEMAN MFG. CO., Box 106, Grenloch, N. J.

Mention American Gardening when you write.

Have you read about THE COMET \$2.50 to \$5.00. Beats them all. Don't buy till you see them. Send postal card for free cata. A harvest for agts, write today. H. B. RUSLER, Johnstown, O.

SPRAYERS

Mention American Gardening when you write.

SPRAYERS EXP. PAT.
We are the largest Sprayer Co. in U. S. Get our Catalogue and compare it with others.
LENOX SPRAYER CO. 84 West St., Pittsfield, Mass.

Mention American Gardening when you write.

IT PAYS

to Grow Strawberries. Send for our 15th Annual Catalogue and get started right. First-class plants at low prices. All about the new and old varieties.

SLAYMAKER & SON, Dover, Del.

Mention American Gardening when you write.

Danish Ballhead Cabbage.

IMPORTED RELIABLE SEED.

Prices on application. Catalogue Free.

FRANK H. BATTLES, Seed Grower, Rochester, N. Y.
Mention American Gardening when you write.

CABBAGE, Woodhaven Flat, earliest cabbage, pkt., 10c; os. 40c. Cauliflower, Erfurt, pkt., 15c; Bolinas, 25c. Celery, Golden Yellow, pkt., 10c. Lettuce, large Erfurt, pkt., 10c. Endish, Deep Scarlet Forcing and New White Tipped Forcing, os., 10c; 1b., 60c. All kinds of vegetable seeds at lowest price. Write for sample.

H. BEAULIEU, Woodhaven, L. I., N. Y.
Mention American Gardening when you write.

Fruit Growers

Make Money.

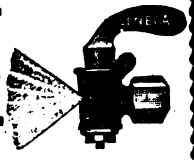
READ



Dunkirk, N. Y.

SAMPLE FREE, 50 cts. per year. Embraces Monthly Grape Belt.
Mention American Gardening when you write.

PROFIT IN FRUIT



DEPENDS LARGELY UPON THE EMPLOYMENT OF BETTER METHODS.

SPRAYING Helps Amazingly.

We make everything used for SPRAYING and tell all about it in our Book on Spraying. Formulas for insecticides; when and how to spray—FREE.

THE COULDS MFG. CO.
11 Ovid St., SENECA FALLS, N. Y.

Mention American Gardening when you write.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*We cannot undertake to reply by mail.

ROSE LEAVES DROPPING.

(To J. S. G.): A sudden rise in temperature, which would run above, say, 70, or too low a temperature, will produce the results complained of. Supposing your plants have been kept at from 50 to 58 degrees, and the temperature then allowed to fall to 40 degrees, you have the cause right there.

TIMOTHY AND SPRING RYE.

(Would like to know if I could sow timothy in the spring with success. Would it be better to sow it alone or mixed with some spring rye. I do not care about the other grasses. How much would you recommend to the acre?—F. J. S.)

—You may sow one-half bushel timothy alone, or with one bushel of rye, whichever you wish. Or, better still, with 10 lbs. of red clover; sow in spring.

TO RAISE HEALTHY PLANTS.

(What is it that gardeners put on their early vegetable plants in flat boxes that makes them have such a rank growth and dark green color? My plants turn yellow and die.—L. M., Mich.)

—It is simply a question of proper treatment, not special foods. To secure healthy, well-colored plants, give ample drainage and liberal soil; do not drown out with water; keep plants as near to glass as possible, and on kinds that will stand it, ventilate freely. Too much heat and water will cause weak and poorly colored plants. Starvation, either by lack of water, root room or cold, will also cause bad color. The happy balance of all these is the only secret.

AZALEA INDICA.

(To W. R. M.): See answers to another correspondent on page 98.

ONION FOR MARKET.

(To Skaneateles, N. Y.)—White Globe is the best white onion for the New York market.

SOWING POPPY SEED.

(Can you give me any suggestions as to the best way of sowing poppy seed in the garden next spring? My experience has been that when sown broadcast the weeds arrive first and crowd out the poppies. Would you advise sowing in rows?—Fred S. Webber.)

—If the weeds arise first, then have recourse to weeding; close attention to this will give good results. You may sow thickly and thin out as necessary. Or, if practicable, sow in drills; that is the best way.

LETTUCE DISEASE.

(What is the matter with my lettuce? The leaves underneath are dropping off and the edges of the head leaves are getting brown and yellow. Then the green fly is in it, notwithstanding I give a smoke every week. I do water, but little, and heat from 45 to 50 degrees at night. What have I to do?—A. MASS.)

—The wisest thing to do when the trouble appears on a plant is to root it right out and destroy it by burning. The disease is contagious. There is no absolute remedy. You injure your healthy plants by withholding water.

POULTRY MANURE.

(I have a small city garden and have a quantity of manure from my hen house. Would it do to use it on my strawberry bed or on any of the beds without a mixture of earth?—J. S. S.)

—The cleanings from the hen house should be mixed either with earth or ashes at a proportion, of say two to one, before applying to the land. This helps to distribute the manure more readily and makes it go further. The dung itself pure is very strong and if distributed in a pure state is more apt to do harm than good.

SCAB ON APPLES.

(Last year all our apples had black spots or blotches all over them, some you could rub off. They are oldish trees and had not been trimmed for years. During the winter I have pruned them largely. I am going to spray with London Purple for the Codlin moth. Will that do any good to the spots?—A. K.)

—The spots, or rather patches, on your apples are due to the scab fungus (*Fusicladium dendriticum*). London Purple should act as a preventive, or you may use Bordeaux. The best thing would be to apply the copper sulphate solution while the trees are yet dormant, following up with the Bordeaux as soon as the leaves appear. If you read the reports of the Fruit Growers' meetings, in this and recent issues, you will get much information.

Names of Plants. (To J. F., Halifax, N. S.)

—1 *Pteris longifolia*. 2 *Branea filamentosus*. 3 Cannot name without fructification.

ARMSTRONG & McKEIVY
Pittsburgh.
BETHEA-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR
Cincinnati.
EISENSTEIN
Cincinnati.
ATLANTIC
BRADLEY
BROOKLYN
JEWETT
New York.
ULSTER
UNION
SOUTHERN
SHIPMAN
Chicago.
COLLIER
MISSOURI
St. Louis.
RED SEAL
SOUTHERN
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALEM
Salem, Mass.
CORNWELL
Buffalo.
KENTUCKY
Louisville.

IT is a significant fact that responsible dealers sell and responsible painters use Pure White Lead (see list of genuine brands) and Pure Linseed Oil. They know their business. Those who don't know, try to sell and use the "just-as-good mixtures," "so called White Lead," &c., &c.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write

Literary Notes.

Surgeon-General George M. Sternberg will review our knowledge of The Malaria Parasite and Other Pathogenic Protozoa in Appletons' Popular Science Monthly for March, telling how they were discovered and upon what grounds they are accepted as specific infectious agents.

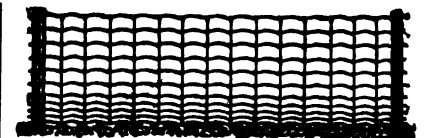
Ex-President Harrison has written of "A Day With the President at His Desk" for the March Ladies' Home Journal. The article is said to be singularly interesting in the detail with which it describes the wearisome routine of the President. It is said that General Harrison, in this article, has delivered himself with great directness and vigor, relative to the annoyances that are visited upon a Chief Executive by persistent office seekers.

The nation has grown since Washington's day. For instance, in 1790, the first full year of his administration, there were seventy-five postoffices in the United States. Now there are more than seventy thousand, and the revenue of the Postoffice Department is two thousand times as great as it was then. Scores of unfamiliar fact like these are brought out in an article on the "Early Days of the American Postoffice," which Postmaster-General Wilson contributes to the Washington's Birthday Special Number of the Youth's Companion. Especially appropriate to the season is a charming engraving, "When George Washington was Young," by Frank T. Merrill.

ARE your cows making as much milk and butter as they should? Do you get as good prices for what they do make as you should? You may have the benefit of other people's successful experience if you read *The Rural New Yorker*. Send to *The Rural New Yorker*, New York, for a free sample copy. We can send it and AMERICAN GARDENING, both one year for \$1.80, and your money back for *The Rural* if you want it.

"ACME" SEED DRILL
Sent Prepaid for Trial!
To introduce King's Seeds, quickly will send 30 regular ac. papers of King's Seed (Northern, Green), and an "ACME SEED DRILL," charges prepaid, all for \$1.50. Further particulars on application. T. J. KING, Richmond, Va.
Mention American Gardening when you write.

CANTON GARDEN PLOW
THREE SHOVELS AND RAKE ATTACHMENT.
WEIGHT, 20 POUNDS
\$3.75 EACH.
CASH WITH ORDER.
PARLIN & DRENDORFF CO.
Largest and oldest permanently established Plow Factory in America.
CANTON, ILLINOIS
Mention American Gardening when you write.



STRONG ENDORSEMENT

"In the spring of '88 I put up 600 rods. I have never had to repair it from that day to this. In '90 I put up about 300 rods, with equally good results. There's no reason why a Page fence will not stand 20 years without any expense for repairs."

WILL W. SHEPARD.

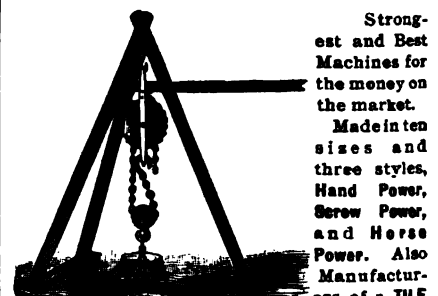
Honeoye Falls, N. Y. (in letter Jan. 18, '97) to

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write.

BUY BERRY BOXES
32-page Illustrated Catalogue for 1896-7 mailed FREE.
THE PIERCE-WILLIAMS CO.
SOUTH HAVEN, MICH.
THE STANDARD BERRY PACKAGE OF THE WORLD

Climax Baskets for Peaches, Grapes and Melons.
Mention American Gardening when you write.

Bennett's Stump Pullers



Strongest and Best Machines for the money on the market.

Made in ten sizes and three styles. Hand Power, Screw Power, and Horse Power. Also Manufacturers of a TILE

DITCHER that will dig 100 rods of ditch in 10 hours. And the BENNETT HANDY FARM WAGON, with or without dump-bed.

Write at once for prices to

H. L. BENNETT & CO., Westerville, Ohio.

Mention American Gardening when you write.

"FLOWER QUERIES" New book on floriculture 10 Chapters, written in questions and answers, discussing 500 floral topics. Price, 25 cts. The COURIER, Box A, Chatham, N. Y. Mention American Gardening when you write.

ALL THE LATEST NOVELTIES
AND PLANTS THAT CAN'T BE HAD ELSEWHERE.
Camellia, Italia and Austria, at \$1 each.
New Roses, New Fruits, New Shrubs, New Bulbs.
10 Cents for \$1.-5 for 50 cts. Book on Cacti 116 pages, 125 cuts, 10 cts. Catalogue of New and Rare Plants, Cacti and Bulbs free.
A. BLANC & CO., - Philadelphia.

Mention American Gardening when you write.

FLORA of JAPAN & CALIFORNIA
Chinese Narcissus, over 100 varieties of Lily Bulbs, Camellias, Palms, etc.
HARDY PLANTS, Japan Maples, Iris, Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan.
Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above.
H. N. BURGER & CO., San Francisco, Cal.
(ESTABLISHED 1887).

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.



We have the largest and finest Collection of
PALMS, ORCHIDS, FERNS
and **FOLIAGE PLANTS**
for Conservatories.
Hardy Herbaceous Plants,
Flowering, Shade and
Ornamental Trees, Vines.
Everything for a private place.
Estimates and Plans for Planting
Places and furnishing stock
(free).

SIEBRECHT & SON'S,

Rose Hill Nurseries, - New Rochelle, N. Y.

Mention American Gardening when you write.

CAMPBELL'S EARLY GRAPE

Best and most valuable. Highest commendation from highest authorities. Hardy, healthy, vigorous, very productive. Early or late. Largest clusters, finest quality, not foxy. Seeds need not be swallowed. None genuine without our seals. We guarantee safe arrival by mail. Largest stock of Grape Vines in the World. Small Fruits. Introducer of unrivalled Red Jacket Gooseberry and Fay Currant. Catalogue free.

GEO. S. JOSSELYN, Fredonia, New York.

Mention American Gardening when you write.



Book on FRUIT

Mailed free. Write for it and learn about the largest and most complete line of fruit, nut and shade trees, small fruits and vines in this country.

ARTHUR J. COLLINS, MOORESTOWN, N. J.

Mention American Gardening when you write.

GREENVILLE (formerly Downing's) APPLE

GREENVILLE STRAWBERRY or anything else in the nursery line. Send for free particulars.

Address. E. M. BUECHLY, (Box 991) GREENVILLE, OHIO.

Mention American Gardening when you write.

STRAWBERRY
RASPBERRY
BLACKBERRY
GOOSEBERRY
DEW

ASK WM. C. BABCOCK, BRINSMAN, MICH.,
For prices of strong STRAWBERRY PLANTS, dug out in solid blocks, not from between the rows, free to name.
Competition Defied. QUALITY considered. Complete Stock of CURRANTS AND GRAPE. (Mention this paper.)

BERRY PLANTS

Mention American Gardening when you write.

"Size and Quality combined, the Hopes and Expectations of the Chestnut Celebration (which THE R. N. Y. inaugurated years ago)," Realized. Nov. 10th, Page 175, 1894.

HEADQUARTERS

For RIDGELY CHESTNUT TREES and WOOD for GRAFTING, also Valuable Long

Keeping Native APPLES. General Line Nursery Stock, also

SMALL FRUIT AND VEGETABLE PLANTS.

WYOMING AVENUE NURSERIES,

P. EMERSON, Proprietor,
Wyoming, Kent Co., Del.

Mention American Gardening when you write.

SEE OUR UNEXCELLED

PREMIUM OFFERS

....OF....

Plants, Seeds, etc., in our issue of February 6th.

Our premiums are offered with a view to interesting present subscribers to obtain us New Subscriptions, and for so doing we expect them to obtain the new subscriber and retain the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. New names sent in direct are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

In our issue of February 6 we published Premium Offers, embracing a vast assortment of Standard, Fancy and Novelty Collections in Seeds, Fruits, Flowers and Vegetables, to which we invite the careful attention of every one of our readers, in the hope that, becoming interested, they will seek to earn these premiums and so increase our subscription list.

The Premiums offered are all of exceptional value; there is nothing bordering on the sensational in the various announcements, and great pains have been taken to secure offers from reliable growers and specialists. As we have previously stated, the publishers of AMERICAN GARDENING neither buy, sell, nor in any way do they trade in the stocks offered, except to mail the orders as received to the growers or dealers making the offers. This arrangement makes it satisfactory to our advertisers, who, in turn, being thus afforded an opportunity to introduce their specialties to likely new customers, at practically no cost for advertising in any of its ramifications, are thus enabled to give values which are unprecedented in the annals of Premium Offers.

If you want a copy of our Premium List let us hear from you and we will mail you one.

Potash

is a necessary and important ingredient of complete fertilizers. Crops of all kinds require a properly balanced manure. The best

Fertilizers

contain a high percentage of Potash.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.

Second Crop Potato Seed—Surpass all others in yield. **ORRIS A. BROWNE,**
Cape Charles, Va.

Mention American Gardening when you write.

PREMIUM AMERICAN PANSY SEEDS

and plants grown by W. Toole, Pansy Specialist, Wis. 35 varieties and mixtures of Pansies. Pansy, 25c per pkt.; trade pkt., 50c. Selected pkt., 15c.; tracee pkt., 30c. Extra choice mixed, pkt., trade pkt., 30c. My Pansies have never been equaled. any show where competing. Complete directions "HOW TO GROW PANSIES," sent free to any address with catalogue of Pansies and other seeds and plants by

WILLIAM TOOLE, Pansy Specialist, Saraboo, Wis.

Mention American Gardening when you write.

We Grow Seeds.

Our Specialties are:

Cabbage, Celery, Onions, Tomatoes, Potatoes and Improved Farm Seeds. Prices low. Please ask for Catalogue.

JOSEPH HARRIS CO.,
Moreton Farm (P. O.), Monroe Co., N. Y.

Mention American Gardening when you write.



3 NEW AND POPULAR FLOWERS.

New Star Petunia. A new variety for garden or pot culture, each flower having distinct white star-like stripes on rich purple-red ground. The flowers, about 2 1/2 inches across, almost hide the plant from view for months.

Double Calliopsis. Have the perfume of the Sweet Scented Pansies, of the Violet; the beauty of the Pansy. One packet each of these New and Popular Flower Seeds sent by mail, postage prepaid, and three months' subscription to the

AGRICULTURAL EPITOMIST. 4 FOR 10 CTS

The Agricultural Epitomist now goes regularly into the homes of over 150,000 Practical, Prosperous and Progressive Farmers of the United States and Canada, and is said by them to be the most Practical, Timely and Interesting Farm, Garden and Household Paper published. It treats intelligently upon General Farming and Stock Raising; tells how to make the Garden pay; how to raise Poultry; treats on Floriculture; and its Household Department, known as "Chatter Corner," is alone worth a year's subscription to any live household. This offer to furnish a packet of each of the above described new and popular flower seeds and three months' subscription to the Agricultural Epitomist, all for 10 cents, is made for the purpose of introducing the Epitomist into new homes, believing that where it is read for three months, it will be found so valuable and interesting as to secure for us in nearly every case a yearly subscription, the regular price of which is 35 cents. The money we will receive from this offer will not be sufficient to more than pay for the advertising, to say nothing of the Flower Seeds and three months' subscription. Send 10 cents in silver or stamps, upon receipt of which the Flower Seeds and Epitomist will be promptly forwarded. Address: EPITOMIST PUBLISHING CO., Indianapolis, Ind.

Mention American Gardening when you write.

AMERICA'S The SWEET PEA. FAVORITE . 50 Distinct Varieties and a free sample of CUPID (Dwarf) FLOWER . . POSTPAID FOR 10 cts. (Stamps or Silver.)

To introduce our **HIGH QUALITY SEEDS, PLANTS AND BULBS** into every section of the United States, we have made up from our enormous stock of Fresh Sweet Peas, a mixture of all the best varieties, including every color, shade and form known to the Sweet Pea family, **SUFFICIENT SEED FOR A ROW 40 FEET LONG.**

25,000 COLLECTIONS RESERVED.

As we wish this distribution to cover as large a territory as possible, we would request that each subscriber order only one collection, unless they desire additional assortments to give to their friends.

PITCHER & MANDA, JOHN N. MAY, Short Hills, N. J. RECEIVER.

Mention American Gardening when you write.

The Savannah Line

1400 Miles at Sea and a Week's Board, \$36.

Ocean Steamship Co. of Savannah & New England & Savannah S. S. Co.

For a short time the Savannah Line will sell First Cabin Tickets calling for transportation 700 miles each way, unexcelled meals and accommodations aboard steamer, transfers in Savannah, and two days' stop at choice of three first-class hotels at Savannah; in all, nearly a week's board in addition to transportation, etc., for **THIRTY-SIX DOLLARS.**

Through Tickets to JACKSONVILLE, ATLANTA, and all Points South. Steamers sail Tuesdays, Thursdays and Saturdays, from New York, and every four and five days respectively from Boston and Philadelphia, (see sailing cards.) Electric Lights kept up all night so that passengers can turn them on or off at pleasure.

UNSURPASSED CABIN ACCOMMODATIONS, SEA SPRAY BATHS AND ALL CONVENIENCES.

Send three two-cent stamps for Savannah Line News, and beautifully illustrated book, something new, to **RICHARDSON & BARNARD, Agents, 20 Atlantic Ave., Boston, Mass.; M. O. HAMMOND, Agent, Pier 18 S. W. Foot Spruce St., Philadelphia, Pa. or**

G. M. SORREL, Manager, New Pier 35, N.R., New York

Mention American Gardening when you write.

Seeds to Burn Landreth's Seeds

have been protected by our Dated Papers, and our **BURNING SYSTEM**, which gives your Local Merchant the **Privilege of Burning his Stock Left Over** at the end of the season, thus assuring to his customers **Fresh Seed Every Year.** D. Landreth & Sons are not Seed Merchants depending upon others for their supplies, but are **Seed Farmers** and grow their Own Stocks from the Most Perfect Types and under the experienced eye and direction of members of the Firm. The work has been going on since 1784, and the business is now conducted by the Third and Fourth Generations. This in itself is a Guarantee that the Seeds are as good as seeds can be made. Ask your local Merchant for **LANDRETH'S.** Observe the Date on each Packet, and if he does not keep Landreth's on sale, send us a Postal for our **CATALOGUE** which contains Truthful Descriptions and Sound Practical Information and we will fill your order direct from headquarters.

Address, **DAVID LANDRETH & SONS, Seed Farmers, Philadelphia, Penna.**

Mention American Gardening when you write.



Beautify your Homes

FOR ONLY

20 CENTS

BY planting the following variety of selected seed, which will bloom the entire season, and cannot help but give you entire satisfaction.

Aurora Collection of Sweet Peas A large pkg. weighing about one ounce and containing all the colors and varieties cultivated.

Aster, Elliott Rainbow Mixture, an acquisition to any garden, and a premium winner. The plants are bushy in form, of a vigorous, robust habit, covered with large globular flowers fully imbricated.

Pansy, Elliott's Blended, produces flowers of a very showy nature and of unusually large size. The seed is selected from the most reliable growers in Germany, England and France, and comprises the finest shades.

Carnation Dwarf Marguerite (an illustration of which you will find on our catalogue cover) something unusually fine, also our annual, beautifully illustrated; actual value in all 40 cents. Remember, 20 cents buys them all.

Wm. Elliott & Sons., SEEDSMEN, 54 & 56 Dey St, N. Y.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 114.
COMBINED SERIES VOL. LI.

NEW YORK, FEBRUARY 27, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Am. Horticultural Society..... 143	Elaeagnus Longipes..... 139	Mushrooms in Cellars... 150	Potatoes, English in America..... 142	Vegetable Garden..... 139
Apple, Wismer's Desert 142	Flower Garden..... 141	Novelties, Selected..... 141	Questions Answered..... 150	Window Plants..... 146
Beans..... 139	Fruit Garden..... 139	Persimmons, Grafting... 150	Rabbits, Protection from 139	
Bedders, Subtropical... 137	Fruits of Experience... 139	Plants Under Glass..... 138	Readers' Notes..... 143	Illustrations.
Bulbs, Home Culture of 143	Grapes..... 139	Plum, Pond's Seedling.. 150	Solanums, Various..... 146	Apple, Wismer's Dessert 143
Celery, Early..... 143	Heliotrope Propagation 150	Plums, Japan..... 143	Strawberry Rows, Matted..... 143	Asparagus Pea..... 139
Cherries..... 139, 140	Home Plot, The..... 146	Produce Car, A..... 140	Sweet Pea, Growing. 144, 150	Bed, Subtropical..... 137
Chrysanthemums..... 150	Manuring the Garden... 139	Potato, Myatt's Ashleaf. 142	Tomatoes..... 139	Potato Borer..... 141
Conn. Pomologists..... 138	Market Reports, N. Y. and Philadelphia..... 147	Poultry Notes..... 146		Potato Vigorosa..... 140
				Radish, Leafless..... 139

Bananas and Papayas as Bedders

The accompanying illustration represents a bed of Bananas and Papayas (*Carica Papaya*) as seen in the grounds of the Rose Valley Nurseries, Dongola Falls, Ill., during the past season. The picture was taken about the

The plants used, which were from six-inch pots, set out about May 10, comprise six Bananas and two Papayas, with an edging of Umbrella Grass (*Cyperus alternifolius*). The two center Bananas were of the Orinoco or Horse variety, the others being the Dwarf Cavendishii. The bed



FIG. 48.—A SUB-TROPICAL BED: BANANAS AND PAPAYAS.

20th of September, and at rather an unfortunate time, for we had just had a week of very windy weather, which had torn the great leaves of the Bananas. This bed, which was in an entirely unprotected position (with the exception of an open packing shed on the south) was an oval 18 feet long and 9 feet wide.

was on rich land, but, with the exception of two or three applications of liquid manure, had no manure. Water was applied freely.

At the time the photo was taken the largest Orinoco Banana measured 17 feet 8 inches to the top of the longest leaf, with a trunk circumference at base of 36 inches. The

largest leaf was 12 feet long and 2 feet wide. The plant also had five suckers, the largest of which was 10 feet high; all this from a small plant out of a six-inch pot. During my long residence in the tropics I have never seen this growth surpassed in so short a time.

The Papaya is a plant which I have never before seen used for bedding, and, in my opinion, nothing approaches it in magnificence, and not the least of its merits is its ease of culture. It is as easy to grow as a castor bean. The papaya is a dioecious fruit bearing plant, cultivated in all parts of the tropics, and has ascribed to it the most wonderful properties, such as the making tender of tough meat by wrapping it in the bruised leaves. The plant is branchless and palmlike, with the most elegant foliage.

The specimen at the right of the picture is a male, and at the time the photo was taken was over ten feet high, with a diameter of six feet and circumference of stem at ground of 18 inches. The largest leaf was 3 feet across. The photo does not do the plant justice; it does not show the bone-white mid-ribs and veins, nor the many racemes of thousands of sweetly scented flowers, for it was, in fact, a gigantic bouquet, clusters of flowers appearing at the base of every leaf from top to bottom; some of the racemes were 3 feet 8 inches long and there were at least 10,000 buds and blossoms in all. The flowers are small, waxlike and yellow, and of the most delicious fragrance, perfuming the air for many yards. The plant at the left of the picture is a female tree, which bore nine fruits, each as large as a man's fist. The trees had been topped preparatory to moving into a greenhouse.

The Umbrella Grass makes an elegant edging for a bed of this sort. In the one here shown it stood over 2½ feet high, perfectly even and regular.

The Papaya bears a very delicious fruit and is one of the best to grow in a greenhouse, being as easy of cultivation under glass as is the tomato. We have been enjoying fruit of as fine quality as was ever produced in the tropics. There are many varieties of the Papaya, those of tall, lanky habit being of little use. The bed was presentable as late as Oct. 14

MARTIN BENSON.

Plants Under Glass.

Seed Sowing.—We should have seeds of Persian Cyclamen already up in the greenhouse, but it is not too late now to sow them; and also seeds of *Grevillea*, *Draecena Australis*, *Eucalyptus globulus*, *Jerusalem Cherries*, *Tuberous Begonias* and *Gloxinias*.

Propagation of general greenhouse stock should be going on now.

Take Cuttings of *Stevias*, *Marguerites*, *Libonia Penrhensis*, *L. floribunda*, *Centradenia rosea*, *Cytisus racemosus*, *C. elegans*, *Heaths*, *Bouvardia* (root cuttings), *Greenhouse Hydrangeas*, *Carnations* and *Chrysanthemums*.

Violets.—A batch of violet cuttings, also soft cuttings taken from hybrid *Roses* which have been forced, and general stock of *Tea Roses* should be put in.

Old bulbs of *Gloxinias* and *Tuberous Begonias* should be looked over and the most forward potted up.

Dormant bulbs of *Montbretias*, *Glaadiolus*, *Galtonias* and other summer flowering stock must be looked over to see that all are sound.

Freeseias and *Lachenalias*, which have done flowering, should be given a good light place to ripen in.

Dahlias should be started for cuttings.

T. D. HATFIELD.

Connecticut Pomologists Meet.

President J. H. Hale, in his opening address, said in part:

The year past has been a particularly trying one for the fruit growing interest of Connecticut. Changeable climatic conditions in the winter previous killed the fruit buds or all except the more hardy fruits; the canes of raspberries and blackberries were badly injured, many fields of strawberries were killed out, and all more or less injured; this, followed by drought in May and June, gave our State the lightest and poorest crop of small fruits it has had for many years.

Prices were good, berries were fairly liberal, and commercial growers who had given good winter protection and were able to irrigate through the drought, received satisfactory returns.

Peach and plum crops were almost a total failure, which, considering the magnitude of the business at the present time, was a loss of a revenue of fully one-half a million dollars. Five successive crops previously, however, had demonstrated that the climate of Connecticut was fully as reliable as that of the so-called "peach growing States," and now, with the nearly one million trees in the orchards of the State, the business would continue to be a profitable industry if in every orchard and garden a vigorous fight was continued against the dread disease, the yellows, and all interested in growing, selling and eating this delicious fruit would co-operate with the State Peach Commission in driving and keeping out this disease. Those who would repeal the law are undoubtedly honest in their convictions, but woefully ignorant of the real disease and its effects; but one commercial orchardist was known to be opposed to the law, most of the other opponents being disgruntled owners of single trees, or small groups of them, who had rather have disease and death among their trees than to receive suggestions and help from the State. The owners of over 90 per cent. of the trees in the State were against repeal. Commercial orchardists and well informed amateurs eradicate the disease at first sight, for their own and their neighbor's protection.

The one great blessing of 1896 was the apple crop, the most abundant for many years, and more than usually free from imperfections.

Prices ruled very low and net cash returns were not so great as in former years, but the great crop caused us to seek wider markets, and a trade has been established that will be of lasting benefit. Many small towns all through the South had apples in our lots for the first time in 1896, and in future years will take many more at higher prices. With good culture, proper feeding, spraying and thinning, the apple is still the king of fruits for Connecticut.

With careful grading and honest packing it will always be a safe and sure money crop, and that, too, on much of our rough hilly lands of little value for other crops. Cherry planting has been greatly neglected; in nearly every home where land is sufficient there is a need of from two to six cherry trees right away this coming spring, while as a commercial crop our markets are ready for the product of many thousands of trees. The new race of Japan plums still continues promising. They are more hardy than peaches, a number of varieties fruiting quite freely in '96 orchards, where the most hardy peaches failed entirely. The earlier varieties ripen here early in July, and a succession may be had till October. A few varieties are very poor in quality, others good, and some superior to any other types of plums known. For canning purposes they are unsurpassed.

The matter of protection against spring frosts is receiving serious attention. Experience seems to indicate that steam is of far greater value than either heat or smoke. Fires at distances of not over fifty feet apart, lightly covered with wet hay or other material, that may be kept wet all the time and yet not put out the fire, will in any but a very windy time, cover the field or orchard with a fog-like vapor that will change the freezing point many degrees.

There are plenty of honest commission men and dealers in the fruit trade; get them out in the field and orchard and get all hands in close touch with one another;

it will do good. A love of the business, judicious advertising, clean packages and honest packing are essential points in commercial fruit culture. New England buyers are the most refined and critical of any and will always pay liberally for fruit that is beautiful and good. The family fruit garden may contain more choice varieties, which through lack of fine appearance or keeping qualities are not acceptable to the markets.

The Fruit Grower's Prospects.

Considerable discussion took place as to what the fruit grower would do in the future. Mr. Hubbard thought that if everybody was going into it, the apple grower's future was bad, and that the crop could not be profitably grown at '96 prices. Those men who were already in the business and did their work thoroughly, could get on all right. Mr. Allen was of opinion that the business would in the future be in the hands of the largest growers, since they would be able to employ better devices. Cheapening of the cost of marketing and decreased expenses were Mr. Taber's panacea. President Hale said prices were down to stay down, so that for the future figuring must be done on present prices. Mr. Hoyt was not discouraged. Supply and demand would regulate the business. The present depression was due to the marketing of inferior fruit. Small growers should co-operate. They would then be able to trade as a large individual. One grower had 200 trees sprayed and attended to carefully. A New York buyer bought the crop on the trees for \$900. Growers should combine and open a store in a large city, and thus save leakage through the commission men. President Hale supported the commission men. Of course there are good and bad among them, but on the whole they were honest, hard-working men, and probably worked harder than did the farmer, for they were at their business from 1 A. M. in the morning, often sticking to it till 6 P. M. Farmers would hardly care to do that. There were many dishonest growers. Shipments from time to time proved this, and the commission men had their doubts about the growers. A general conclusion was pack straight and prices will be straight. Some one considered it would be well to advertise the crop and sell as much as possible locally. Mr. Collingwood exhibited apples that were retailing on the streets at 5 cents and others at two for 5. Whoever heard of a grower getting prices anything like these figures? Some one was getting the profits, and it was not the grower.

Peaches.

Fox Seedling, Keyport, White, Lovett's White, were recommended as productive and satisfactory peaches, ripening later than late Crawford. Crother's New was said to be later than Ward's. State Pomologist Platt, speaking of new peaches, said Champion was larger than Mountain Rose, and three or four days later. So was New Prolific (so-called). This was a large yellow peach, identical with an old Michigan variety known to them. President Hale did not like the Champion; did not think favorably of Sneed. This is a very early peach, ripening before Alexander; not a free-stone, yet ripens clear through. Triumph was a special early and had the same qualities as the previous one. The Greensboro was handsome and large; would sell well; not a high quality, but there would be money in it. Wardel was highly spoken of; very early, good quality, not so large as Mountain Rose. Professor Van Deman referred to a Texan variety, Carmen; white skin and yellow flesh. He believed the climates of West Virginia and Connecticut were much the same. If so, this variety should do well in Connecticut. The State Peach Commissioner, in reply to a question as to whether the southern part of the State was particularly liable to yellows, did not consider Connecticut was any worse off than other similarly exposed places, but possibly because of the peach yellows laws more attention was drawn to the disease with them. If the present campaign was continued, the State would soon be free of the disease. No other cure than destruction of the affected tree was known. A committee of eight was appointed to watch the interest of the fruit growers,

especially with regard to the maintenance of the yellows law.

Strawberries and Small Fruits.

It was asked whether any one had tried the new Strawberry Culture (Farmer's method). Mr. King had tried it on a half acre with good results. Another grower had been successful on an acre. Dennis Penn reported fair results. The Lucretia Dewberry, when staked in Spring, three stems to a stake, would yield seventy bushels per acre, which could be marketed early and was a profitable crop. After trying all methods of pruning for raspberries, both black and red, A. G. Sharp of Richmond, Mass., concluded that staking was the best method. Wires had been tried, but dropped. On six acres of reds he had used stakes and hills, and hills improved the flavor. Water was drained off after raining, and the staking gave the needed exposure. According to varieties, plant 4x5, 5x5 and 6x5 feet. Having so much more room between the plants affords plenty of soil for covering during the winter. His favorite varieties were Cuthbert and Marlboro.

Plums and Cherries.

The Dwarf Rocky Mountain Cherry was good for ornament only. Asked to name the best varieties, Mr. Hoyt selected Black Tartarian, Governor Wood, Drake, May Duke, Montmorency. A popular variety in Western New York was Robert's Redheart. Professor Van Deman said Wixom Plum was "very delicious." Mr. Fairchild said: "It is very large and handsome, but has the musty flavor of the Japan Plums, but this disappears on cooking." The Hale was also very favorably commented upon.

Pears.

The meeting was asked to name five pears best for market use to cover Fall and Winter demands. Only three were named, namely, Kieffer, Garfield and Lawrence. Professor Guiley advised keeping the heads down for standard pears. "Don't grow trees for the sake of driving horses under." "See to it in pruning," said Mr. Taber, "that the center is kept well open."

Novelties and Various.

Mr. Merriman advocated that in order to grow brightly colored fruit, one must prune from the center and let in the sunlight. State Pomologist Platt said if perfect foliage were secured, perfect fruit would follow. Mr. Hoyt said see to breed. Winter Bartlett Pear grows much like Winter Nellis. Bismarck Apple was unfavorably reported. Sutton's Beauty Apple, exhibited by the State Pomologist, was thought very worthy; Professor Guiley and Mr. Hoyt offered scions free to all present. Bismarck Strawberry was said to be excellent. The army worm was the new insect that threatened fruit growers. President Hale, when asked what new implements could be recommended, said the Breed Weeder. He was using it extensively.

Hudson Valley Hort. Society.

There will be a mass meeting of this newly organized society in Vassar Hall, Poughkeepsie, N. Y., March 11 and 12. The preliminary programme provides on the first day for a session at 10 A. M., another at 2 P. M. and a third at 8 P. M.; two sessions on the second day are arranged for, 10 A. M. and 2 P. M. The speakers so far engaged are Professors Voorhees, Jordan and Beach and Dr. Halstead. Messrs. J. H. Hale and E. W. Wigand. On the evening of the first day there will be two stereopticon lectures on fungi and insects, also a talk by the president, Colonel James Wood, of Mount Kisco, N. Y., on "Beautiful Flowers in Many Lands." Mr. Wigand, a man well known in Washington Market, New York City, will talk about marketing and shipping. The complete programme may be had from the secretary, E. Van Alestyne, Kinderhook, Columbia County, N. Y.

Peter Henderson & Co., the seedsmen of New York City, this year celebrate their jubilee of existence as a firm, and have issued, besides the ordinary edition of their exhaustive catalogue, an "edition de luxe." This differs from the regular in being printed on heavy paper and has a linen back. It is, indeed, a useful handbook, and we are glad to possess a copy.

The Vegetable Garden.

Potatoes.—For early crops, an average of ten days is gained by planting northern grown seed. The Early Northern and Puritan are two excellent varieties for early crop. Carman No. 3 and Rochester Rose are very productive and satisfactory for main crop.

Manuring the Garden.—Old gardens often become infested with many weeds, the seeds of which are disseminated through the careless use of manure containing the seeds, and which may readily be killed if reasonable care be given previous to carting the manure on to the land. The

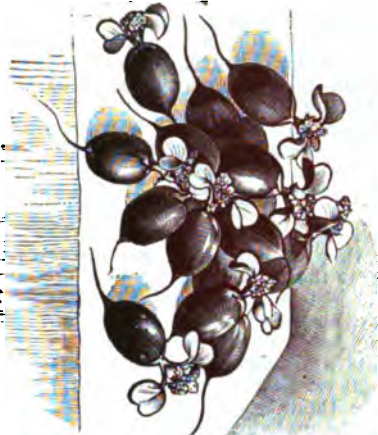


FIG. 49.—LEAFLESS RADISH. (See page 141.)

manure should first be collected together, turned over and thrown into a big heap to heat. If dry, it should be moistened thoroughly. After remaining hot a few days it should be again carefully turned over in such a way as to throw the outside manure into the center of the heap, and vice versa. The little work attached to this operation is well repaid in the resulting absence of the weeds and in advancing the decaying process so essential to render available the plant food contained.

Pole Beans, Peas, Tomatoes.—The ground upon which these are intended to be



FIG. 50.—ASPARAGUS PEA. (See page 141.)

planted, should not be made too rich by manuring the same year as planted. It is much better to plant these upon ground that was well enriched for the crops the year previous. If planted on very rich ground they will make a rank growth of vines, with very inferior crops. Should it be necessary to use artificial manures care should be taken to use those low in nitrogen, and high in phosphoric acid and potash. Pure bone dust and unleached wood ashes are excellent for these crops.

Rich Ground.—Where such vegetables as celery, cabbage, cauliflower and spinach are grown, the ground cannot be too highly manured. If, after the garden be well manured, there is still a surplus, it should all be added to the celery patch.

W. M. EDWARDS, R. I.

The Fruit Garden.

Scale.—There are now bright days with no wind, when the temperature will rise to 38 or 40 degrees. Then is the time to attend to the scale. If you have the San Jose the best remedy is 2 pounds of whale oil soap dissolved in one gallon of water, and so sprayed on the trees as to cover every bit of wood. This can only be done satisfactorily when the wood is not frozen and on a calm day. Expensive? Yes, so is the increasing San Jose scale.

Elaeagnus Longipes, a very ornamental Japanese shrub, has in the last few years come to the front as a new fruit bush. The shrub is covered in May with small greenish-yellow, fragrant flowers, and later with pendulous, bright-red, oval-shaped berries, the pungent flavor of which is very agreeable on a hot day in July. Cooked they have not an attractive appearance, but the syrup makes a good beverage to allay thirst.

Grapes.—Prepare any posts needed for the trellis. There are many methods of training the vines, each upheld as good for some personal reasons. Most growers agree, however, that a trellis of some kind is good. A very satisfactory one is constructed of locust posts 9 feet long, set in the ground 4 feet, and standing 8 feet apart in the line; use 4 lines of No. 19 galvanized wire, stretched along these, the bottom wire at 18 inches from the ground, the others 12 inches apart. Does it pay to grow varieties of grapes, which must be covered in winter after the first year or two from planting? Do we not cover more from habit than from necessity?

Gooseberries can be increased by mound layering young bushy plants as soon as the ground can be worked; or by cutting back in spring an old bush almost to the ground, and layering the shoots therefrom one year after; also by cuttings made and planted like current cuttings.

Raspberries are usually increased by suckers or by layering the tips of the current summer growth in late summer. If the variety be very scarce, early cuttings are sometimes made to work up a stock.

Spring Planting.—Have you decided what to move, and just where to plant it?

Protection from Rabbits.—A strong wash of whale oil soap, to one gallon of which is added one ounce of carbolic acid, is a good protection to fruit trees where rabbits and snow are plentiful.

Grafts.—Have you got them? If not, get them at once. Label and bury them in soil until wanted.

Cherries.—The trees are very accommodating as regards soil. They grow less rapidly and fruit more freely if the soil be inclined to dry rather than wet. This is the only difference discernable here. No doubt in a more severe climate a dry situation in winter would be the best. Black Tartarian is a popular kind, which, with yellow Spanish, Early Richmond and Belle Magnifique should find a place in all gardens, even if they had to take the place of some of the other worthless shade trees about the door yard. Pruning amounts to nothing except to shape the trees when young and growing freely. The diseases common to cherries are about equal in any other fruit tree. Why are not more grown?

J. HOLLOWAY, L. I.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

As to Packages.—One firm of berry package manufacturers says in its circular that the way to get both pleasure and profit out of fruit growing is to put up choice fruit in first class packages. Right!

Is Gregg Tender?—Some complain of the Gregg raspberry as being too tender; others say it is not so tender. The facts seem to be, very rich soil makes such a vigorous growth on the Gregg that it becomes tender by not having time to ripen the wood thoroughly, while on soil of medium fertility it is hardy enough and produces heavy crops. I once grew the Gregg on very rich soil and it killed back considerably. I now have over an acre of them on soil which is in fair condition (not over rich), but it does not kill back, except for a trifle at the tips.

Some Notes on Cherries.

About ten years ago the varieties of cherries noted below were received from Professor J. L. Budd of Ames, Ia., and planted on the experimental grounds. They were mostly from his European importations. Most of the trees have fruited for a number of years, but very little has been published concerning their behavior in this climate. The soil on which they are grown is a heavy sandy loam, underlaid with gravel.

As would naturally be supposed, the trees are all perfectly hardy, and have made a good growth. Of nineteen varieties which fruited this past season only a few of them possess any qualities superior to those of our older cultivated varieties, and these would warrant a more extended trial. The greater portion of varieties tested are in no way superior to the old Early Richmond. The following notes were taken during the fruiting season, and are given here for the benefit of those who may wish to plant some of these varieties.

Brusseler Braune makes a larger tree than Early Richmond, and has shown itself to be a heavy bearer. The fruit is large and nearly black when fully ripe. Stem two inches long. Flesh firm, juicy and of fine quality. Juice highly colored. It ripens about June 25 in this latitude. This is one of the most promising varieties in the list.

Montmorency probably stands next with its large, bright red, showy fruit. In productiveness it equals the Early Richmond, but ripens ten days to two weeks later.

Lutovka. A large, bright red cherry, with a deep suture, flesh firm and of good quality, ripening about June 10. This variety has received favorable comments from growers in the East as a promising variety. So far, with us it has been a very shy bearer; otherwise it would be recommended for general planting.

Griotte du Nord is a good tree, with fine foliage. The fruit is large, almost black where fully ripe; stem two inches in length, resembles Brusseler Braune in general appearance, but ripens a little earlier.

Dye House has been spoken of very highly in some localities, but with us is only of medium quality, no better than many others.

French Morello is a large, dark red cherry of good quality and quite productive. It ripens about June 25.

Montmorency Extraordinary is of medium size, bright red, good quality, short stem, ripens June 10.

Fouke Morello is a large, bright red fruit, of fine quality, short stem, quite productive. Ripens June 8.

Spate Morello is a good bearer, fruit medium in size, dark in color when fully ripe. The skin is quite tough, making it a good shipping variety. Ripens June 25.

Wragg is a low spreading tree; fruit medium in size, of a dark red color, and of very good quality when fully ripe. Ripens June 25.

Weir's No. 2 is only medium in all respects; in fact, there are so many that are better we would not recommend it at all, for this locality at least.

Bessarabian would be a fine variety if it were more productive, but thus far it has produced very sparingly. The fruit is large, dark and of good quality and ripens about June 20.

Cerise de Ostheim is a round topped tree, the branch is somewhat pendulous in habit. It seems to be one of the best varieties of its class that we have fruited. The fruit is medium in size, dark color when fully ripe, flesh firm and tender, juicy and rich. It produces a heavy crop every year.

Frauentorfer is a strong growing tree; large, dark red fruit, tender and juicy. As yet has not been prolific enough to warrant us in recommending it for general cultivation.

Carnation is a sweet cherry of great promise. The fruit is very large, bright red, rich and meaty. It ripens about June 8, and is a most excellent variety for family use. J. TROOP.

Lafayette, Ind.

Talk on a Product Car.

As stated in a previous article, a product car is a railroad car fitted up so as to show to the best advantage the agricultural possibilities of some particular section of country that is being advertised. Thousands of people visit it, and the comment is remarkably uniform. The women take to the preserved fruits and the men talk grain and the like. All of them remark that things are magnified, and the only way to convince them of their error is to show them some fruit like crab apples, that they know all about, and which run remarkably uniform all over the country, and call their attention to the apparent natural size, and then tell them that the jar of peaches next the crabs is regarded as being magnified because they have never seen anything so large.

All express a desire to eat the fruit, and if their wishes are gratified in this respect in some instances of exhibits, they would never get out of the car, as the preserving liquid is charged with poison. This is necessary, because the show of form and color can be had only in this way. The different fruits and vegetables all take a different solution, and in no case does it leave them good to eat. It is looks that the management is after, not their taste.

One of the most provoking characteristics of all people is the impossibility of keeping their hands off the exhibits. The mounted animals are placarded and marked "Poison," but the average man or woman is not satisfied unless they put their hands on things. Men will surreptitiously shuck out a single grain of oats, or a grain of corn will disappear, and be pocketed, not because

the jar containing the big snake cucumber and inquire about it, and when they are told that they will grow anywhere, wind up by asking where they can get the seed. They are surprised when they are told that it is obtainable of any seedsman.

One thing is especially noticed, and that is that nearly all speak of the large fruit as "California fruit," although it is a well known fact that equally as large and good is grown all along the Pacific slope. A good deal of the fruit grown in Washington masquerades in the market as from California, and nothing else seems to fill the public demand. It shows the value of a name well advertised.

Another thing which shows the ignorance of the general public in matters of horticulture is that the vast majority of people prefer size and color to quality. An apple that is big and red is always more saleable than a smaller one, although the latter may far surpass it in every desirable quality. Some of the best potatoes are not attractive in appearance, and are thus beaten in the race by their better looking fellows with less character. It is the old story of the fruit tree agent with his book of plates. What appeals to the eye is better to the public than the taste.

In the presence of so much fine fruit there is always more or less of a disposition on the part of visitors to the car to get hold of some of the plants and grow the same kind of peaches and plums at home in the Eastern States. Of course such a thing is impossible, and will ever remain so until there is some way discovered to transplant climate.

A great many ask what alfalfa is, and it is evident that the majority of persons who have never been West



FIG. 51.—POTATO VIGOROSA.

they are natural thieves, but because the disposition to try something new in the farming line is overwhelming.

One of the most remarkable things in the car experience is that more people, ten to one, ask what the bunches of flax are. It is a very common thing for a young woman to ask about it, and an older woman standing by will take the word out of the mouth of the manager and give it instantly. The reason is obvious. The old woman has worked in flax and the young woman is utterly ignorant of the lost household art.

A good many people stop in front of

know nothing about it. Some who have been West and brought back seed report unanimously that it is not a success, referring now to western Pennsylvania and the valley of Virginia. As a rule, the farmer visitor declares that he can raise better corn than that shown from North Dakota, not thinking, or not knowing, that the wonder is that corn will mature there at all.

Take it all around, a product car is an educator, and no one ought to give it less than a very thorough examination should it come his way.

HOWARD MILLER.

Two New Pears.

Summer Beauty and Moore's Sugar.
In your issue of Feb. 6, page 82, reference is made to Summer Beauty and Moore's Sugar pears. These were new varieties to me, and if the quality be what is claimed I should like to secure them. Can you inform me where they are propagated?—W. C. RICHARDS, Connecticut.

In reply to the request of your correspondent, I would state that the Summer Beauty pear was first sent to this division in 1890 by Otto Locke, New Braunfels, Tex. He states that his father obtained scions in 1872 from a tree of an unnamed variety owned by

The Flower Garden.

A gardener, like a neat housewife, has "never done." To his work there is no beginning, no ending. In the autumn he prepares for winter, in winter for spring. Those who have a greenhouse are fortunately situated, but a good hotbed started now will help considerably.

Seeds of Annuals.—Seeds of all annuals useful for cutting, and also those intended for border display, should be sown at once. By transplanting seedlings later in cold frames, we can help the season along.

A Selection.—Stocks, Asters Senecio Jacobaeus, Phlox Drummondii, Coreopsis Drummondii, especially the variety known as "Golden Wave," annual chrysanthemums, larkspurs, marigolds, snapdragons, Penta-

Novelties of the Season.

(FOURTH SERIES.)

The descriptions given are those of the introducers.

Asparagus Pea.—Fig 50.

This is botanically known as *Lotus tetragonolobus*, and has never to our knowledge been grown in this country before last season, when we sent out a number of packets for trial. It produces very beautiful little plants, foliage light green and the flowers, although small, are very bright, being a deep red in color. The pods when cooked like string beans make an excellent dish.

New Leafless Radish.—Fig. 49.

This is a very remarkable variety of Radish in that the roots grow so rapidly that the seed cotyledons, which assume a great development from the start, are the only green parts to be seen on the plants, thus giving it the appearance of being leafless.

From the catalogue of W. Atlee Burpee, Phila.

Potato Vigorosa.—Fig. 51.

It is easy enough to find good early potatoes. It is easy enough to find potatoes that are great producers. But it is not so easy to find early potatoes that are great producers. Vigorosa is early, and is a tremendous yielder, of strong, vigorous growth; hence its name. Skin, a beautiful flesh color, with considerable of a netting; form smooth and regular. The originator is Mr. D. C. Hicks, the well known Vermont seed specialist, who thus describes it: "Vigorosa is an inbred seedling of the good old Garnet Chili. It was a very strong, robust grower from the start, and the second year gave me tubers of marketable size and of very good quality. The form of the tuber also was fixed from the start. The plant has a very tough, leathery foliage. Its productiveness, good quality and beauty of tuber will make it a favorite with all planters." We ourselves have had Vigorosa on trial for several years and have appreciated its value more and more each year. Last season it stood easily first in yield record of all the earlies, and Vigorosa, Thoroughbred and Early Michigan were the only earlies that were not badly affected by the blight or sun scald.

From catalogue of L. L. Olds, Clinton, Wis.

Bovee Potato.—Fig. 52.

Not only is it the earliest but it takes a leading place among the heavy cropping varieties, an unusual thing among first earlies. It is even earlier than Early Ohio, and compares favorably with Triumph, a light cropping variety that has only extreme earliness to recommend it, while the Bovee in all competitive trials has outyielded all the early potatoes. In many of the tests conducted by experiment stations and private growers it has outyielded even the late varieties. The vine is dwarf and stocky, and the tubers grow remarkably close, all bunched together in the hill close up to the vine. They size up to a marketable size more evenly than any potato we ever saw—none too large or too small—practically the whole crop being merchantable.

From the catalogue of Peter Henderson & Co. New York.

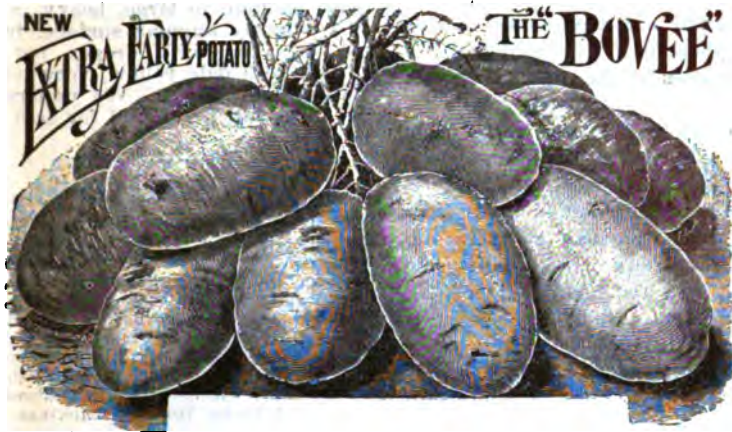


FIG. 52.—POTATO BOVEE.

an old gardener in New Braunfels, Tex. Mr. Locke has sent specimens to this division during several seasons. The pear is certainly worthy of trial, and I secured trees for that purpose, which were sent into Connecticut, Michigan, New York, Pennsylvania and Maryland. The pear is as large as the average Bartlett, and is juicy, buttery and quite good. When ripe its general color is a light yellow, with a very brilliant red cheek. I prefer to give a fruit that has succeeded in but a single locality a trial throughout a wide range of country before recommending it for general cultivation.

It is not claimed that the Summer Beauty is a seedling, although it has never been identified by this division. Specimens were sent to P. Barry and to T. T. Lyon. These gentlemen failed to recognize it. Should it be found to be a variety that had already been named Mr. Locke has been informed that the first name will be adopted.

As reported on page 82, I commended a pear, originated by that veteran fruit grower Jacob Moore, of Attica, N. Y., which he has named Moore's Sugar. Mr. Moore has originated many choice fruits, but none I think superior to this pear. There are so many pears named Sugar that I doubt the propriety of adding to the list. I do not know whether or not Mr. Moore will disseminate this variety, but it certainly is entitled to a more distinct name. It is said to have been raised from seed of the Seckel fertilized by the Angouleme. The pear is about two weeks earlier than Seckel, is larger and more beautiful than that variety, and in quality ranks among the best.

S. B. HEIGES,
Pomologist, United States Department of Agriculture.

A Municipal Tree Inspector has been appointed for the cities of New York and Brooklyn at an annual salary of \$1,200.

temons and Salvia "Blue Beard," are among the most useful decorative plants we can grow, but tastes vary, and the number to select from is legion.

In the Green House we sow in flats, covering the soil but lightly. We keep these well watered and shaded until the seeds are up. For small seeds the sub-irrigation plan of letting in the water from below is best. Usually one wetting is enough to last until the seeds are up. Seedlings must be transplanted as soon as large enough to handle, and all the light and air consistent with a proper degree of temperature, say 60 degrees Fahrenheit, obtainable given.

In the Hotbed.—A hotbed is best made by using good, warm stable manure, moist enough so that in the process of heating it will not burn, or become dry, and so soon spend the heat. It should be made firm, and allowed to settle for a day or two, and then made up level, or even, and the soil added when the temperature is about 75 degrees Fahrenheit. Three inches of good, fresh loam is enough. We sow in drills, up and down, as the most convenient to reach, and leave room enough between the rows, say ten inches, so that the seedlings do not crowd each other until they grow large. Generally we transplant directly from the frames, no matter how cold the weather is. So long as fermentation goes on in the hotbed, we leave some air vent at night. In a close frame the congestion of foul air is disastrous.

T. D. HATFIELD, Mass.

Henry M. Engle, the well known fruit grower of Marietta, Pa., died recently, aged 78 years. He was a prominent member of the State societies and was the father of twenty-one children.

Dudley W. Adams, for the last seven years president of the Florida State Horticultural Society, died suddenly at Tangerine, Fla., on February 13, aged 65 years. He was one of the founders of the Patrons of Husbandry.

Encyclopaedia of American Horticulture.—Under this title the Macmillan Company announces that it will issue a work in three large volumes, illustrated. Professor L. H. Bailey will be its editor, and it is hoped the publication will be completed by 1900.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY
A. T. DELAMARE PTC. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 3154 Cortlandt. P. O. Box 1897.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.
Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Mailing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Abolish Free Seeds.

Every seed grower, as well as every man who plants a seed, every seedman, florist, and nurseryman, should immediately write a concise and pointed protest to his Congressman against the further distribution of seeds by Government.

As pointed out in previous issues, if this system of paternalism is allowed to continue and flourish, there is no saying where it will stop, and Government competition will so lower the standard of seeds grown, by crushing individual effort, as to relegate the American farmer and horticulturist far to the rear in the world's progressive march.

English Potatoes
in America.

THE correspondence concerning the, in England, very popular Myatt's Ashleaf Kidney Potato, which has appeared in recent issues of AMERICAN GARDENING, is worthy a moment's reflection. The writers of the various letters are gentlemen who, having come to this country from England, had a desire, which is not an unnatural one, to import into their American gardens the best of what they had been accustomed to use in their old home. The fact that these essays have time and again been proved to be of no practical value seems not in any way to lessen the ardor of those individuals; at all events not until many failures have supervened, or perhaps the palate has become accustomed to the American product.

The problem raised is one of considerable interest from several points of view,

but none more so than in regard to the possibility of acclimatizing a given variety in its new surroundings. There is an abundance of evidence to lead to the conclusion that acclimatization is effected at times, under certain conditions; and as regards the special case of the potato, it is a fact that a very large proportion of, if not all, the varieties sent by our raisers to England have been successfully grown there from the very first. That is, the variety grew and retained its character in its new climatic conditions. Indeed, some of the best known and most reliable potatoes grown in England at this present day are of American origin, notably so Early Puritan. It may indeed be well said that there is a European field for the exploitation of the American potato raiser.

Let us now look at the matter from the other side, and we are brought face to face with a deep problem. There is not in cultivation to-day, in any portion of our land, with possibly one exception, any English variety of potato that has taken root here and flourished, keeping its character true.

It is not at this time our intention to enter into a discussion of the reasons or underlying causes; we wish merely to emphasize the fact that English raised potatoes are not adapted to the climatic conditions with which they are brought into touch in this country; and, therefore, those of our readers who are longing for other potatoes than they now have will get more satisfaction by judicious testing of the introductions of our home seed houses than by wasting time in the foredoomed attempts at acclimatizing foreign standard sorts.

No doubt but that in a few specially favored localities, varieties such as Myatt's Ashleaf may be found to succeed partially, which instances, however, but emphasize the point we make. French varieties are equally failures.

Grower vs. Commission Man.—A recently tried case of some little concern to all who are handling fruit commercially is recorded in another column of this issue. The principle aroused is one of importance: Are selling agents to be held responsible for any failure on their part to realize the best market price of the day? No doubt the grower feels keen disappointment when his returns do not coincide with the reports in the papers, but if a decision, as now recorded, be allowed to stand we venture to think that very few growers will be able to engage the services of a commission man in the future. The complaint we generally hear is that of excessive rate of commission charged, which was certainly not the case in the present instance. This fighting between commission man and grower ought to cease, for their best interests are in parallel grooves.

Quick Returns.—I like your paper very much. I have already got the worth of the dollar invested.—J. R. J., Ridgetown, Ont., Feb. 10.

New Apple—Wismer's Dessert.

The accompanying illustration represents in natural size a new apple, of which a specimen has been received from J. H. Wismer, Port Elgin, Ont. There is always some danger connected with the introduction of a new fruit that it has no great merit over existing varieties such as would warrant its dissemination, and as regards Wismer's dessert, were it not for the pear-like texture and exceedingly high aroma and flavor, it would not be counted as anything more than what other apples possess, but these make the variety stand out superior and distinct. Indeed, the delicacy and melting quality of the flesh are most remarkable. The apple is a seedling of Canadian origin; season, late winter; fruit, medium to large, heavy, round, very slightly angular surface, bright red, streaked with deeper red and dotted, flesh pale yellow, very tender, melting and juicy. We understand the trees will be offered for sale next summer.

Myatt's Ashleaf Potato.

In answer to Jesse Robbins, Carlisle, Pa.: The so-called Myatt's Ashleaf Potato was raised from seed by my uncle, Robert Stratton, in Worcestershire, England, in 1851, he having planted a tuber of River's Royal Ashleaf in some hard ground which caused it to flower and ripen a fruit ball. From the seed sown he obtained several different varieties, round and kidney shaped, colored and white. One he named the Pink Eyed Fluke, from its markings. Another the Eliza. One Alma. And another he named Stratton's Seedling. From these he raised forty pecks, the whole of which he sold to a Mr. Myatt, of Offenham, Worcestershire, at 62 cents per peck. Mr. Myatt called the potato by his own name, and it became so popular that a seedsman at Gloucester by the name of Wheeler sold it as Wheeler's Gloucestershire Kidney, and so it has been known and sold under all three names. It has stood the test of over forty years, and is still considered one of the best potatoes grown. Up to 1885 (when I left England) it had invariably carried off the prize wherever exhibited as the best early kidney potato.

The tuber is kidney shaped, rather flattened, broad at one end and blunt pointed at the other, thin skin of a light, yellowish tint, white inside, eyes raised slightly, with small indentures, from which spring the sprouts, medium size, very early and prolific. When cooked it is dry and mealy and of good flavor, generally free from disease, and a good sound keeper. One property it has that I have never known any other variety to possess. You can dig and cook them when the largest is not more than half an inch in diameter, and they will not taste watery or soggy. Planting should be done as soon in the spring as the weather will permit, in a rich light or sandy loam soil well drained. Plant tubers of medium size eighteen inches apart in the row, rows two to three feet apart, according to the mode of cultivation. As the foliage is stunted and not abundant, and the tubers are produced close around the sets, but little space is needed for good results. The principal needs are a rich, light, friable soil, well drained, in which make furrows or drills three or four inches deep. Drop the tubers about eighteen inches apart, and before covering sprinkle a small quantity of dry ashes from wood or weeds (not coal ashes) upon the tubers. Then cover, keep the ground free from weeds by frequent cultivating, mold or ridge the earth against the stems. When they are commencing to form tubers, and as soon as the tops begin to wither or brown, dig and carefully handle and dry before storing. The tubers can be dug for present use as soon as they are the size of walnuts. Treated as I have described, they will never be soapy or soggy. The addition of dry ashes causes the tubers when dug to leave the soil clean and bright. G. M. STRATTON.
San Francisco, Cal.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

American Horticultural Society.—There seems to be a good deal of controversy regarding the adoption of the title American Horticultural Society. As a delegate to the convention on Jan. 11, and as seconder, I believe, of the motion to adopt this name, I asked if it were certain the original society was defunct, and was assured it was so without a doubt. Who is to blame in this matter? If the recently launched society has infringed, its duty is very plain: It ought without delay change a title it certainly has no right to use, if the original society still exists.—ROBERT MILLICAN, Monmouth County, N. J.

Early Celery.—In a recent number of American Gardening was an article on celery growing by W. M. Edwards, of Rhode Island, where I lived for over twenty-five years. His way of raising early celery is all very well, but is, I think, a good deal of work and trouble. I have had celery for the last nine years at Chestnut Hill, Pa. I plant, or, rather, sow the seed in a small

enough (the rows full enough) to give us a full crop.—T. GRENIER.

The Japanese Plums.—I am much interested in the articles under the head of the "Fruit Garden," and value the suggestions contained therein very highly. In referring to the Japanese varieties, Mr. Holloway spoke of an extra early yellow sort as the Organ; Ogon is the correct name for this excellent plum (a typographical error.—Ed). It is one of the best for home use, but not so popular in the markets; its firm yellow flesh has a spicy flavor not found in other kinds. The fruit is larger, and coming in July is very welcome. The tree, however, is not so vigorous a grower as the other Japanese. My experience with the Japan plums has been most satisfactory. I started in some seven years ago with twenty trees, and now have nearly four times that number; and they will be in bearing this coming season. Among my varieties are Ogon, Abundance, Burbank, Satsuma, Willard, Chabot, Normand, Berkman. Of those which I have fruited, Abundance has given me the most fruit, but Burbank has proved the best market sort. Satsuma is of peculiar blood-red color all through, but is valuable for canning. Plums of this class are tremendous growers and begin to fruit very early in life, are not troubled with black knot and are nearly curculio-proof. Their only fault, so far as I can see, is a tendency to overbear. The fruit should

weight will break the limbs if not propped. There is no more luscious fruit to eat from the hand than a full ripe Abundance plum, and coming in before peaches are ripe they fill a very important place in our list of fruits. They cover quite a long season, from the very earliest varieties to the late ripening ones. I have often received as high as 15 cents per quart for these plums, and believe their culture is a profitable venture. Even the small garden should contain a tree or two, as they are so easily grown and will be much appreciated when they begin to fruit. If the weather happens to be damp at ripening time the plums will suffer from rot. I lost a portion of my crop last season from that cause. If any of your readers have been successful in spraying with Bordeaux for this trouble, I should like to hear from them.—H. C. C. MILES, Connecticut.

Successful Home Culture of Bulbs.

In one of your issues of the early fall of 1896 there was an interesting article on the planting of bulbs for house blooming. The idea was different from any I had previously heard of, and as I followed the directions and have had, and am having, such satisfactory results, I feel that it is only right to express my thanks to you and your contributor. The plan stated was to immerse the pots when planted in a bed of coal ashes or some such material, covering them a foot or more, and leaving them in a cool place for six weeks or so. I have heretofore potted bulbs and placed them in a dark closet in the cellar, but rarely had perfectly satisfactory flower heads. This year, after potting some two dozen or more bulbs, I placed them in a trench in a corner of the garden, sheltered from extreme cold. After covering each bulb with an inverted small pot, I covered the whole with coal ashes a foot in depth. Planting them in October I did not disturb them till early in December. I then dug out the pots and brought them in. Some were left in the cellar for awhile and others immediately put in sunny windows close to the glass. The result has been most satisfactory. I have had some pots of hyacinths and jonquills quite equal to those seen in city florists' stores. The flowers have grown high and flowered most profusely. I attribute the success wholly to the roots having ample opportunity to grow well before the forcing process began. Now, are these bulbs of any further use? Can they be planted in the garden for bloom out of doors another season? I have Narcissus, Jonquills and Hyacinths.—M. V. ALEXANDER, Massachusetts.

(Bulbs that have been once forced are practically useless. But if you so wish, and you have a border that can be spared, you may plant the bulbs there, and they may produce a few small flowers in a year or so. But in these days of cheap bulbs, it seems folly to thus waste space and time. The Narcissus and Jonquills may be planted in clumps; they do better than Hyacinths when so treated.—Ed.)

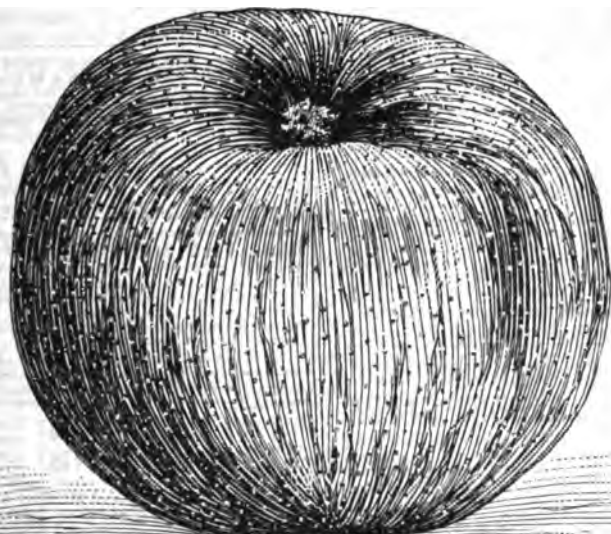


FIG. 53.—NEW APPLE WISNERS' DESSERT.

box in the greenhouse about the middle or last of February. Then when the plants are large enough pick out into flats, as some people call them, leave them there until the last week of April, transplant into open ground between Jersey Wakefield cabbage. The last named vegetable is cut and gone by the first week in June. Then hill up your celery, which grows very rapidly. If the weather be dry I use water freely, and by July 4 the celery is all right. This is my experience in growing early celery, but of course every one has his own way of doing a thing.—A PENNSYLVANIA GARDENER.

Matted Strawberry Rows.—Referring to friend Hale's criticism on first page of Feb. 13 issue, let me reassert the statement that here we cannot grow a full crop without having full matted rows. We don't want single plants here and there, nor vacant spots. There should be plants enough to cover a strip of ground at least eighteen inches to two feet wide, with healthy and thrifty foliage. On the other hand, we don't want the rows overcrowded with plants. Good judgment should prevail in all these things. It is not practicable to have the individual plants just at a certain and uniform distance, but by setting the free-plant-makers, like Haverland, Warfield, Crescent, etc., two feet apart in four-foot rows, we usually manage to prevent an overcrowded condition of the matted rows. The chief trouble with most varieties, in our dry seasons, has been to get plants

be thinned severely, especially on the Abundance, going over the trees until you think you have taken off enough; then repeat the act over again. Even then the fruit will not reach its largest size, and its

50,000

COPIES OF
AMERICAN
GARDENING

WILL BE MAILED TO

50,000 Buyers of Seeds and Plants

SATURDAY, MARCH 13, 1897.

We believe advertisers generally will recognize the value of a thorough representation in this Special Edition, and we herewith solicit your patronage.

Advertising Pays

But Advertising in American Gardening Pays Best.

No advance in rates over our regular charge of 25 cents per agate line will be made. Copy for your advt. in this issue must be in our hands not later than March 6th.

The Flower for Everybody. The Sweet Pea: Its History, Culture, Foes.

REV. W. T. HUTCHINS.*

"With regard to the history of the sweet pea, Francois Cupani, an Italian botanist in Sicily, about 1700, was the first cultivator of this flower. There were four original species, two of them natives of Ceylon and two of Sicily. De Candolle, however, speaks of two only, regarding the others as variations of these. Mr. Eckford, of London, began improving this flower in 1885. Mr. Laxton, of Bedford, England, also introduced some valuable novelties, but to Mr. Eckford we must attribute a large part of the honor of developing the flower to its present beauty. To-day California is the second great factor in sweet peas. That State is supplying the best trade stock we have, and exports almost the balance of the world's supply. It seems to me that England, France and Germany must give preference to this California stock. Some growers do not hesitate to grow 250 acres of this flower so as to supply every known variety.

"I shall be expected to refer to rules for the culture of this flower. Those who failed last year had plenty of good company. The causes of failure prevailed from one end of the country to the other. I bent all my energy to escaping the blight, and succeeded only in seeing my vines go up ten feet, blossoming in a scattering way after they were five feet high. There were two main causes, the first being that we had no frost to check a rapid start, and this was followed by an excess of rain during the growing season. One of the worst vices of the sweet pea is a tendency to produce a rank vine and no bloom. Make the plant work, if you want to increase the bloom. The root is the part that works, and the stiffer the soil the more wholesome exercise it gets. The sweet pea should not have a soft bed beneath it as it induces a less hardy growth, indulges the root and weakens it for its after-work; it also favors a top growth beyond the power of the root to support. We have been following the trench system, which means that people have dug down and filled in with loose soil and fertilizer, and the very looseness of this bed under our seed and vines has been enough to make mischief. We have weakened the plants by this soft treatment, and then have imprisoned them at the tenderest age four inches below the sunny surface of the ground and suffocated them still more by filling in the earth before they were at all hardened. If the soil be a light loam, it should be made firm by treading down; but on a clay loam one ought to have good flowers without half trying.

"We had better all of us fight shy of the trench method of cultivation. I have a soft, spongy soil; I plough it in the fall, going over each furrow twice; then hollow out about two inches for the rows, treading the soil, if found soft. In the spring scratch lines an inch deep for the seed and cover it an inch, and roll the soil above and along the sides. A clay loam will settle enough of itself. I believe in spading in the fall for the purpose of mixing, but I should let the frost be my plough in the spring. For ground moles, I resort to tar paper, setting pieces one by two feet in size into the ground every few feet to prevent their running lengthwise of the rows. Of course, catch them if you can.

"Sow the seed as early as possible and liberally enough to allow for various losses. I plant in double rows at the rate of one ounce to ten feet, using more than that if it be cheap mixed seed. After all losses the plants should not stand nearer than three inches apart.

"Go for the cut-worm in the fall just as soon as the frost has spoiled things, put on a good dressing of salt; freeze him out by spading up as late as possible. I find virtue in bran and paris green; a handful of bran with a tablespoonful of the poison stirred in, sweetened a little, and sown on the surface or lightly hoed in in the spring is a simple remedy. Diverting the worms by planting some valueless thing for them to feed on helps. Go out in the morning and kill them before breakfast.

*Extract from paper read before Massachusetts Horticultural Society.

Purify Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier.

Hood's Pills are the only pills to take with Hood's Sarsaparilla.

DISCOVERED A face wash that will remove that greasy complexion and leave it soft and white in 10 minutes after washing, and in a week remove all pimples, blackheads and tan. Blanches the skin without irritation. Perfectly harmless; contains no poisons. Costs but five cents to prepare enough to last six months. Recipe and full directions, 25 cts. Mrs. B. HUNTER, 4518 Evans Av., St. Louis, Mo. Mention American Gardening when you write.

Danish Ballhead Cabbage.

IMPORTED RELIABLE SEED.

Prices on application. Catalogue Free. FRANK H. BATTLES, Seed Grower Rochester, N. Y. Mention American Gardening when you write.

CABBAGE, Woodhaven Flat, earliest. Cauliflower, Erfurt, pkt., 10c.; os. 25c. Celery, Golden Yellow, pkt., 10c. Lettuce, large Erfurt, pkt., 10c. Radish, Deep Scarlet Forcing and New White Tipped Forcing, os. 10c.; lb., 50c. All kinds of vegetable seeds at lowest price. Write for sample.

H. BEAULIEU, Woodhaven L. I., N. Y. Mention American Gardening when you write.

KOSS' SEEDS Always Give Satisfaction. Our German and English Catalogue Free to all who need seeds, no matter how much. Wholesale list for Market Gardeners and Truckers. Address THEO. KOSS, 251 Reed St., Milwaukee, Wis. Dealer, Grower and Importer. (Wanted, a few good salesmen.) Mention American Gardening when you write.



TRY DREER'S GARDEN SEEDS

Plants, Bulbs and Requisites. They are the best at the lowest prices. Calendar for 1896 mailed free. Address

HENRY A. DREER, 714 Chestnut St., PHILA.

Mention American Gardening when you write.

Seeds! Seeds!

73d Annual Priced Catalogue of VEGETABLE, FARM AND FLOWER SEEDS is now ready and mailed Free to all applicants.

BRIDGEMAN'S SEED WAREHOUSE, 37 East 19th Street, - New York City. Mention American Gardening when you write.

OLDS' NEW VIGOROSA Impartially Vigorous Early, Handsome, of Best Quality. A VERY STRONG GROWER. We are headquarters for Seed Potatoes, 60 Varieties, An Immense Stock, At Low Prices. Also Garden Seeds and Field Seeds. Illustrated Catalogue FREE. L. L. OLDS, CLINTON, Rock Co., Wis.

Mention American Gardening when you write.

PREMIUM AMERICAN PANSY SEEDS

and plants grown by W. Toole, Pansy Specialist, Baraboo, Wis. 35 varieties and mixtures of Pansies. Hesperian Pansy, 25c per pkt.; trade pkt., 50c. Selected mixed, pkt., 10c.; trade pkt., 50c. Extra choice mixed, pkt., 10c.; trade pkt., 50c. My Pansies have never been equalled at any show where competing. Complete directions "HOW TO GROW PANSIES," sent free to any address with catalogue of Pansies and other seeds and plants by

WILLIAM TOOLE, Pansy Specialist, Baraboo, Wis. Mention American Gardening when you write.

PEACH TREES \$2. per 100. List Free. RELIANCE NURSERY CO., Geneva, N.Y. Mention American Gardening when you write.

READER IF YOU LOVE RARE FLOWERS choose only, address ELLIS BRON, Keene, N.H. It will astonish and please. 15c FREE. Mention American Gardening when you write.

1,000 Peach Trees One year, from bud 2 to 3 ft., mostly branched, with freight prepaid to any station east of Miss. River for \$30; or 500 for \$15.50. Sample prepaid, 25c. Other sized trees proportional prices. R. S. JOHNSTON, Box 21, Stockley, Del. Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan Ivy, 2 years, \$5.00 per 100.

E. S. PETERSON, Montrose, New York. Montrose Nurseries.

Mention American Gardening when you write.

IT PAYS to Grow Strawberries. Send for our 15th Annual Catalogue and get started right. First-class plants at low prices. All about the new and old varieties.

SLAYMAKER & SON, Dover, Del. Mention American Gardening when you write.

MILLER RED RASPBERRY

A SPECIALTY

Choice fruits, new and old. Our catalogues sent free will save you money.

MYER & SON, Bridgeville, De. Mention American Gardening when you write.

HALL'S FAVORITE. THE COMING NEW does competition; the best introduced for years. Forty other kinds pedigree plants. Raspberries, Blackberries, Asparagus roots etc. Headquarters for Second Crop Seed Potatoes, double crop and earlier than other seed.

Descriptive Catalogue Free. J. W. HALL, - Marion Station, Md. Mention American Gardening when you write.

ALL THE LATEST NOVELTIES AND PLANTS THAT CAN'T BE HAD ELSEWHERE. Cammas, Italia and Austria, at \$1 each. New Roses, New Fruits, New Shrubs, New Bulbs. 10 Cents for \$1.-3 for 50 cts. Book on Cacti 125 pages, 125 cts. 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free. A. BLANC & CO., - Philadelphia.

Mention American Gardening when you write.

FULTON'S STEAMBOAT 1807 I make a business of supplying private

FULTON'S PLANTS 1897 growers, who want the best that can be had, with Strawberry, Raspberry, Gooseberry, and all other kinds of small fruit plants. Yes, and at prices just as low as any responsible grower.

Send for my descriptive price list. W. B. FULTON, - Kirkwood, Ohio.

Mention American Gardening when you write.

Berber, California Privet and Japan Quince (For Ornamental)

HEDGES.

HARDY ROSES ON OWN ROOTS.

Write for Prices to FAIR OAKS NURSERY, OAK PARK, ILL.

Mention American Gardening when you write.

...2,000,000...

Strawberry Plants FOR SALE.

Eighty varieties. Catalogue Free. It Tells How to Raise a Big Crop of Berries.

E. J. MULL, Clyphant, Lock's Co., Pa. Mention American Gardening when you write.

SEED POTATOES.

Price per barrel: Carman No. 1.....\$1.75 | E. N. Y. No. 2.....\$1.15 Carman No. 3.....1.50 | New Queen.....1.50

Other varieties equally low.

Write for prices on what you want. All choice stock. Seed Corn, \$1 per bushel; Banner Oats, 45c. per bushel, in 10-bushel lots.

O. H. WHITE & SON, Miller Corners, N. Y. Mention American Gardening when you write.

"The last two seasons have brought another pest. I call it a louse. It colonizes on the under side of the foliage, near the base of the vine, and causes whitish translucent spots on the leaves. Go at it vigorously with tobacco tea or a force of water from the hose. I use the latter, but, with the excess of rain last year it caused the vines to grow up at the expense of bloom.

"The balance of the rules for culture are simple and threadbare. Bush or trellis strongly, and give the vines room to ramble. Water freely after the blooming period comes, but not too much before. Run the rows north and south to give them both morning and afternoon sun on both sides. Almost anywhere near the sea coast sweet peas thrive."

The Codlin Moth.

How to Trap It at Night.

In your issue of Jan. 16 Professor W. G. Johnson writes on the codlin moth as it affects the apple, and knowing from experience that an ounce of prevention is worth a pound of cure give the following method which I have found to be a very good preventive from the ravages of the night-flying moth as Professor Johnson calls it. I do not profess that this cure or trap will catch all the moths, but a large percentage of them will be kept from laying on the fruit buds.

Take an ordinary barrel and fill it about three parts with water; hang any kind of a lantern right over the barrel by means of a piece of lath, allowing the bottom of the lantern to hang just inside the barrel and above the water. Choose still nights about the time the bloom is dropping. I say still nights because of a two-fold reason: Firstly, the moth does not fly on a windy night; secondly, it is hard to keep the light in the lantern if windy.

All night-flying insects or moths will fly to a light, and striking against the lantern fall into the water, when the mealy substance that is on the wings becomes sticky and they are therefore unable to rise again. In the morning a goodly number of these night marauders will be captured. I have seen as high as four quarts of moths taken from four barrels, which for all the trouble and expense is a very good return. If this be repeated for two or three nights there will be little or no use of spraying, although I have generally advised one spraying after. J. R. JOHNSON, Ont.

You run no risk in subscribing for *The Rural New-Yorker*. It costs \$1 a year. If it's worth more to you, you make money. If it's worth less you may have all your money back. Do you want a sample copy? The address is New York. We can send it and AMERICAN GARDENING both one year for \$1.80.

B KEEPER'S!

SEND FOR sample copy of **CLEANINGS IN BEE CULTURE.** A Handsomely Illustrated Magazine and Catalogue of BEE SUPPLIES. Valuable book on Bees given FREE to each one who mentions this paper. THE A. I. ROOT CO., Medina, O.

Mention American Gardening when you write.

"ACME" SEED DRILL

Sent Prepaid for Trial!

To introduce King's Seeds, quickly will send to regular \$5.00 papers of King's Seed (Northern, Green), and an "ACME SEED DRILL," charges prepaid, all for \$1.50. Further particulars on application. T. J. KING, Richmond, Va.

Mention American Gardening when you write.

Eight Showy Sea-Shells

FOR FIFTY CENTS.

Fourteen, \$1.00, or both collections \$1.25, by mail postpaid and safe arrival guaranteed. Illustrated price list free.

J. H. HOLMES, Dunedin, Fla.

Mention American Gardening when you write.

One loaf of bread may be light, sweet and digestible. You may use the same materials for another and have it heavy, sour and soggy. The knack is in putting the ingredients together just right. A substitute for Scott's Emulsion may have the same ingredients and yet not be a perfect substitute, for no one knows how to put the parts together as we do. The secret of "how" is our business—twenty-five years of experience has taught us the best way.

Two sizes, 50 cts. and \$1.00.
Scott & Bowne, Chemists, New York.

IOWA TREES.

First-class and prices reasonable at the
Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

STRAWBERRY PLANTS

\$2 per 1000. The best plants you ever saw.
RASPBERRIES, BLACKBERRIES,
and other small fruits cheap.

SEED POTATOES

\$1.50 per barrel. New Varieties, true to name, first quality. Northern Grown. Lists free.
JOHN F. DAYTON, WAUKON, IOWA.

Mention American Gardening when you write.



We have the largest and finest Collection of
PALMS, ORCHIDS, FERNS
and FOLIAGE PLANTS
for Conservatories.
Hardy Herbaceous Plants,
Flowering, Shade and
Ornamental Trees, Vines.
Everything for a private place.
Estimates and Plans for Planting
Places and Furnishing stock
(free).

SIEBRECHT & SON'S,

Rose Hill Nurseries, New Rochelle, N. Y.

Mention American Gardening when you write.

IF IN WANT OF

FRUIT TREES

Currant or Gooseberry Bushes, send for our Surplus List before buying.

H. E. HOOKER CO.

Wholesale Nurseries. Established 1835.

ROCHESTER, - NEW YORK.

Mention American Gardening when you write.

New Single Violets.

Princess of Wales, Princess Beatrice, Admiral Aveilan. \$1.50 per doz.

Luxonne, Petit Blue. \$1.00 per doz.

My plants are all perfectly healthy, and have all been grown cold, insuring strong, healthy growth. Older varieties such as Chambrom, etc., prices on application.

FRANCIS SUPLOT,

57th and Lancaster Avenue, Philadelphia
Mention American Gardening when you write

BEAUTIFUL TREES, PLANTS and NATIVE FLOWERS for parks, private grounds and the trade. Write for lowest prices. W. M. HARRISON & SONS, Wymanoseek Nurseries, Lebanon Springs, N. Y. Mention American Gardening when you write.

EVERGREENS.

FINEST STOCK IN THE COUNTRY FOR NURSERY PLANTING, OR HEDGES AND WINDBREAKS.

MANY THOUSAND COLORADO BLUE SPRUCE.

And all standard sorts. For lowest prices,

Write C. L. WHITNEY, Warren, O.

Mention American Gardening when you write.

SMITH'S SMALL FRUITS FOR 1897.

100 varieties. The best of the old and new sorts, including the new Egyptian Raspberry, one of the hardest blacks ever produced. Send for list.

B. F. SMITH,

Box 6, LAWRENCE, KANSAS.

Mention American Gardening when you write.



FLORA of JAPAN & CALIFORNIA

Chinese Narcissus, over 100 varieties of Lily Bu be, Camellias, Palms, etc. HARDY PLANTS, Japan Maples, Iris K., Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan.

Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above.

M. H. BURGER & CO., San Francisco, Cal.

(ESTABLISHED 1887).

Mention American Gardening when you write.

100 BEST EVERGREEN SEEDLINGS

delivered free by mail, only \$1. 100 best evergreens 2 to 5 ft. delivered east of Rocky Mts., only \$1.00. Write for free catalogue and price list & 50 big bargains, selections from complete nursery stock. Cash paid for getting up clubs or to salesmen with or without experience. Address

D. HILL
EVERGREEN SPECIALIST, DUNDEE, ILL.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.

Mention American Gardening when you write.

Roses

An elegant stock of large 2 year old, field-grown HYBRID PERPETUAL, MOSS, and

CLIMBING ROSE PLANTS, \$3.00 per doz; \$20.00 per 100.

All the best sorts, old and new, and true to name. Write for Catalogue.

W. E. WALLACE, Nurseryman, Hartford, Conn.

Mention American Gardening when you write.

New, Rare and Beautiful Plants

A Large Collection of Rare Hothouse and Greenhouse Plants, Hybrid Sweetbriars, Old Garden Roses, etc. New Philadelphia, New Illinois, etc.

PERONIA.—A large collection of the finest in cultivation. Hardy Perennials, Phloxes, Japanese Iris, Roses, Clematis, etc. New and Standard Fruits, Rare and Beautiful Trees and Shrubs, Evergreens, etc. Catalogues on application.

JOHN SAUL, Washington, D. C.

Mention American Gardening when you write.

THE BURDENS OF THE FARMER'S WIFE ARE MANY FOLD



and often seem to be greater than she is able to bear. This is doubly true when sickness comes to her and leaves in its wake that condition of lassitude which bespeaks a broken down condition. The most fruitful causes of these conditions are

**FEMALE COMPLAINTS,
BRIGHT'S DISEASE,
URINARY TROUBLES,
GENERAL DEBILITY,
AND MALARIA.**

A sure and effectual remedy for these and all diseases resulting from disordered Kidneys and Liver is



It is a purely vegetable preparation that has cured thousands and will cure you. Large sized bottles or new style smaller ones at your nearest store.

POULTRY BOOKS. ABC Poultry Culture, 25 cts.; 500 Questions and Answers, 25 cts.; Poultry House Plans, 25 cts.; Pigeon Queries, 25 cts.; *Fanciers' R view* 1 year, 50 cts. All \$1.00. Any 2 books, 40 cts.; 3 for 50 cts. J. DARROW, CHATEAU, NEW YORK. Mention American Gardening when you write.



MONITOR INCUBATOR
Illustrated Catalogue for stamp. Medal and Diploma Awarded at the World's Fair A. F. WILLIAMS, 76 Race St. Bristol, Ct.

Mention American Gardening when you write.



BETTER THAN A DAIRY FARM
is a poultry farm. More money and less labor and expense. All proofs in our NEW POULTRY GUIDE FOR 1897, 100 pages printed in colors sent for 15 cents. Address JOHN BAUSCHER, Jr. Box 38, Freeport, Me.

Mention American Gardening when you write.



HATCH Chickens BY STEAM—
With the MODEL
EXCELSIOR Incubator
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made.
GEO. H. STAHL,
114 to 122 S. 6th St. Quincy, Ill.

Mention American Gardening when you write.

A GOOD

Pruning Knife.

YOU HAVE NEED OF ONE?

Send \$1.00 to the New York Farmer, Port Jervis, N. Y., and the knife will be sent, postpaid, as well as the paper for one year.

The New York Farmer

is a wide-awake, up-to-date journal, looking after the interests of the agricultural population, keeping well in the foreground in all matters pertaining to agriculture, the dairy, poultry, etc., and furnishes, in addition, much valuable literature for the home.

Sent 5 weeks for 10c. "postman copy free."

NEW YORK FARMER, Port Jervis, N. Y. Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

BUFF ROCKS.

A notable feature of the late New York show was the large number of buff fowls present. The beautiful Buff Cochins may be said to rank as a purely fancy bird. But we have now at least three handsome breeds of buffs that are pushing for distinction as general purpose fowls. These are the Buff Leghorns, Buff Wyandottes and Buff Plymouth Rocks. The last are making special claim to superiority as dressed poultry. Besides the usual good qualities of the Plymouth Rock, the Buffs ask notice, from broiler men, on the ground that buff pinfeathers do not show at all on the yellow skin. The color of the plumage is a most attractive one to poultry lovers, and dwellers on the home plot could not find this breed otherwise than satisfactory. The broad claim is made that these are the most promising general purpose fowls of America. And they might well attract attention anywhere.

EARLY-LAYING PULLETS.

The struggle for a record for early laying is developing somewhat ludicrous features. Four months and a half, four months and three months and a half from the egg are being reported too commonly to cause notice. A late report of a pullet laying at eleven months and one day old has raised a protest from the editor of the poultry paper to which it was sent. He says "It's too young." As a matter of fact raisers of poultry for home use will find it only a detriment to the fowls to be pushed so hard. The birds will lose in size and vigor of constitution more than they gain otherwise. Five months is early enough for young stock to begin to lay, even if of the smaller breeds. With the large breeds six, seven or eight months is often better, as well as nearer the common record.

STROBILANTHES.

The Strobilanthes Dyerianus, though undoubtedly very beautiful when well grown, is not giving a good account of itself in cool windows. The tendency to legginess shown during the summer has become accentuated, and the plant is far from an ornament to the window collection. It must give place to something that likes cool conditions.

WINDOW PLANT CULTIVATION.

The duty of cultivation is a point seldom in the mind of the window gardener, yet, if cultivation is one of the largest factors in success outside, it surely ought to count for much indoors also. This especially if water be given at the top of the pot, so that the surface becomes badly baked. It is a point to be borne in mind, however, that fine roots near the surface need great care, and the soil must not be stirred deeply. With many plants, indeed, if there be sufficient room, a slight sprinkling of fresh earth on the top of the pots will do more good than cultivation. Making the soil very porous at the beginning is really the best help.

NARCISSUS BLOOMS ON SALE.

As the scribe was passing along a New York street last week her attention was attracted by some Narcissus blooms in a glass case. They corresponded almost exactly to the description lately given of the "Giant White Narcissus," the blossoms being very large and the clusters many-flowered. Noticing her close scrutiny, the dealer hastened up to inquire if flowers were wanted. "No," was the reply, "my attention was caught by the large size of the clusters. Are these paper white?" "No," exploded the would-be seller, "they are flowers." "Oh-h!" choked the scribe, "I-I did not mean just that" and hurried on without attempting further explanation. It is often said that most buyers do not know one sort from another. Is it often true, also, of apparently intelligent dealers? It certainly was in this one case.

Smouldering fires of old disease

lurk in the blood of many a man, who fancies himself in good health. Let a slight sickness seize him, and the old enemy breaks out anew. The fault is the taking of medicines that suppress, instead of curing disease. You can eradicate disease and purify your blood, if you use the standard remedy of the world,

**Ayer's
Sarsaparilla.**

VARIOUS SOLANUMS.

Standing in the end door of a commercial greenhouse recently the writer was attracted particularly by one block of blossomy white about half way down the house. From this vantage point said block was the prettiest thing in the house. Closer inspection showed it to be a lot of young plants of Solanum jasminoides, just coming into bloom, four of them more than six or eight inches high. Yet, if one should hand a cluster of these blooms (or of those of the lilac sort) to a farmer he would be likely at once to pronounce them potato blossoms. The family resemblance is very striking, though the Solanum jasminoides has a chaste, aristocratic look not belonging to the denizens of the potato field. The colored sort is scarcely superior in any degree to the potato blossom. The new candidate, the to-be azure blue Rantonetti, has foliage more potato-like than the others. As to bloom, we shall see later.

MYRA V. NORRIS.

GAMES FREE a useful articles for only 2-6mo. sub. to Poultry Keeper at 5c. Every poultry raiser wants this leading poultry paper. Sample free. Address POULTRY KEEPER CO., Box 30 Parkersburg, Pa. Mention American Gardening when you write.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.60.

THE OHIO FARMER is a large, 20 page weekly, 4¢ per year. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for illustrations, correspondence and Market Reports than any other of its class. It is the Best and Cheapest no more than others. Send for a SAMPLE COPY to THE OHIO FARMER, Cleveland, O.

THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1898-14 months, if ordered at once. Address all orders to AMERICAN GARDENING, P. O. Box 1697, New York.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

WHOLESALE MARKET REPORT

New York.

Business, generally speaking, has been fair, with a prospect of continuance. But no advance over existing prices is to be expected. As it is, the market is clearing fairly well at normal figures. A large proportion of Southern stock is arriving in a condition akin to rottenness, and consequently will not make freight charges. At the same time, it lowers general prices.

Local grown hot house stock is also deficient in quality, especially lettuce, for which 50c. per dozen is the top notch. Radishes are also poor; when really good they make \$2.50 to \$3.00 per 100 bunches, but there is not sufficient quantity of this class to speak about.

Celery just now is making fancy figures. When quality is at all good prices range from 60c. to \$1.35 per dozen stalks.

Cucumbers remain as quoted last week.

Mushrooms have improved, and are now clearing at figures ranging from 30c. to 50c. per lb.

Tomatoes, when good and bright, realize 30c. per lb.

Hot house strawberries are selling well at prices previously quoted.

European grapes are in light supply, and prices are stiffening.

Apples—New York perhaps has the undignified position of being the lowest price market just now to be found anywhere. Receipts from September till now and for the week are as follows:

Receipts for week.....	44,873
Receipts since Sept. 1.....	1,107,567
Receipts same time last year.....	597,043
Exports for week.....	13,949
Exports since Sept. 1.....	530,132
Exports same time last year.....	253,199
Spitzenberg, fancy, per bbl.....	2 00@2 50
—Common to fair, per bbl.....	1 25@1 75
Baldwin, Vt. and northern, fancy.....	1 37@1 50
—Wm. N. Y., good to fancy, per bbl.....	1 20@1 37
—Up-river, per bbl.....	1 12@1 25
Baldwin & Greening, Vermont, prime.....	1 20@1 25
Greening, Vermont & ntn, fancy, bbl.....	1 37@1 62
—Wm. N. Y., gd. to fancy, per bbl.....	1 12@1 37
—Up-river, per bbl.....	1 12@1 25
Greening & Baldwin, ordinary, per bbl.....	1 00
Brussels sprouts, per qt.....	8@ 12
Cauliflowers, California, per crate.....	2 00@3 00
—Florida, 1/4-bbl. basket.....	1 00@2 00
Cabbages, per 100.....	2 50@4 00
—Florida, per barrel crate.....	1 25@1 75
Celery, flat bunches, per dozen bchs.....	75@1 50
—California, large, per doz. stalks.....	60@1 00
—Average best, per doz. stalks.....	25@ 40
Carrots, washed, per bbl.....	75
—Unwashed, per bbl.....	60
Egg plants, Fla., per 1/4-bbl. box.....	1 50@2 50
Escarole, N. O., per bbl.....	6 00
Kale, Norfolk, per bbl.....	40@ 60
Lettuce, Fla. chice to fcy, 1/4-bbl. bak.....	75@3 50
—Eastern, per dozen.....	25@ 75
Onions, Eastern, white, per bbl.....	4 00@6 50
—Eastern red, per bbl.....	3 25@3 50
—Eastern yellow, per bbl.....	3 00@3 25
—Canadian, red, per bbl.....	2 75
—Havana, per box.....	3 50@2 65
—Bermuda, per box.....	2 75
Peppers, Fla., per crate or carrier.....	2 00@3 00
Paranips, per bbl.....	75
Parsley, Bermuda, per crate.....	1 00@1 75
Romaine, Bermuda, per crate.....	1 00@1 25
Squash Marrow, per bbl.....	1 25@1 50
—Hubbard, per bbl.....	1 25
String beans, Fla., fancy, per crate.....	3 50@4 00
—Fla., poor to prime.....	1 50@3 00
Spinach, Norfolk, per bbl.....	50@1 00
Tomatoes, Fla., ad to pme, per carrier.....	1 50@1 75
Turnips, J'y and L. I., Russia, per bbl.....	50@ 75

Philadelphia.

The supply of all kinds of stock has fallen off, but what has come in has found ready sale. Reports from Florida state that there have been very heavy rains there last week, so that what stock is coming in is poor.

Apples show a little weakening, on account of larger supply. Ten car loads arrived on Monday and were held for a higher market. Prices are:

Spitzenberg, fancy.....	2 00@2 25
—fair.....	1 35@1 50
Baldwins, fancy.....	1 40@1 75
—Fair.....	1 20@1 35
Greenings.....	1 35@1 50
Strawberries are scarce and of poor quality and sell at 40c. to 50c. per basket.	
Mushrooms are going better at 35c. and 40c. per lb.: none being left over at these prices.	
Hot house cucumbers are now coming in, and are held at \$2.50 to \$3.00 per dozen, but find few takers at these prices.	
All kinds of vegetables are somewhat scarce.	
Beets, Fla. (few on hand), per crate.....	1 50@2 00
Brussels sprouts, per qt.....	8@ 10
Cabbages, Fla., per crate.....	1 50@2 00
Cauliflower, Fla., per basket.....	1 50@2 00
Celery, extra, per doz. stalks.....	50@ 75
—Fair to good.....	25@ 40
Kale, Norfolk, per bbl.....	75@1 00
Lettuce, Fla., per basket.....	1 75@2 00
Spinach, Fla., per bbl.....	75@2 00
Tomatoes, hot house, per bbl.....	35@ 40
—Fla., fancy, per crate.....	2 00@2 25
—Fla., fair.....	1 25@1 50

Onions, Eastern, white.....4 75@6 00
—Eastern, yellow.....3 75@4 00
—Eastern, red.....3 25@3 75
There are no English hot house grapes on the market and very few Spanish white.

Grower vs. Commission Man.

A legal decision of great importance was made at Lyons, N. Y., on Feb. 18. J. C. Meyer, of that place, sued W. G. Ahrens, wholesale grocer, of New York city, for alleged loss on difference in prices returned for a car load of apples sold for the plaintiff on Jan. 27, and the market quotation for that time. Goods were shipped Friday, January 24, to J. P. Heard, who has since died; but inasmuch as he was backed by the defendant, Ahrens, litigation proceeded.

Plaintiff contended that apples on the day that he had instructed him to be sold were quoted \$2.75 for greenings and \$3.25 for reds, whereas these had been sold for \$1.75 and \$2.25, respectively; he, therefore, sued for the difference. The defense was that during the time of transit the thermometer fell to 10 degrees below zero, consequently the face of the barrel and all fruit touching wood was frozen and opened up in bad condition. Further, the defense contended that the apples were "repacks" and that the greenings were "scalded."

Every possible means had been adopted to sell at the best price; some fifteen or more buyers had been approached, but owing to the poor condition of the apples, they could not be placed. Eventually they were sold to a reputable house for the price quoted, and only a commission of 5 per cent. charged. The jury awarded a verdict to the plaintiff of \$73 and costs. Notice of appeal was at once given and allowed.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues notes here. They are sent free to our readers except when otherwise stated.]

WISCONSIN FLOWER EXCHANGE, Milwaukee.—Price List of Plants, etc.

E. Y. TEAS, Irvington, Ind.—Price List of Fruit Trees and Plants, etc.

HILFINGER BROS., Fort Edward, N. Y.—Price List of Standard Flower Pots.

WILLIAM BULL, Chelsea, London, Eng.—Catalogue of Seeds. (Illustrated.)

NORMAN COLE, Glens Falls, N. Y.—Price List of New Hybrid Gladiolus.

W. ATLEE BURPEE & Co., Philadelphia.—Price List for Market Gardeners and Florists for 1897.

REV. W. T. HUTCHINS, Indian Orchard, Mass.—Sweet Pea Annual for 1897; contains list of all the novelties and standard sorts, with full cultural directions for outdoor culture. The Annual is illustrated; among the pictures shown are photographs of several Sweet Pea specialists.

JAMES CARTER & Co., London, Eng.—A large and beautifully gotten up catalogue of Tested Garden Seeds, containing many illustrations, the greater portion of which are reproduced from photographs taken from nature. A handsome colored plate of single and double primulas accompanies this catalogue.

W. ATLEE BURPEE & Co., Philadelphia, Pa.—Farm Annual. From the present issue of the Annual we learn that this well-known firm has "become of age"—in other words, has reached its 21st year; and a glance at the contents of the Annual will show that the firm attains its majority under the most favorable auspices, and in the healthiest possible condition. Full descriptions are furnished, and the indorsements of those who have raised seeds supplied by the firm go to show that the Annual, as claimed, tells "the plain truth about seeds."

Wounded and Paralyzed.

AN OLD VETERAN OF THE WAR AFTER YEARS OF SUFFERING HAS A SHOCK OF PARALYSIS.

From the Press, Utica, N. Y.

Mr. David G. Talbot is a well-known and respected citizen of Otsego County, New York, residing at Edmeston, who three years ago had a stroke of paralysis, which he attributes to the effects of a wound received on the 16th of June, 1864, before Petersburg, Va., while serving with the New York Heavy Artillery.

The following is his own account of his illness and convalescence, which will be found interesting:

EDMESTON, N. Y., Aug. 31, 1896
"On the fifth day of December, 1893, I was taken with a paralytic shock, which affected the whole of the left side, and I could not speak for three weeks. I was confined to my bed for a long time and constantly attended by a physician, though little relief was experienced. My stomach and the muscles of my throat were much affected. I was wounded in June, 1864, at Petersburg, Va., having then lost three fingers of my left hand, and that always affected me in a marked degree, my arm often becoming numb. I should state that on the day I received the stroke, I had two distinct shocks, the first in the morning, which was so light that the doctor was not at all alarmed, but the second nearly finished me up. Ever since the war I had suffered with nervous debility, and my condition was very bad when I was attacked. I am now sixty years old, and hardly dared look for anything approaching good health after my life

of suffering, but I saw so much said about Dr. Williams' Pink Pills for Pale People in the newspapers, and that they were good for paralytics, that I determined to try them. This I did just one year and four months ago. I strictly followed directions and felt better within a week. I am not the same man I was when I began to take Dr. Williams' medicine. My old comrade, Norton, who was in the same company and regiment with me, and was a grievous sufferer from general nervous debility, at my recommendation has taken Dr. Williams' Pink Pills, and they have helped him wonderfully.

"I certify on honor that the above statement is true in every particular.

(Signed) DAVID C. TALBOT.

Witness JOHN C. LAPPEUS.

Dr. Williams' Pink Pills contain, in a condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are also a specific for troubles peculiar to females, such as suppressions, irregularities, and all forms of weakness. They build up the blood, and restore the glow of health to pale and sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork, or excesses of whatever nature. Pink Pills are sold in boxes (never in loose bulk) at 50 cents a box or six boxes for \$2.50, and may be had of all druggists, or direct by mail from Dr. Williams' Medicine Company, Schenectady, N. Y.

WEEBER & DON,

Seed Merchants and Growers,

114 Chambers St., NEW YORK.

Illustrated Catalogue

of Vegetable and Flower Seeds

NOW READY.

EVERY GARDENER SHOULD HAVE ONE.

Free on Application.

Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at two cents per word each insertion, payable in advance. The address will be charged as part of the advt. and each initial, or a number, counts as one word. No cut or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

NEW GLADIOLUS. Leaflet free. Norman Cole, Glens Falls, N. Y.

STRAWBERRY PLANTS. Circular free. Wm Carson & Son, Rutland, O.

GERANIUMS, 15 for one dollar, no two alike; free by mail. D. L. Hunsberger, Parker Ford, Pa.

LOVELY ARBUTUS plants, ferns and flowers cheap. Wyomack Nurseries, Lebanon Springs, N. Y.

RADISH and LETTUCE seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedman, Rochester, N. Y.

THE RIDGEWAY, a new strawberry of great merit. For price of plants and free catalogue, address M. H. Ridgeway Box 292, Wabash City, Ind.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

\$500 PER ACRE realized from Mammoth Rhubarb plants. \$1.25 per doz. by mail. Write for wholesale prices. F. H. Llewellyn, Olean, N. Y.

NEW PINK VIOLET Mrs. J. J. Astor (named by permission), \$2.00 per dozen, \$19 per 100. Orders filled in rotation. G. Saltford, Violet Specialist, Rhinebeck, N. Y.

CHOICE STRAWBERRY plants, 10 kinds, 12 each, postpaid, \$1.00. 1,000 strawberries, 500 Brandywine red raspberries, 1,000 Ohio black raspberries, boxed and expressed, \$4.25. A. Y. Cathcart, Bristol, Ind.

STRAWBERRY PLANTS. Try the Margaret Fountain, Michman, Clyde. Glen Mary. Headquarters for Gan y, Brandywine Marshall, Parker Earle and all choice standards. Catalogue free to all. C. N. Frazzburgh, Leslie, Mich.

GLADIOLUS BULBS, Marie Lemoine, (orchid marked), 25c. per doz. Marie Lemoine, bulbrites (mostly bloom 1st year), 20c. per 10, 50c. 75c., 1.00 \$1.25; all postpaid. Price list free. John Fay Kennell, (Groner) Box 405, Rochester, N. Y.

CEDAR OIL INSECTICIDE, better and cheaper than fir-tree oil, \$2.50 the gallon; \$1.00 the quart tin. Cedar Oil Soap, pound tins, 50 cents; half pounds 25 cents. Sold by seedmen and florists. August Rolker & Sons, New York, P. O. Station E.

10,000 VIOLETS given away. \$1 per 100 pays for packing and postage, must have room in greenhouse at once. Young well-rooted plants, Lady Campbell. The earliest, freest bloomer, sweetest and healthiest of all double violets. C. E. Price, Smithtown Branch, N. Y.

GOLD-COIN VINELESS. I am the originator of this improved strain of the vineless Sweet Potato, and I will send free a full history of it and how it was brought to its present state of perfection, and how to grow them successfully, or for 10 cts. in stamps I will include a sample potato, and the stamps may be deducted from the first order. William T. Simpson, Box 74, Pine Bluff, Ark.

GLADIOLI, CANNAS, CLIVIAS, Souchet and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings. Cannas, Italia, Austria, and best standards. New Hybrid Clivias, Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.

Are You Interested in the...
Horticulture

THE GLEANER, Austin, Tex.

...WILL TELL YOU ALL ABOUT IT...

Mention American Gardening when you write.

Business Cards.

Cards will be inserted under this heading at two cents per word each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1007, New York City.

Situations Wanted.

Advertisements will be inserted under this heading at one cent per word each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION wanted in private place, by German gardener, understands greenhouse and outdoor cultivation of flowers and vegetables; greenhouse building and heating. Best references. Address B. E., care American Gardening.

WM. FITZWILLIAM, for the past eight years orchid grower for Wm. Barr Esq., Baronald, Orange, N. J., will be disengaged March 1st. Testimonials and satisfactory references. Address: Wm. Fitzwilliam, West Orange, N. J.

SITUATION, as gardener, on private place, wanted by a Dane, age 35, married, but no family. All outdoor gardening and greenhouse culture. Is sober and trustworthy, has been nearly 6 years in present place. Address Scandinavian, P. O., Chiloee, Mass.

GARDENER and florist, 48, married, no children, thoroughly competent in all greenhouse culture, stove, and all other kinds of plants, flowers, fruits, vegetables, shrubs, lawns and roads. Life experience. Best of references. Address P. Haensig, Hoosick, New York.

BY women, each with an infant or young child, situations in the country (general housework, plain cooking, etc.) in New York and adjacent States. Small wages expected. Railroad fare paid by Association. Apply State Charities Aid Association, 105 East Twenty-second St., New York City.

GARDENER and Florists' assistant, English, 35 years of age, single, 3 years' experience at florist work, also 3 years' at kitchen garden, understands growing vegetables in greenhouse, good references, desires situation with florist or market gardener near New York. Address A, care American Gardening.

HEAD GARDENERS—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of graperies, greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 35 & 37 Cortlandt St., New York.

GARDENER wants situation, Scotchman, age 27, married, no family, 13 years' experience in greenhouse, graperies, also in fruit, flowers plants and vegetables, and everything regarding horticulture; would take charge of gentleman's place. Disengaged April 1st. Good references A. Watson, care of F. De R. Wissmann, Westchester, N. Y.

SITUATION wanted—First-class Gardener with diploma from both sides of the Atlantic, will guarantee financial success in producing choicest roses, also mushrooms under glass, in same building, and heat, thereby saving expense in labor, space and fuel; forcing vegetables under glass and European grapes specialties; thorough artist at table decorations; good landscape gardener; best city references. Wm. Thompson, 741 First Ave., N. Y. City.

WANTED. A competent Florist and Gardener desires a position as superintendent of public park, cemetery, or gentleman's private place, where thorough, competent and practical gardener is required. 30 years experience in all branches of gardening, a thorough Landscape Gardener, and well versed in all kinds of trees and shrubs and their cultivation. Strictly first-class position desired. All testimonials. East preferred. Address S. R., care American Gardening.

WANTED.

A thoroughly posted man familiar with the propagation and care of Ornamental Nursery Stock.

Also, man for private place, competent to care for vegetable and flower garden, and lawn, and who can drive a horse.

Only sober, industrious parties need apply, stating where last employed and wages expected.

ELM CITY NURSERY CO., New Haven, Conn.

Mention American Gardening when you write.

GRAY HAIR MADE DARK

By a hairdresser from Wash. Also makes the hair grow. Full directions and recipe for sale. Mrs. A. MURLEY, 4215 Evans Ave., St. Louis, Mo.

Mention American Gardening when you write.

PRIVATE GARDENERS.

Appointment.

James Woods has been appointed orchid grower to W. Barr, Baronald, Orange, N. J., in succession to William Fitzwilliam, who has resigned and seeks another place.

Springfield, Mass.

Rev. W. T. Hutchins has been elected president of the Amateur Horticultural Society, in place of Mr. Wille, who declined to serve.

Hempstead (L. I.) Hort. Society.

The above society held its regular monthly meeting in the King's Daughters House, Hempstead, on Monday, February 3, to which the most prominent residents of the township were invited. The meeting was a most successful one. The exhibits of plants and cut flowers, and the interesting discussions on same, created a lasting impression, and the local florists look forward to good results.

Mr. Miller, Oasis Nursery, exhibited some well grown Lorillard tomatoes and three different brands of mushrooms. Chris Beed, of Mineola, showed a fine display of carnations, including some new seedlings. J. Sidenburg, Hempstead, made a display of flowering plants and cut flowers; Weston Brothers, a group of ferns and cut carnations; C. W. Ward, Queens, sent a vase of Scotts; Mr. Kindsgrab put up a fine bunch of the California violet, and John M. Hunter a pan of Begonia Brindleyi. The society intends to hold an exhibition in April for the purpose of encouraging the purchasing of Easter plants.

Philadelphia.

Although the attendance was not very large at the meeting on Feb. 16, owing, no doubt, to its being spring election day. Mr. Joseph Mesian read an interesting paper on Herbaceous plants, and the hints on their cultivation was very valuable. Mr. Thilow explained the plans of flower beds submitted in the Ridgway contest. The premium for mushrooms offered by Henry F. Michell, was awarded to Wright & Ward, who staged a grand dish which was greatly admired. The premiums offered by Clarence H. Clark, Esq., for vegetables and salads, were awarded to R. C. Kalign and James Westcott, respectively.

New York.

The first floral meeting of the horticultural section of the American Institute will take place on March 9, at their own rooms, Nos. 111-116 W. Thirty-eighth street. This will afford an excellent opportunity for those who have seedling carnations or other novelties to exhibit to put them before the public. Certificates will be awarded to meritorious varieties. The president, Dr. Hexamer, solicits exhibits of every kind, and anticipates a very successful meeting.

Honor to Whom Due.

Mr. Murdoch, on page 18, says that when he was a bit younger he was foreman under gardeners when they came to the front in producing first-class grapes. I say it was quite different with Mr. Murray, as he did not keep any such men as foremen, but gave each man charge of a certain department, and if he did well in it to that man he gave the credit. Moreover, I did not in my first letter say: I was superintendent gardener or that I had "entire" charge, and Mr. Murray himself says that I had charge of the grape house referred to.

ALEXANDER NAPIER, N. Y.

The Water Hyacinth—This interesting aquatic is responsible for an immense amount of inconvenience to boatmen on some of the heretofore navigable rivers of Gulf. Introduced within recent years to those rivers, it has increased so rapidly that it covers square miles of surface with a dense matted growth, interfering with and at times compelling steamers to come to a standstill. In the United States Senate, lately, an appropriation of \$10,000 was sanctioned to enable the Secretary of War to investigate methods of ridding those rivers of this nuisance.

American Carnation Society.

The sixth annual meeting of this society was held in Cincinnati on Thursday and Friday, Feb. 18 and 19. There was a large attendance of carnation growers present, and the flowers exhibited showed wonderful improvement over those displayed on former similar occasions. The exhibition was pronounced by experts to have been the finest ever seen anywhere.

Among the principal varieties shown may be mentioned the following: Seedlings, White Cloud and Storm Queen, both white having extremely large flowers and strong, stiff stems. These were exhibited by Fred Dorner & Sons Co., La Fayette, Ind. This firm also displayed some magnificent Uncle John, white, a variety which has been found difficult to grow by most carnation men on account of its susceptibility to the disease called rust. Dorner & Sons Co. also made a grand showing with a collection of 500 flowers comprising the best standard varieties and many other promising seedlings, more particularly those showing yellow ground.

E. G. Hill & Co. exhibited their new white variety, Flora Hill, which obtained the Carnation Society's certificate at New York last year. This kind was awarded the prize for the best 100 white on exhibition. The same firm also showed Mars, a scarlet seedling which also captured the prize in that class. Other new kinds in this exhibit were Painted Lady, pink; and Whitcomb Riley, a large white pencilled with carmine.

W. N. Rudd of Chicago exhibited two grand vases of Jubilee, which were the admiration of the visitors.

C. W. Ward, Queens, N. Y., had some new seedlings, among them Charles A. Dana, a beautiful shell pink; John Young, white, and Mrs. James Dean, pink.

Breitmeyer & Sons, Detroit, Mich., carried off the prize with their yellow variegated variety, Mayor Pingree.

Other prize-takers were R. Witterstaetter, Sedanville, O., for Emma Wachter, a bright pink seedling; Dorner & Sons' Co., for their white variegated Mrs. George M. Bratt, which were marvels of good cultivation.

The society was very sparing in dispensing its certificates, only three being awarded. These were given to F. Dorner & Sons' Co., one each for White Cloud and Storm Queen as third-year seedlings, and to W. J. & M. S. Vesey for Fort Wayne, as second-year seedling scarlet.

The sessions of the society were held in the Gibson House and were very largely attended. The president, in his address, recommended a fixed scale of points, also a scale each for exhibition and commercial varieties. These points were discussed and scales finally adopted.

W. R. Shelmire of Avondale, Pa., read a very able paper on the "Carnation," from the taking of the cutting to planting in the field, in which he described his method. The paper was exceedingly practical.

At the Friday morning session Chicago was selected as the next meeting place of the society, and the following officers were elected: President, W. N. Rudd, Chicago; vice-president, Fred Dorner, Jr., Lafayette, Ind.; secretary, Albert M. Herr, Lancaster, Pa.; treasurer, Charles H. Allen, Floral Park, N. Y.

Mr. Henry Weber, of Oakland, Md., read a very instructive paper on the "Carnation in the Field and in the House."

In the discussion which followed the reading of this paper several growers intimated that they had abandoned all overhead watering because it induced spot and rust. As a remedy for red spider, thorough ventilation, smoking with tobacco extract and the painting of sulphur mixed with linseed oil upon the pipes was recommended. One grower also recommended as a preventive against fungoid diseases spraying with a salt water solution at the rate of four ounces of salt to three gallons of water. This he applied, commencing about three weeks after the plants were housed, and kept up at intervals of ten days or a couple of weeks until March, when the spraying was done regularly.

Lenox, Mass.

At the regular meeting of the Horticultural Society, held Feb. 20, the Rev. W. T. Hutchins read an excellent paper on the "Sweet Pea." There was a very good attendance, some sixty members being present. Messrs. Hoppe and Lemke, of Grand Rapids, Mich., exhibited a few blooms of their new scarlet carnation Morello, which was judged worthy of the first class certificate of the society. Mr. Charles Russell exhibited a well flowered specimen of Dendrobium nobile (diploma). At the next meeting on March 6 Professor Watson, of the Bussey Institute, will read a paper on "Some Native Trees and Shrubs That Should Be More Frequently Used in Ornamental Planting."

Oceanic, N. J.

The second February meeting of the Monmouth County Horticultural Society was held here on Friday, Feb. 19. Every member of the society was in attendance in anticipation of the "smoker." Mr. Patrick O'Mara, of New York, was the guest of the evening, and lent material aid to the members of the Committee on Public Exhibition by his suggestions. An American Beauty rose of remarkable size and beauty was exhibited by Mr. Wellington Kennedy, of Red Bank, and was pronounced by Mr. O'Mara to be the finest he had ever seen. At the conclusion of the meeting the president introduced the artists who were to furnish the evening's amusement. The date of the next meeting is March 5.

"FLOWER QUERIES" New book on floriculture 10 Chapters, written in questions and answers, discussing 500 floral topics. Price, 25 cts. The COURIER, Box A, Chatham, N. Y. Mention American Gardening when you write.

TREES AND PLANTS.

FRUIT AND ORNAMENTAL, DECIDUOUS AND EVERGREEN, OLD STANDARD AND BEST NEW VARIETIES.

Large supply of SHADE TREES, 1 1/2 to 4 inch caliper.

KEERE & FOULK, BLOODGOOD NURSERIES, Flushing, N. Y.

Mention American Gardening when you write.

5,000,000 Strawberry Plants, 100 varieties, including Carrie, the queen berry ever introduced; Edith, the largest; Essex, the latest. We carry the largest and best stock in the United States. The King Red Raspberry, the brightest and best ever offered. 1,000,000 Wakefield Cabbage Plants. Also, tobacco dust. Send for free wholesale price-list free.

THOMPSON'S SONS, Originators of the Strawberry, Rio Vista, Va. If you cut this adv. out and send with 50 cents, we will send free, by mail, 12 plants each of Rio Vista Tennessee and Lady Thompson.

Mention American Gardening when you write.

STRAW
RASP
BLACK
GOOSE
DEW

ASK WM. C. BABCOCK, BRIDGMAN, MICH.,

For prices of strong STRAWBERRY PLANTS, dug out in solid blocks, not from between the rows, true to name. Competition Defied. QUALITY considered. Complete Stock of CURRENTS and QUALITIES. (Mention this paper.)

Mention American Gardening when you write.

**BERRY
PLANTS**

BIG MONEY IN BLACKBERRIES

NEW METHODS. Grow 300 Bushels Blackberries per acre. DOUBLE YOUR CROPS of Strawberries and Raspberries in Quantity and Quality with less work. Command special customers and dealers and get big prices with everything sold in advance. Be a Leader in the Business. A booklet, which has REVOLUTIONIZED small Fruit Growing, by the proprietor of the largest plantation of Small Fruits in the country. Tells the "when and how" he does it. Send your address on a postal card and get it FREE!

R. M. KELLOGG, Three Rivers, Michigan.

Mention American Gardening when you write.

WE OFFER AMONG MANY NEW THINGS

The Bismarck Apple—Bears splendid fruit on 2-year grafts. A remarkable new fruit.
Hedysarum Multilingum—A new Mongolian Shrub of great beauty.
Lord Penzance's Hybrid Sweetbriars—Worthy a place in every garden.
Viburnum Tomentosum—We consider this the finest shrub grown. Very rare.
Picea Canadensis—An improvement on the Blue Spruce.
The Weeping Spruce.
Clematis Paniculata—Without an equal as a hardy climber, 30 cts.
Magnolias, Japan Maples.
The best stock of Herbaceous Perennials in the country.
Rhododendrons and Azaleas at lowest prices quoted.

For all these, and full advice and plans for planting grounds and gardens, write us.

THE SHADY HILL NURSERY CO., 102 State St., Boston, Mass.

Mention American Gardening when you write.



OUR NURSERY STOCK
is grown on the banks of the Hudson River. It is first-class. Prices are Low. 50 acres of **FRUIT TREES**, Plants, Vines, and Ornamental Stock to sell. 1897 Catalogue Free. T. J. DWYER, Cornwall, N. Y.

Mention American Gardening when you write.

Knight's Catalogue

Of Small Fruit Plants

Should be in the hands of every one who intends to purchase plants. Michigan northern grown plants are the best obtainable and my price was never so low. I can save you money. Millions of plants of all leading varieties.

David Knight, Sawyer, Mich.

Mention American Gardening when you write.



The choicest **MAGNOLIAS, JAPANESE MAPLES** and other **TREES & SHRUBS** are accurately described in our New Catalogue. Profusely illustrated, including three lithographs. Contains prices of large and small trees, specimens for immediate effect; and special prices for quantities. A Guide to Tree Planting. The most complete catalogue of its kind ever published. 6 cents in stamps.

THOS. MEEHAN & SONS,
Germantown, Philadelphia.

Mention American Gardening when you write.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*. We cannot undertake to reply by mail.

SWEET PEAS, EARTHING UP.

(When sowing sweet peas on the gradual filling in plan—I mean covering the seed about one inch deep at first—how high should plants average when second inch of earth is added? When adding this (second) inch, and at succeeding fillings in of earth, it seems impossible to avoid burying the lower leaves, as they are so near the ground. Does it do any harm? Very many of mine died last season after each filling was done by a careful gardener, who covered no tops of crowns. Is this common, and when this system is to be pursued should more seed be sown as an allowance for death of more or less of the young plants? Is it not just as well—it is certainly much easier—to add the second inch, and so on, as soon as a few plants show their tips? I tried this one season and had good success.—B. S. T., Mass.)

—The object of sowing peas in a trench is mainly to secure shade and moisture for the roots, and on light soils in an exposed garden may be followed to advantage; but where the soil is any way retentive and not apt to dry out rapidly the system is unnecessary, and, in fact, on some soils may be injurious. This may have been your case, or if not so the trench may have been too deep, or in adding the soil some of the vines may have got broken off or bent under the pressure of the soil, and in that way injured. It is always advisable to sow more seeds than vines are actually required.

CHRYSANTHEMUM GROWING: ENGLISH VS. AMERICAN.

(I find Molynieux's book is an English work. Can the directions there given be followed in every respect in this country? Morton, in his book on chrysanthemum culture for America, constantly speaks of "terminal" buds, but makes no mention of "crown" buds. This has puzzled me.—Mrs. S. P. Adams.)

—The English work referred to was written by one who in the time when he was exhibiting was perhaps the most successful chrysanthemum grower in Europe, and he faithfully deals with his subject in his book, and in that way he is reliable. There are points, however, in which our American system differs from the English. In Great Britain, to make any kind of success, the plants have to be grown carefully for at least ten months, at least so as to get an exhibition bloom. In this climate the same result can be had from a cutting rooted in May. The reason is that here plants develop much more rapidly than they do there during the months of September, October and November. In England nearly all the plants are grown in pots, but bench or box system not being so much used. But even in this country some of the sensational blooms exhibited are so grown. Many of those shown by Mr. Powell or Mr. Russell, both of Millbrook, N. Y., are grown in either pots or small boxes. The roots are then under better control, and feeding can be applied more judiciously and a more deeply built bloom results. Commercially in this country the bench plan is practiced as being the cheapest and most expeditious, and the terminal bud is more generally used, there being only a few varieties that require to be taken from the crown bud. Probably Morton omitted to speak of the minority. Since the issue of his book, however, we have had a few kinds that are almost entirely taken from the crown. Yellow Queen is an instance.

VIOLET DISEASE.

(To J. Soehrer, Ill.): Preventives: A clean, sweet atmosphere, carefully picking off the affected leaves as they appear and burning them. Remedies: None that are absolute. Syringing is practiced by some successful growers and condemned by others. Local circumstances have much to do with determining which is the best method. Details of cultivation will appear shortly.

TO MAKE PASSION FLOWERS BLOOM

(I have grown two varieties of Passiflora for years in my conservatory. They grow readily, running all over, but never produce flowers. How can I induce bloom?—J. H. C., N. J.)

—Rest the plants a little and slightly check the roots. Give no fresh soil this season. This will probably induce flowering.

MUSHROOMS IN CELLARS.

(Can mushrooms be successfully grown in cellars or vaults that were originally built for storing beer—temperature about 40 to 45 degrees? Vaults are dark except directly under ventilators. They are from 10 to 30 feet under ground and several hundred feet long, all nicely laid up with brick and stone masonry. In places walls are damp with moisture.—Phil Strubler, Ill.)

—The cellars mentioned should make excellent quarters for mushroom growing, but it

ARMSTRONG & McKELVY
Pittsburgh.
SEYMOUR-BAUMANN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANONOR } Cincinnati.
ROCKSTEIN }
ATLANTIC }
BRADLEY }
BROOKLYN } New York.
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MINNOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROS CO } Philadelphia.
MORLEY } Cleveland.
SALER } Salem, Mass.
OORNEILL } Buffalo.
KENTUCKY } Louisville.

THERE is no getting away from the fact that Pure White Lead (see list of brands which are genuine) and Pure Linseed Oil make the best paint.

Properly applied, it will not chip, chalk or scale off, but will outwear any of the mixtures offered as substitutes. It is, therefore, by far the most economical.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

may be necessary to run at least a flow and return hot water pipe through the whole; three pipes would be preferable. A temperature of 48 degrees is about the lowest that can be allowed; 50 to 55 degrees more likely to guarantee quick and steady bearing. Of course, when the beds are in the temperature would be a little higher than the question suggests, so that the amount of fire heat required would be very slight. Sometimes heat is generated by heaps of warm manure. But we advocate the use of hot water as being more satisfactory.

AS TO FROZEN PLUM TREES: POND'S SEEDLING FOR EASTERN MARKETS.

(I have 2,000 Italian prune trees five years from setting. We had a sudden spell of cold weather on Nov. 20. Although it was 15 degrees above zero, it was so early that it killed nearly every tree to within six inches of the ground. Would it be practicable to graft them, as I wish to change them to Pond's Seedling, which does very finely here, often reaching four inches in length? Do they find a ready market in Eastern cities?—H. H. KING'S Co., Wash.)

—We think the most profitable plan would be to root out the old stock and plant afresh Pond's Seedling. The fruit is handsome, and if you can grow it to the size mentioned there would be no difficulty in disposing of the stock in Eastern cities if you can get it on the market in good condition. There are times in the New York market when any plums would rule low, but speaking generally for fruit of the high quality you name you should be able to realize good figures.

SELF SOWN PETUNIA.

(In October of 1895 we sowed a large crescent of ground with Petunia seed. It was a perfect show of color all last summer. Will the seed dropped from the flowers be likely to produce another full bloom?—S. A. C. C., Pa.)

—There will be some risk about the seed, even supposing a sufficient quantity had formed and ripened. It will perhaps have reverted. We should advise making a new sowing for best results.

PROPAGATING HELIOTROPE.

(To N. V. K.): To successfully propagate Heliotrope in winter and early spring a good brisk heat is necessary. The cuttings are best taken off old stock plants kept for that purpose, and the growths that root most readily are the small tips and side breaks. Fat, robust growths are apt to damp off in the sand, or any way the foliage sags so that they make slow progress, while the partially ripened breaks and shoots keep up their foliage, a very essential feature in Heliotrope propagation.

GRAFTING PERSIMMONS.

(Does top grafting (say at a height of two feet) of the Persimmon prove satisfactory? I want to graft Japanese on wild Persimmon. Which is to be preferred, grafting wax or clay?—J., Alabama.)

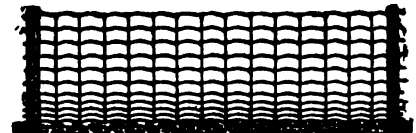
—The native American Persimmon (Diospyros Virginiana) is considered to be the very best stock for Japanese varieties. I believe that nurserymen generally use budding, but if grafting be preferred, I think that wax will be better than clay.—Dr. F. Franceschi.

Insects on Crab Apple.—(To A. J. G.): The twig you send covered with two lateral layers of overlapping "scales" has the eggs of the katydid on it.

CALIFORNIA LANDS ARE RICH

and only \$35 to \$50 per acre AT ESCROWING. Grows fine oranges, lemons, olives, prunes, apples, hay, grains, etc. Best summer and winter climate in U. S. Send stamp for files. Pamphlet to Beachside Land & Town Co. at Beachside, Los Angeles or San Diego, Cal.

Mention American Gardening when you write.



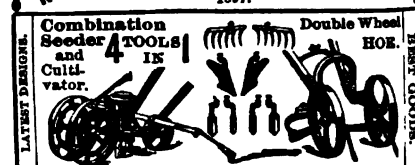
CATCHES ROADMASTERS

Last spring several farmers on the line of a big railroad rebelled against barbed wire, and demanded board fences. They compromised on the Page, first the company had used. Our man lately called on the Roadmaster, who wanted him to "see those farmers, who would hug and kiss you, and I've got to have 25 miles on my division."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write.

NEW UNIVERSAL HAND GARDEN TOOLS

Success of 1896. Better for 1897.



RECOMMENDED BY MARKET GARDINERS.
A dozen styles to select from. Write for circulars and address of nearest supply depot to:
AMES FLOW CO., SOLE MAKERS.
New York and Boston.

Mention American Gardening when you write.



Mention American Gardening when you write.

Maule's Seeds

LEAD ALL

Have done so for years, and are as far ahead in '97 as ever.

If you want the Best Garden you have ever had, send address on a postal **TO-DAY** for New 1897 Seed and Plant Book. It is a wonder. Address
WM. HENRY MAULE,
Philadelphia, Pa.

Mention American Gardening when you write.

THE BEST SEED POTATOES.



EARLY MICHIGAN.

Are grown on Michigan new muck lands by

HARRY M. HAMMOND, Decatur, Mich.
SEEDSMAN.

Largest grower of **SEED POTATOES** in America. Write him to-day for his handsome illustrated catalogue **FREE**, describing the best new and standard varieties of



MICHIGAN WONDER

Potatoes, Oats, Corn and Garden Seeds.

Mention American Gardening when you write.



Beautify your Homes

FOR ONLY

20 CENTS

By planting the following variety of selected seed, which will bloom the entire season, and cannot help but give you entire satisfaction.

Aurora Collection of Sweet Peas

A large pkg. weighing about one ounce and containing all the colors and varieties cultivated.

Aster, Elliott Rainbow Mixture, an acquisition to any garden, and a premium winner. The plants are bushy in form, of a vigorous, robust habit, covered with large globular flowers fully imbricated.

Pansy, Elliott's Blended, produces flowers of a very showy nature and of unusually large size. The seed is selected from the most reliable growers in Germany, England and France, and comprises the finest shades.

Carnation Dwarf Marguerite (an illustration of which you will find on our catalogue cover) something unusually fine, also our annual, beautifully illustrated; actual value in all 40 cents. Remember, 20 cents buys them all.

Wm. Elliott & Sons., SEEDSMEN, 54 & 56 Dey St, N. Y.

Mention American Gardening when you write.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL FOR 1897
Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable **NEW Novelties**, painted from nature.
"The Leading American Seed Catalogue." **42-Mailed FREE to all.**
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

SEE OUR UNEXCELLED

PREMIUM OFFERS

....OF....

Plants, Seeds, etc., in our issue of February 6th.

Our premiums are offered with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by **AMERICAN GARDENING** in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

In our issue of **February 6** we published Premium Offers, embracing a vast assortment of Standard, Fancy and Novelty Collections in Seeds, Fruits, Flowers and Vegetables, to which we invite the careful attention of every one of our readers, in the hope that, becoming interested, they will seek to earn these premiums and so increase our subscription list.

The Premiums offered are all of exceptional value; there is nothing bordering on the sensational in the various announcements, and great pains have been taken to secure offers from reliable growers and specialists. As we have previously stated, the publishers of **AMERICAN GARDENING** neither buy, sell, nor in any way do they trade in the stocks offered, except to mail the orders as received to the growers or dealers making the offers. This arrangement makes it satisfactory to our advertisers, who, in turn, being thus afforded an opportunity to introduce their specialties to likely new customers, at practically no cost for advertising in any of its ramifications, are thus enabled to give values which are unprecedented in the annals of Premium Offers.

If you want a copy of our Premium List let us hear from you and we will mail you one.

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.

BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

GARDEN CROPS

of every kind may be greatly increased in quantity and improved in quality by liberal use of **NITRATE OF SODA**, either singly or in combination with other fertilizers. Best results from **EARLY VEGETABLES** are impossible without the use of nitrogen in soluble form. **NITRATE OF SODA** is the most soluble, cheapest and most reliable source of nitrogen. Your soil must contain the other fertilizing elements in sufficient quantity and fail to yield good crops because it is deficient in nitrogen. Cover this deficiency by using **NITRATE OF SODA**. All about its sources, use and the profits resulting therefrom in book on "FOOD FOR PLANTS."

S. M. HARRIS, Moreton Farm, P. O., N. Y.

Sent FREE. Address.....

Mention American Gardening when you write.

GLASS For Greenhouses, Grap- eries, Conservatories, GLASS Hothouses and Hotbeds.

VANHORNE, GRIFFEN & CO.

Importers of French Glass.

13, 15 & 17 LAIGHT ST., AND NEW YORK.
52, 54 & 56 VARICK ST.,

Mention American Gardening when you write.

WHEN BUILDING

a new house or barn, or in putting new roofing or siding on those you already have, a little inquiry into the value of **CORRUGATED IRON AND STEEL ROOFING AND SIDING** will repay you handsomely. It is cheaper than boards or shingles, and the lasting qualities are double. No repainting. A Good CORRUGATED STEEL ROOF at 2-1/2 cts. per sq. ft. For testimonials circulars and estimates, address,

E. M. WATSON, JR.,
Buesey Inst. South St.
Jamaica Plain, Mass.

E. BERLIN CONN.

Mention American Gardening when you write.

The Savannah Line

1400 Miles at Sea and a Week's Board, \$36.

For a short time the Savannah Line will sell First Cabin Tickets calling for transportation 700 miles each way, unexcelled meals and accommodations aboard steamer, transfers in Savannah, and two days' stop at choice of three first-class hotels at Savannah; in all, nearly a week's board in addition to transportation, etc., for THIRTY-SIX DOLLARS.

Through Tickets to JACKSONVILLE, ATLANTA, and all Points South.

Steamers sail Tuesdays, Thursdays and Saturdays, from New York, and every four and five days respectively from Boston and Philadelphia, (see sailing cards.) Electric Lights kept up all night so that passengers can turn them on or off at pleasure.

UNSURPASSED CABIN ACCOMMODATIONS, SEA SPRAY BATHS AND ALL CONVENIENCES.

Send three two-cent stamps for Savannah Line News, and beautifully illustrated book, something new, to **RICHARDSON & BARNARD, Agents, 20 Atlantic Ave., Boston, Mass.; M. C. HAMMOND, Agent, Pier 18 S. W. Foot Spruce St., Philadelphia, Pa., or**

G. M. SORREL, Manager, New Pier 35, N. R., New York

Mention American Gardening when you write.

LORD & BURNHAM CO.,**HORTICULTURAL ARCHITECTS AND BUILDERS****STEAM AND HOT WATER HEATING ENGINEERS.**

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 91st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York

Mention American Gardening when you write.

Corn

is a vigorous feeder and responds well to liberal fertilization. On corn lands the yield increases and the soil improves if properly treated with fertilizers containing not under 7% actual

Potash.

A trial of this plan costs but little and is sure to lead to profitable culture.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.

SPRAYERS EXP. PAT. Any Point.

We are the largest sprayer Co. in U. S. Get our Catalogue and compare it with others.

LENOX SPRAYER CO. 84 West St., Pittsfield, Mass.

Mention American Gardening when you write.

Cedar Oil Soap

is the best all around insecticide for house and greenhouse use. Kills scale, thrip, spider, mealy bug, fly, etc. The best preventive if used oftener as a wash; keeps foliage bright and clean. Kills fleas on dogs, cats, fowl, etc.; cures mange. Put up in pound tins, 50 cts.; half pounds, 25 cts. each. Sold by Seedmen and Florists. Half pound trial tin mailed on receipt of 5 cts. enough for ten gallons solution. Address the Manufacturers

AUGUST RÖLKER & SONS,

P. O. Station E. 126 W. 34th St., New York

Mention American Gardening when you write.

GOULDS' SPRAY PUMPS



are either made of Brass or are Brass lined. No iron to rust or corrode. 12 Varieties, meeting all the requirements of Spray Pumps.

GOULDS' NOZZLES ARE BEST.

Made in 25 styles. This shows one of

GOULDS' PORTABLE BRASS FORCE PUMPS.

All about Spraying. "How and When to Spray," and Valuable Formulas for insecticides sent free. Address

THE GOULDS' MFG. CO.

11 Ovid St., Seneca Falls, N. Y.

Mention American Gardening when you write.

CYPRESS

IS MUCH MORE DURABLE THAN PINE.

CYPRESS**SASH BARS**

UP TO 22 FEET IN LENGTH OR LONGER.

GREENHOUSE

AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book "CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.,
Neponset, Boston, Mass.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 115.
COMBINED SERIES VOL. LI.

NEW YORK, MARCH 6, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Barberry as a Hedge Plant.....	159	Descriptions.....	158	Kohlrabi.....	155	Ornithogalum Arabicum.....	159	Vegetable Garden.....	155
Bean Cream Valentine.....	157	Forests to Preserve.....	159	Lawns and Potash.....	157	Pea, 1897.....	157	W. Va. Horticulturists Meet.....	154
Best Variety, The.....	158	Fruit Garden.....	155	Lawns, Renovating.....	160	Plum Trees.....	154	Window Gardening.....	162
Birds in the Garden.....	159	Fruit Growing in W. Fla.....	161	Leeks.....	155	Potato Tests.....	154		
Calla, Little Gem.....	162	Grape Growing Under Glass.....	156	Lettuce, Mignonette.....	157	Poultry Notes.....	162		
Casabanana.....	159	Herendeen, late E. W.....	158	Market Reports.....	163	Prune, How To.....	155	Illustrations.....	
Chrysanthemums.....	155	Honeysuckles.....	166	Mushroom Puzzle, A.....	160	Questions Answered.....	166	Bean Cream Valentine.....	155
Cucumber, Fordhook.....	157	Hotbeds.....	155	Novelties of the Season.....	157	Seed Sowing.....	155	Lettuce Mignonette.....	157
Pickling.....	157	Incubators, Toy.....	159	Old and New, The.....	153	Suburban Gardens.....	159	Morton, Hon. J. S.....	153
				Onion, Australian Brown.....	157	Tucker, late L. E.....	158	Wilson, Hon. J.....	153

The Old and the New.

We have pleasure in presenting herewith portraits of the retiring Secretary of Agriculture, Hon. J. Sterling Morton, and of his successor in office, Professor James Wilson.

The retiring Secretary was a native of the State of New York, and his ancestors were among the earliest of the New England Puritans. He is a graduate of Union

creasing the efficiency of the department, and has succeeded in having it attract more attention in Congress than ever before, and this is not the least complimentary thing which can be said of his administration. The bulletins and pamphlets issued by the department have been of inestimable value to the farmers, gardeners and fruit growers of the country. One of the most creditable features of his administration is his sturdy fight against the infamous vote-bribing seed distribution, which has done



FIG. 54.—HON. J. STERLING MORTON.
(Secretary of Agriculture 1893-1897.)

College. His career as Secretary of Agriculture has fulfilled the expectations of his friends and at the same time has kept his political enemies busy. He has perhaps justified the statement that he "never forgets his friends, nor often allows his enemies to forget him." Whatever may be the individual opinion regarding the policy of the ex-Secretary it must be conceded that he has largely increased the importance and dignity of the Agricultural Department. He has reduced the expenses without de-



FIG. 55.—HON. JAMES WILSON.
(Present Secretary of Agriculture.)

so much to demoralize the Congressmen, their constituents and the business of seed growing and selling. Although Mr. Morton will doubtless retire to his beautiful home in Nebraska, it is to be hoped that he will be frequently heard from in the prolonged and bitter struggle which will be required to finally abolish the iniquitous free seed distribution.

Of the new incumbent of the office there is as yet but little for us to say. Professor James Wilson comes into

office having a full and intimate acquaintance with the real wants and demands of those whose interests it will be his duty to watch. As a practical farmer working on advanced lines he has ably demonstrated the value of scientific farming, and as director of the State Experiment Station at Ames, Ia., he has been brought into actual contact with the work of stations, and his administration of the department should therefore be of much value in developing along proper lines the future work of station officers. In a previous issue (on page 88) we presented a brief sketch of Professor Willson's career. He has also served three terms in Congress, and six in the State Legislature of Iowa.

Potato Tests.

made in your issue of Jan. 30, and that planters may choose varieties for planting this spring, if desired, I give the following report of varieties of potatoes tested on my grounds last year; but the reader will please bear in mind that this locality is not considered a good potato country, and that, because of having been sick from June until late fall, the potatoes suffered much neglect.

Had I been well I should have weighed the potatoes, but as it was I was forced to be satisfied with counting them. I expect to devote about three acres to the testing of varieties of potatoes this year, hence you may hear from me at some future time. The height or strength of the vines is given about in inches.

*Indicates the tubers were extra large. **Indicates "very" rough, "very" long, etc.

NAME OF VARIETY.	Height of vine.	Large tubers to hill.	Small tubers to hill.	Eyes deep or shallow.	Surface.	Mature in weeks.	Form and Shape.	Color.
Victor Rose.....	24	3	1	deep	medium	12	long round	white
Burpee's Extra Early.....	12	3	1	shallow	smooth	10	long round	white
State of Maine.....	18	4	0	shallow	smooth	18	short flat	white
Brownell's Winner.....	18	3	0	shallow	smooth	16	long round	pink
Orphans.....	18	1	1	deep	medium	18	long round	white
Early Puritan.....	18	3	0	shallow	smooth	14	long round	pink
New Queen.....	18	4	0	shallow	smooth	14	short round	white
Beauty of Hebron.....	24	3	0	shallow	smooth	14	short round	white
Rural Blush.....	18	1	1	shallow	smooth	14	short round	pink
Prize Taker.....	24	3	0	deep	rough	18	long round	red
Honey Rose.....	18	3	0	deep	rough	14	long flat	pink
Peerless, Jr.....	18	*3	0	shallow	smooth	16	short flat	white
Rose No. 9.....	18	*2	2	deep	**rough	16	long round	red
Cyrena.....	12	2	3	shallow	smooth	12	short round	white
Money Maker.....	18	2	0	shallow	rough	16	**long round	white
Salzer's Quality.....	18	3	5	deep	**rough	16	**short round	white
Empire State.....	24	3	2	deep	smooth	16	long round	white
Maule's Early Thorbred.....	12	2	2	shallow	smooth	14	long round	pink
Carman No. 3.....	24	*4	0	shallow	smooth	16	short flat	white
World's Fair.....	18	0	7	shallow	smooth	16	short flat	white
Delaware.....	24	3	2	deep	rough	16	long round	pink
American Wonder.....	24	4	2	deep	**rough	16	long round	white
Irish Daisy.....	24	6	4	deep	smooth	16	short round	white
Carman No. 1.....	18	3	0	shallow	smooth	16	short flat	white
Maggy Murphy.....	18	2	0	deep	rough	16	long round	pink
Summit.....	18	4	2	shallow	smooth	14	short flat	white
Rural New Yorker No. 2.....	18	5	1	shallow	smooth	14	short flat	white
King of the Earlies.....	12	4	2	shallow	smooth	8	short round	pink
Harvest King.....	18	4	1	shallow	**smooth	14	short round	white
Early Wisconsin.....	12	5	2	shallow	smooth	12	short round	pink
Lightning Express.....	18	3	0	shallow	smooth	16	long round	pink
Salzer's Earliest (Triumph).....	12	4	2	shallow	smooth	10	short round	red
Hundredfold.....	12	2	1	shallow	smooth	16	short round	white
Champion.....	18	4	1	deep	rough	18	long round	white
Freeman.....	24	3	2	shallow	smooth	12	short flat	white
Early Vaughan.....	18	5	1	shallow	smooth	10	short round	white
Six Weeks Market.....	12	4	0	shallow	smooth	8	short round	pink
Early Market.....	12	4	0	shallow	smooth	8	short round	pink
Great Divide.....	24	4	0	shallow	rough	18	long round	white
Polaris.....	18	4	2	shallow	smooth	12	short round	white
Acme.....	18	3	1	shallow	smooth	8	short round	pink
Early Ohio.....	12	3	1	shallow	smooth	10	short round	pink
Pink Gem.....	12	3	1	shallow	smooth	12	long round	pink

L. S. SPENCER, Pesotum, Ill.

Strawberry plants packed in alternate layers of moss, without being tied in bunches, have always given us the best satisfaction.

West Virginia Horticulturists Meet.

Notwithstanding the general prevalence of low prices for apples, West Virginia horticulturists are not complaining. The State is at present divided into two important fruit growing regions. The Northern Panhandle, where the apple interests overshadow all others, and the Eastern Panhandle, in which the horticulture is more diversified, yet places its main dependence upon the peach, apple and grape. While these two regions have taken the lead in horticultural developments, the greater part of the State is pre-eminently fitted by virtue of its climate and location to horticultural pursuits. The following notes were gathered at the recent meeting of the State society.

Flowers as an Educator.

Mr. Hieble discussed his subject from a florist's standpoint, bringing it under these three heads: First, civilization; second, fashion, and third, literature and organizations of the nature of horticultural and floricultural societies. The progress of the florist's art moves hand in hand with civilization, and as the standards of living are elevated, so the fashion in flowers and plants change. These changes and advances are made available to the general public through the medium of the press and public discussion.

Opposed to Budded Trees.

Mr. Charles Becker, of Millville, said: "In the spring of 1887 and 1888 we planted five hundred acres of fruit trees and grape vines. This was a large venture, for at that time comparatively little was known of the sorts best suited to the locality; we concluded to plant and experiment on a large scale, so that in case one class of fruit failed, we would have large quantities of those that succeeded. The fifth year we had a good peach and grape crop, the sixth

year there was a heavy peach crop all over the country, and no money was made, in the seventh year a great many trees among the peaches, apricots and plums were failing in vigor; and as this was common to all trees on rich soil, as well as those on poor, I was puzzled for more than a year to know the cause. * * * One day, while in a deep study about what could be wrong with the orchard that had for four or five years been so thrifty and was now going out, I happened to remember of one day in 1891 standing in the apricot orchard admiring the handsome trees. * * * I heard something fall. Looking about, I could see nothing; there was no wind blowing, but I was positive I heard something fall. I went some distance into the orchard, when I saw an apricot tree in perfect foliage lying upon the ground. Upon examination, I found the tree had broken off at the bud. The fracture looked as if the tree had only been glued to the stock, both parts being smooth and no indication of a union in the wood of the two parts. During the same season I found several others broken off in the same way, and all were of one variety of Russian Catherine. I consulted a nurseryman about it, but as he gave no satisfactory answer, the matter rested until the spring of 1896 upon the day above referred to. I then examined the trees around the collar where they were budded, and I found that when a tree did not look healthy it was rotten at the collar at the point of union with stock and bud; and upon digging up such trees I found a healthy root, the tree dying from the bud up. * * * It is my firm opinion that orchards of budded trees are short lived. After one or two heavy crops the drain is so severe on the tree that if there is not a perfect union the tree soon succumbs." As a substitute for budded trees, Mr. Becker proposed to use only piece root grafted trees in this way, eliminating the objection to the budded and crown worked trees, and at the same time placing the tree more completely upon its own root.

Strawberries.

Mr. Vandervort, of Morgantown, emphasized the importance of grading the fruit as it is gathered, and as the season advances raise the standard of the grades rather than lowering the price.

"Structure of Some of Our Common Fruits" was dealt with by Professor Rumsey, of the West Virginia University.

Scale Insects.

Dr. A. D. Hopkins, entomologist of the West Virginia Experiment Station, called attention to the distinctive characters of the scurfy bark louse, the oyster shell bark louse, and the San Jose or pernicious scale, and their distribution in the State. The San Jose scale had been found in five localities, into each of which it had been introduced from a New Jersey nursery. So far as could be determined, the scale had been eradicated in each of the infested localities by the heroic measure of cutting and burning the infested plants. From a study of the life zones of the State, Dr. Hopkins was able to point out the regions where the scale was likely to become established, i. e., that portion of the State adjacent to the Ohio River, and the lower valleys of its principal tributaries; also a large portion of the Potomac Valley in the eastern panhandle; or, in other words, the area lying below an altitude of 1,000 feet above tide. Fruit growers were requested to keep a sharp lookout for the pest in these localities, and if it was found, the grubbing up and burning of the infested trees was recommended as the only safe remedy. Legislation to prevent the introduction of the pest from nurseries, and its spread in the State, was discussed at length by several members, and it was concluded that the State could accomplish very little in this direction unless the Federal government took some action to control interstate commerce, and the following resolution with reference to this phase of the subject was adopted:

Resolved, That it is the sense of this society that Congress should enact laws as will tend to prevent the distribution of the San Jose scale and other dangerous insects through interstate commerce, and that States should enact such uniform supplementary laws as will eradicate these pests where they have already become established.

The Manchester Strawberry is not heard from very often now, but it used to grow some very large crops of fruit on heavy loam when well cultivated.

Commercial Orchards.

Hon. Alex. Clohan of Martinsburg brought out the advantages of this State for commercial fruit growing, laying particular stress upon its climate and geographical situation. He then described the evolution which has taken place in the methods of pruning commercial orchards within the last quarter century, pointing to the superiority of the low-headed tree. The peach, he mentions as the "favorite" fruit for that locality; the soil and exposure of the mountain region seems to be especially adapted to this fruit. The favorite tree for planting, among the peach growers, is a thrifty yearling; during the first season after setting the orchard is kept in some hoe-crop, such as corn; after this the ground is entirely given over to the trees, but cultivation is kept up as long as the trees stand. The pruning practised has two objects: To keep the tree thinned and at the same time headed in. Profits are variable; one peach orchard of less than 100 acres, that was planted as a venture on virgin soil, returned this year (its first crop) over \$15,000. What is now needed is further experiments to determine the limits of the peach belt in this State.

Methods of Propagating Fruit Trees.

Under this title, Professor L. C. Corbett of West Virginia University discussed the weaknesses that are liable to arise in trees either from budding or crown graft-

The Fruit Garden.

Plum Trees.—Keep an eye open for caterpillar nests. The pruning should be done as soon as the weather moderates. There will not be much required if the trees are bearing freely, except to remove any branch that is growing across another. Pruning of the trees before bearing time requires judgment, otherwise the probable result after three or four years will be a mass of foliage, through which it is impossible to see in early summer—that is, if the trees have had liberal treatment (which is requisite for all fruit trees).

How to Prune.—That judgment referred to consists in cutting out entirely all surplus shoots instead of cutting back all the summer growth at one-third or one-half the spring pruning. There is too much of this systematic annual pruning business done. We get hold of a young tree and half starve it to keep it in subjection, and by working with the knife fill up the center with half ripened wood, until the tree has exhausted its feeding ground. Whereas by letting the necessary shoots extend spurs will form almost the entire length. We had this summer trees of Schuyler, Gage and Lombard, with arms six to eight feet long, actual ropes of plums. Perhaps the best way to make my meaning plain will be to give figures taken from a Smith Orleans tree planted six years.

Peach Trees.—Don't rush the pruning until the severe weather in your locality is certainly over.

J. HOLLOWAY, R. I.

The Vegetable Garden.

Season Advancing.—The time has now arrived for increased activity in the garden, and as the pressure of work increases, if it be not kept well in hand, something is liable to be overlooked, and as early crops of vegetables are mostly appreciated, no pains should be spared to attain them.

The hurrying of seed sowing before the ground is well prepared and warm, does not insure the earliest crops; the best cultivators are guided in these matters by the location and the condition of the soil. It is better to wait a few days than to sow any seed before the soil becomes warm, and in the right condition for working. A little care in this respect will insure better germinating results.

Hot Beds.—The hot beds should be in full swing this month, freely ventilated every fine day and carefully protected from frost. In this way the temperature should be kept as equable as possible, avoiding all sudden changes. The sashes should be opened a little as early as the sun shines upon the glass, and closed early in the afternoon, to "bottle up" the sun heat. Lettuce in different stages of growth for successional transplantings, should be coming along; also, radish, spinach, etc.

Beets, Early.—A sowing of the early Egyptian Beet made now in the hot bed, will make nice young plants for transplanting outside as soon as the weather is settled.

Leeks.—These are among the hardest vegetables in cultivation, and very useful for culinary purposes; good cooks frequently using both tops and bottoms. A few seeds sown in March in the hotbed or in the early border, as soon as the weather is favorable, the plants, when ten inches high, transplanted into trenches six inches in depth, and heavily manured, will give a crop. Make the trench wide enough to plant double rows ten inches apart.

Kohlrabi.—A few seeds of this sown now as directed for leeks and transplanted in the garden, will be fit for early use. It is a desirable vegetable when used young. Withstanding cold weather and drouth admirably, and not so subject to insect enemies as the turnips, and growing also in such places where it is impossible to grow turnips, it is advisable to plant this.

W. M. EDWARDS, R. I.

Chrysanthemums.

Propagation.—This is probably the best time to propagate the bulk of the plants for pot work. Old stools are beginning to move and should be kept a little warmer, say 50 degrees, at night. It makes the cuttings root more quickly. When you run across a plant that is yellow, avoid it though you may be short of that particular variety. Yellow foliage like the poor will be always with you, and will always crop up when the plant gets too much water.

Cuttings that were struck in December and January for specimen plants should be kept moving on gently. In potting them a little burnt vegetable refuse thoroughly mixed with the soil will put the gloss of health on the leaves as nothing else will.

Our ideal pot plants for exhibition flowers are struck now, and finally, in May or June, potted in a 9 inch pot and three shoots taken up. Flowers from these are superior in every way to those from a June struck plant in a 6 inch pot.

Did you ever try the English method with some of the slower growing kinds by rooting now and growing right along without pinching? Mrs. H. Robinson and Major Bonnaffon are two that will give superb flowers that way and will amply repay a longer season of growth.

Novelties.—Go easy on propagating. There have been others that did not live up to their records after the first year.

C. TOTTY, N. J.

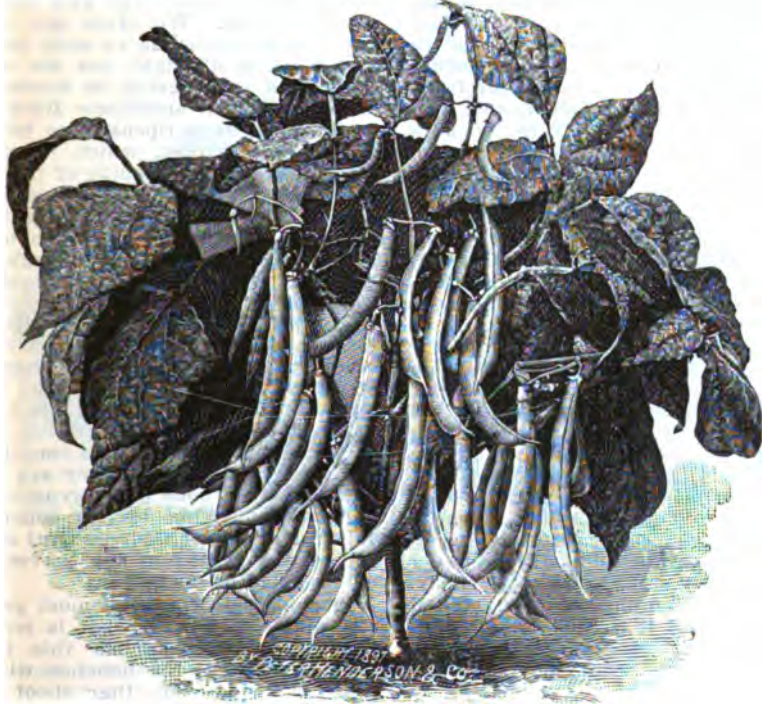


FIG. 56.—BEAN CREAM VALENTINE. (See page 157.)

ing. The weakness that is shown in the trunks of some varieties of apples, plums and apricots was mentioned as liable to lead to the abandonment of such varieties, yet by a system of double working such varieties can be perpetuated.

The next annual meeting is to be held at Martinsburg in the month of October. R. C. Burkhart is president and Professor L. C. Corbett, West Virginia University, Morgantown, secretary and treasurer.

Massachusetts Fruit Growers' Association will hold its third annual meeting at Horticultural Hall, Worcester, Mass., on March 10 and 11. "Peach Yellows," "The Commercial Side of Fruit Growing" and "Small Fruit for Market," will be subjects of discussion. The secretary is S. T. Maynard, Amherst, Mass.

Locality.—As a rule, varieties do best in localities where they originated, and seedlings from any sort which has a fixed character in the same soil and climate are the best new fruits to plant for experimental purposes. Most of our best fruits in cultivation have such origin, and were given extensive trials through local tests, and extended their claims among neighborhoods for years before they were widely tested. The work was local.—W. M. BOMBERGER.

An average branch in the summer of 1894 made a growth of 38 inches, from the top of which grew in 1895 two shoots, 30 and 24 inches respectively. No extra shoots were produced in 1896, and only a growth of 8 inches from each point. On the 38-inch growth there are now twenty-eight spurs; on the 30-inch thirty-one, and on the 24-inch thirty-four spurs.

The following is from a tree of Washington of the same age: In 1894 growth 36 inches, producing from the points in 1895 three shoots, measuring 29, 32 and 24 inches, which, in 1896, gave no extra shoots, only a growth from the points, of 13, 13 and 12 inches. The number of spurs on the 36-inch growth, 20; on the three shoots from it, 17, 31, 18; showing that it is not necessary to cut back the growth to induce spurs.

The foregoing figures also show a decreasing growth each year after the trees commenced bearing, which will continue until there is very little noticeable wood growth—in fact, a tree of Coe's Golden Drop of the same age has reached that point, which means manure will be necessary in the future to keep the tree in first-class condition.

Don't forget to add "no substitution" to your order list.

Grape Growing Under Glass.*

(Concluded from page 50.)

The temperature should not be kept too high at first. I consider 45 degrees by night quite high enough, but, as it is desirable to keep the house as close as possible at this stage, it will do no harm to allow a rise of 20 degrees by sun heat. The temperature should be gradually raised, so that by the time the shoots appear it will be ranging from 55 to 60 degrees at night, with a rise of 15 degrees during the day. A little air must now be admitted on every favorable occasion to help strengthen the growths.

Most of the surplus shoots are removed as soon as the strongest can be selected for retention, but with some varieties (such as Barbarossa) that are somewhat shy fruiter, it is better to leave plenty on until the fruiting shoots can be distinguished. With the variety just mentioned the strongest shoots are just as apt to run blind as the weaker ones. Tying down should not be attempted too soon, as there is nothing gained, and great risk of breaking incurred.

At this stage it is well to keep a sharp outlook for mealy bugs, as any that have been left will now begin to leave their hiding places; it will repay to go over the vines every second day, for if one bug escape now it will mean the presence of hundreds before fall.

Pinching will need seeing to after the shoots are long enough. I stop the main shoots two or three joints beyond the fruit, according to their strength, and the lateral growths as they appear are stopped above the first leaf. At first it is necessary to go over them about every two weeks while the rapid growth continues, then occasionally through the summer until toward the end of the season, when, I think, it is better to let them ramble a little.

A very important point is judicious watering. The amount to be given must be controlled to a great extent by the mechanical composition of the soil; should this be of a loose, porous nature a larger supply is required; if close and retentive less will be needed. In either case watering should stop when the grapes begin to show the least color, and should not again be given until after the fruit is cut. It will often be necessary to give a good watering then to avert the danger of the roots becoming too dry during the resting season. A point on which opinions widely differ is syringing; some growers believe in continuing this up to the time of coloring, and contend that this is necessary for the keeping down of thrip and red spider, but my opinion is that this practice rather produces than prevents, as it weakens the foliage and leaves it more susceptible to the attacks of insect pests; then syringing must necessarily be stopped, for it also injures the bloom of the grape, which is very easily disturbed during the early stages of its formation. Syringing ought to be discontinued after the grapes are set. An occasional good syringing may be given after this should red spider prove troublesome. A bright day, when plenty of air can be given, should be chosen, so the water can be quickly dried from the bunches and little harm will be done to the bloom, as once this is fixed, it will help to shed the water from the

berries, provided the water does not strike with full force on the bunches. During the setting period the atmosphere of the house should be kept as dry as possible. It is a good plan to run the temperature a few degrees higher then and to shake the rods occasionally during the heat of the day, to distribute the pollen.

The cutting away of the surplus bunches is an operation that requires considerable judgment, together with a thorough knowledge of the variety in hand, though the gardener cannot always use his own judgment and do as he pleases in this matter. The employer sometimes insists on having a heavy crop, and in consequence the "finish" of the grapes is sacrificed.

Finish is the end that every gardener strives to attain, but if the vines are compelled to carry too heavy a crop it is impossible to obtain the coveted perfection of color, richness of bloom, large, well-formed berries and good flavor. The vines can certainly be assisted in bearing their heavy burden by liberal feeding, but grossly fed vines never produce properly finished grapes. As the varieties vary so much in vigor and size of bunch, it is impossible to lay down a hard and fast rule as to the exact number of bunches a rod ought to carry. Many consider that one pound to every foot of fruiting cane is amply sufficient, and, generally speaking, this may be taken as a good crop, though some of the more vigorous growers are capable of carrying even more.

Thinning comes next in rotation; as a rule we are always anxious to make a start at this work as soon as possible, as a few days make such a difference in the size of the berries, but it is a mistake to start too soon with some varieties, muscat of Alexandria, for example, some of the berries of which though appearing to set at first stop, swelling at the stoning period. So it is better to wait until the non-stoning berries can be detected, which, by close observation, can be done before the majority have attained the size of small peas. Other varieties, such as Black Hamburg, Buckland Sweetwater, etc., can be thinned at a smaller stage, as they stone much more freely.

A second thinning is often found necessary, but it is well to do it all at once, as it marks the berries to work at them after they have attained any considerable size; but it is by no means an easy matter to strike it just right, even the most experienced being apt to make miscalculations. The thinner must be guided to a considerable extent by the variety he has in hand. Varieties such as the Frontignans, with short, stiff fruit stalks, require considerable more space for the individual berries than do such as Black Hamburg or Barbarossa, the fruit stalks of these latter being longer, and the general frame work of the bunch being loose and open they require to be left sufficiently close, so that one berry will help to keep the other in position; then when the bunch is cut it will keep its shape. Grapes intended for late keeping should be more vigorously thinned than those to be used during the summer, and though it is better to have the berries from the inside of all bunches well cut out, this is especially desirable in the late keeping varieties.

Ventilation is one of the most important details, and one that requires very strict attention, especially during the spring months. The extremes caused by the increasing brightness of the sun on the one hand and the cold

air on the other make it a matter of considerable difficulty to regulate the temperature of the house and at the same time to avoid cold draughts. At that season the airing is best done as much as possible from the top. As the season advances and the extremes become less marked, the trouble is considerably lessened, but when coloring has commenced and it is necessary to have a little night air on, then the greatest danger from mildew arises. I find that it generally makes its appearance during the prevalence of easterly winds, and by leaving air on at the west side only the danger from this source is materially lessened. The leaves become harder in texture toward the end of the season, and are less subject to the attacks of mildew. More night air being then required for the ripening of the wood, it can be given with more safety, but it is not advisable to leave full night air on until after the fruit is cut.

The number of varieties now in commerce is so large that it is needless here to go into their individual merits. Were I confined to two varieties, one black and one white, I should certainly choose Black Hamburg and Muscat of Alexandria. We often see these two grown together in an early house. The black is all right, but for early work, if a white grape be wanted, I would prefer to substitute Buckland Sweetwater, as it ripens from two to three weeks earlier, which means a great deal at the beginning of the season. For the second house, or what may be termed the general crop, Muscat of Alexandria, Muscat Hamburg, Mrs. Pince and Black Hamburg are all excellent varieties. For latest house, with a view to keeping, Lady Downe's, Black Alicante and Barbarossa are well suited. To give these varieties justice and enable them to properly ripen their growths, they must be started not later than the first of April. These varieties will hang in good condition for a considerable length of time after they are ripe, but should be gone over occasionally and any decaying berries removed. When deprived of their natural shading by the falling of the leaves the bunches had better be cut.

The method of storing most generally practiced now is what is termed bottling. To accomplish this it is necessary to cut the bunches with a foot or more of the shoot attached, and the end of the shoot is inserted into the neck of a bottle of water. Some use a few small pieces of charcoal in the water to help keep it sweet and prevent the necessity of frequently changing. The bottles are fixed in racks with enough slope, so the bunches will hang clear. A perfectly dry, dark room, where a temperature of about 40 degrees can be maintained, is a most suitable place for storing.

American Forestry Association at its annual meeting, held at Washington, D. C., elected as president Francis H. Appleton of Boston, Mass.

Portage (O.) County Horticultural Society held its nineteenth annual meeting at Ravenna, Feb. 17. The following officers were elected: Frank Ford, president; A. D. Olin, vice-president; Andrew Wilson, secretary; W. A. Hammond, treasurer; A. J. Jennings, T. B. Dickinson, L. Smith, executive committee.

Arkansas State Horticultural Society.—The annual meeting and exhibition of this society will be held at Little Rock, May 12, 13 and 14.

*Lecture before the N. Y. Gardeners' Society by William Scott.

Lawns and Potash.

I have read with interest Lawns and Potash, in your issues of Feb. 6, by Mr. John Shore, and Feb. 20, by Mr. Gomersall. I agree with both in regard to the value of potash as a lawn dressing, but why not give a good square meal when you are about it? A lawn needs plenty of feeding to back it up against the dry summers and severe winters with which it has to contend, and I think the results will amply repay the little extra outlay involved.

A formula which I used last spring with good effect, was nitrate of soda, 500 pounds; tankage, 790 pounds; dissolved bone, 350 pounds; muriate of potash, 360 pounds. Wood ashes are, I think, an expensive manure, considering potash as the principal manurial constituent. The ratio varies so much. The virtue of wood ashes depends greatly on the kind of wood burned, and also how they are handled before getting to the gardener or farmer.

The average ton of wood ashes does not analyze more than 4 or 5 per cent.

he would employ as a top dressing for a lawn, either as a mulch or as a fertilizer. I cannot agree with him as to their being of such value as a top dressing for lawns. They have very little virtue as a fertilizer, and, I think, even less as a mulch. If put on heavily enough to be of any benefit as such, they will certainly injure the grass.

I would prefer to use some good rotten manure, putting it on in the fall, thus killing two or three birds with one stone, as it were, by feeding the lawn, mulching it for the next summer and at the same time incorporating humus with the soil, to help retain moisture. I have seen coal ashes used with good results, on heavy clay lands, but doubt whether they can be used to as good advantage as a good dressing of stable manure, black swamp muck, leaf mould, or anything rich in humus, and in which stiff or clay lands are usually deficient.

A few words on the treatment of the lawn resembling a "pavement or stubble field." My plan would be to plow and summer fallow it, working it on every chance possible to get it clean,

Novelties of the Season.

(FIFTH SERIES.)

The descriptions given are those of the introducers.

Pea.—Fig. 50.

This variety is 2½ feet in height; the vine is robust, and the foliage is large and vigorous, of a light green color, closely resembling Telephone in general appearance, though dwarfer, and it is very much earlier. The pods, which are as large as Telephone, are produced singly and in great abundance, and are well filled with from six to eight peas of enormous size, but its chief value lies in its earliness, and when we consider that a pea so large and as rich in flavor as any of the later wrinkled sorts can be had three days after Henderson's First of All, its value can be readily seen.

Cream Valentine Bean.—Fig. 56.

This variety presents improvements different entirely from those of Black Valentine, and is distinctly superior to its parent, the Early Red Valentine. The plant is considerably larger than the old Valentine, though it may be planted at exactly the same distance. It preserves all the characteristics of its parent, particularly in the absence of stringiness. The pods are borne in enormous quantities close to the center of the plant, and are not only longer but much thicker and more meaty than any of this type. Another advantage which will recommend it to all is that the beans retain their tenderness much longer than any other variety.

Mignonette Lettuce.—Fig. 57.

This is a small, sturdy, russet colored Lettuce, distinct and unique, and of great value. The entire plant measures only seven inches in diameter, and is more solid and compact than any existing variety. The outer leaves are few, and these cling so closely to the head that it is almost all head. The few outside leaves are as deeply crumpled as a Savoy Cabbage and richly colored with russet red and bronze green of varying shades. The cut section shows the character of the solid heart, which is of a creamy yellow waved with pale greenish white. It is wonderfully hardy, resists drought and excessive moisture—a most valuable feature in our climate. It is fit for use five days after Boston Market, which, combined with its long standing character, constitutes it an all-seasons variety.

From the catalogue of Peter Henderson & Co., New York.

Australian Brown Onion.

This is a new variety from Australia, where it is grown in preference to all others, and practically every grower confines himself to this one variety. The Onions are flat, but thick through, of a light brown color with white flesh. They are extremely early in ripening, not making any stiff necks or scallions.

Fordhook Pickling Cucumber.

This is wonderfully prolific, and may be termed a continuous bearer. Its most valuable characteristic is its habit of keeping up its supply of pickles after such varieties as Green Cluster, Jersey Pickle, Early Frame, New Everbearing, etc., have quit setting on.

From the catalogue of W. Atlee Burpee & Co.

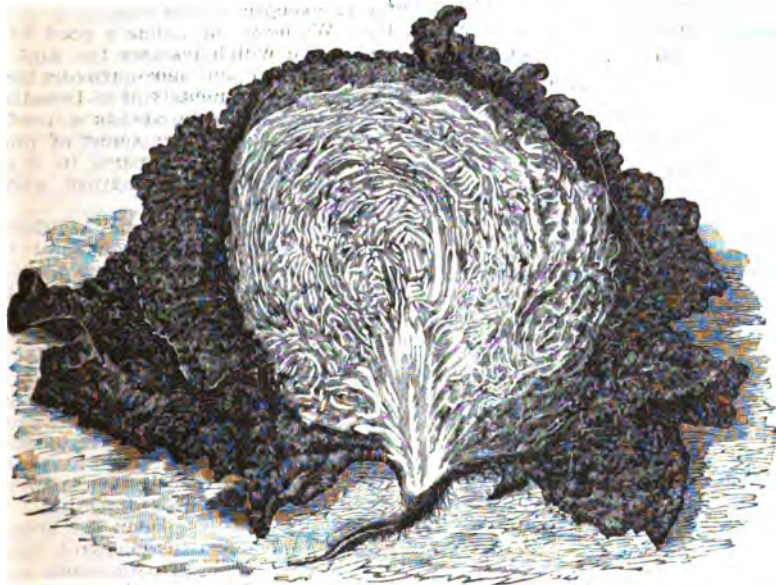


FIG. 57.—LETTUCE MIGNONETTE.

of potash, with a little phosphoric acid, and the price ranges from \$10 to \$14 per ton, which you pay for 80 or 100 pounds of potash, the commercial value of which is \$5 or \$6 in the form of the sulphate or muriate. Of course if one has the fire heap Mr. Gomersall speaks about, where weeds, hedge pruning, etc., are burned, and if the quantity will guarantee the trouble, it will pay to spread the ashes from such a heap on the lawn or elsewhere, rather than let them go to waste. But the question is, how much of this refuse must be burned before you get sufficient ashes? If it be intended to burn on the same heap, for any length of time, with the idea of accumulating a quantity of ashes, and the heap be left exposed to heavy rains, I am afraid the fertilizing qualities of the ashes will be reduced to a minimum, and I don't think there need be any fear of them burning anything. I burn 100 to 200 loads of tree trimmings in the course of the year, and when I get through I can put the ashes in a very small space.

Mr. Gomersall, himself, makes the same mistake as that for which he calls Mr. Shore to account, namely, not stating what quality of coal ashes

then with a good subsoil plow well loosen the bottom, give a good dressing of manure, plowing it in, work the surface down smooth preparatory to sowing the seed, which should be done from the 1st to the 15th of September, using a lawn mixture from any reliable seed house, at the rate of 4½ bushels to the acre, giving a good rolling with a heavy roller, and after the ground gets frozen up, a coat of manure. Everything else going right, this will give a good permanent sod and at less expense than it would be to adopt the method advised by Mr. Gomersall. T. HARRISON, N. Y.

Is It a Fact?—A potato grower says if you throw the furrow from the north side of the row you make a shade in which if you drop your seed, it lies for a long time before warm enough to germinate. His plan is to prepare the ground thoroughly, plow deep, manure well; lay off east and west, drop your seed and cover on the south side of the row, covering about two inches deep. This forms a bank of earth just the right shape to catch the sun's rays and produce germination.—The Farmer, Dallas, Tex.

Armenian Relief Fund.—A number of orange growers on the Pacific Slope put up a car load of oranges (329 boxes) which was sold in New York for the benefit of the Armenians.

AMERICAN GARDENING.

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY

A. T. DELAMARE PTC. & PUB. CO. LTD.

ROSE AND DUANE BROS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1897.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

A Question and a Thought. THE necessity for a thoroughly understandable code of description to be used by these who make the catalogues is impressed upon us the more we look into some of the productions. Many compilers run so exclusively on superlatives as to positively defeat their best interests; for a continual outpouring of such qualifications as "superb," "most remarkable," as to quality or effect, and "deepest" or "most intense" as to color, are only of value to their users when employed with careful discrimination. It is purely folly for one to put extravagant adjectives to all the objects offered for sale. The only conclusion to be made is that it is assumed that the buying public is composed mainly of fools, and while it may be an accepted truism that the "public" is to be so described, it is worthy of a moment's thought that the seedsmen and plant dealers are not appealing to "the public," but to a portion of it only, and that portion composed of individuals of fair intelligence.

It is a noteworthy sign of the times that those concerns which have in the past been notorious for the false impressions conveyed by their catalogue descriptions and illustrations are either greatly modifying their tactics, or are slowly but surely being relegated to the bottom

of the list of available houses from which to purchase, a natural sequence in these days of an enlightened horticultural press. It is again an illustration of the old adage: "Slow and sure wins the race."

We have been led thus to animadvert by the perusal of a letter from a correspondent who asks, and very reasonably, too—

What do the terms "good bloomer," "free bloomer," "copious bloomer," etc., mean as applied to Hybrid Perpetual Roses? Do they mean that the Roses mentioned give "free" or "copious" blooms, in relation to quantity, during their regular flowering season (June), or that "free" or "copious" signifies that the flowering is prolonged through the fall and summer?

We are forced to confess our inability to solve the points raised. If our lethargic Rose Society were a body of merit and deeds, here indeed, were work for it to undertake; the compilation of a classified and systematic Rose list; but such a hope is vain. The Society has no sympathy with the Rose, except as a commercial plant. Is it impossible to arouse any live interest among the amateurs of America to move them to act in the organization of a genuine Rose Society, one where the Rose shall reign; not the dollars and cents that a few may squeeze out of her?

DEATH OF LUTHER TUCKER.

It is with deepest regret that we have to record the death on Feb. 23 last of Luther Edward Tucker, senior editor and proprietor of the "Country Gentleman" of Albany, N. Y. Our late brother was in his 63d year and was born at Rochester, N. Y. His career has been one of unremitted hard work and conscientious endeavor.

DEATH OF E. W. HERENDEN.

On Feb. 23 Edward W. Herenden, president of the Herenden Manufacturing Company, died suddenly at Geneva, N. Y. Born at Farmington, Ontario County, N. Y., on July 21, 1831, he graduated from Harvard, and was for a term of three years a schoolmaster, but entered into the business of a nurseryman at Macedon, N. Y., in partnership with the late J. J. Thomas. After one or two changes in the nursery business, Mr. Herenden formed the Thomas Harrow Company in 1874, which in 1886 was succeeded by the Herenden Manufacturing Company.

Free Farm Labor Bureau.—In order to assist the thousands of unemployed men in Chicago, the Workingmen's Home, at 42 Custom House Place, has established a Free Labor Bureau, and is prepared to furnish men to farmers and others in all parts of the country without expense to either. Employers applying should state definitely as to the kind of work, wages to be paid, and if railway fare will be advanced.

Plans for public grounds.—"Many citizens enter the Park Commission who know enough not to venture upon originating plans for parks, but an inexplicable number of them don't know enough to understand that alterations in public places demand as much deliberation by competent authorities as when places of that sort were first made. The idea that there is anything in a 'plan,' and that the design of a public place requires a higher quality of thought and training than can be supplied by an engineer or paving contractor, is something which has to be learned even by men selected for the honorable and delicate task of guarding the city's parks."—N. Y. "Sun."

The "Best" Variety.

Why do not some of our extensive growers who have been experimenting and testing for years tell us definitely what is the best early, medium and late peach, pear, strawberry and other kinds of fruit? What is the best variety for sandy soil, clay and loam?

These questions have been never-ending themes for argument and discussion at all our horticultural meetings and in the agricultural press for years, yet the problem is no nearer being solved than at the beginning. Nobody can answer the question now, and it probably never will be answered definitely.

What is a good variety? This is an easy question. It is not so well-understood as it should be that when a plant or tree bears fruit it is simply breeding, or multiplying its species, and the pulp forms only for the seeds to grow in and assist their distribution. Some varieties will bear seeds without developing the pulp beyond a limited extent, and often impart to it a bitter flavor and woody texture. Such a variety we discard as worthless. Only about one in 10,000 seedlings will be an exception to this rule.

We may, then, define a good variety as one which possesses the ability to withstand the most unfavorable climatic conditions, is full of breeding or fruiting stamina and has a tendency to develop a large amount of pulp in seed bearing and imparts to it a delicious flavor, good texture and desirable color.

Individual plants behave differently under different conditions and treatment, hence their pedigree or history is always essential to success. What stock breeder would be content to know that his Jersey was a thoroughbred? He must know the individual points of excellence and whether they come to her by chance or through a long, scientific system of breeding to build up good qualities and eliminate defects. Horticulturists are just beginning to recognize the importance of these laws in plant breeding.

Plants have a passion for breeding, and if not kept under control, limiting them to their ability to reach perfection in seed bearing, they rapidly retrograde and become wholly or partially impotent; hence, it is equally important that we should know the history of the plant and its present ability in this direction.

Then, again, plants are much like the human family. They have their affinities, with strong likes and dislikes. There are people who really enjoy strong tobacco, garlic, limburger cheese, blood puddings, etc., while many others would cease to exist if compelled to feed on such fare, or, at least, they would not flourish on that diet. So in the soil the plant finds something of which it is especially fond, and grows fat, while the same ingredient is offensive to another sort, and so it pines away, but may find the congenial soil near by and flourish wonderfully.

These deficiencies are found in clay and sand alike; hence, when any one asks us to say which one out of a hundred or more desirable varieties will do the best of all, we are forced to admit we don't know. On our own farm and under our method of fertilizing and tillage we can say a certain sort leads everything and another one is an entire failure, while a neighbor not a mile away reports exactly the reverse. The only way we can tell definitely is to make a trial.

There are many new and very promising sorts which are known to lead all others in certain localities, and when these are ascertained they are the sorts to set very largely. Every enterprising grower will be on the lookout and test highly commended varieties, and if, perchance, he strikes exact adaptability to soil and market, and then administers proper methods of culture and restriction to preserve and accumulate good qualities, success is assured.

Out of many millions of people who have lived and died, only a very few have possessed qualities of brain and brawn which enabled them to leave their mark upon the world. The same is true of plants. Varieties come, and shine like meteors for a season, but, falling into uncongenial surroundings, disappear, and their places are taken by others. Out of this great host the number which have acquired nearly universal fame is less than a dozen, and yet, it is true, we are making wonderful progress in horticulture.

R. M. KELLOGG.

Three Rivers, Mich.

To Preserve the Forests.

President Cleveland, on the recommendation of Secretary Francis and a Forestry Commission of the National Academy of Sciences, has signed and promulgated thirteen proclamations establishing thirteen additional forest reservations, containing an aggregate area of 21,379,840 acres.

The report of the Forestry Commission to Secretary Francis, and his report to the President, give interesting and valuable information concerning this important Executive act. An appropriation of \$25,000 was made by Congress "to enable the Secretary of the Interior to meet the expenses of an investigation and report by the National Academy of Sciences on the inauguration of a national forestry policy for the forested lands of the United States." Under authority of this act, and with the approval of the Secretary of the Interior, Professor Wolcott Gibbs (president of the National Academy of Sciences), appointed a commission, consisting of Professor Charles S. Sargent, director of the Arnold Arboretum at Harvard University; General H. L. Abbott, United States Engineer Corps; Professor William H. Brewer of Yale University, Mr. Arnold Hague of the United States Geological Survey, Mr. Alexander Agassiz and Mr. Gifford Pinchot, the president of the Academy, being ex-officio a member of the commission.

Together with previous reservations, the total area of secured forest land is now about 39,000,000 acres. The President could not have done any act which would be of more ultimate good to the country. Our forests must be preserved.

Birds and the Garden.

President Nowlin of the Arkansas State Horticultural Society presented the following resolution at a late meeting of that body, and it was unanimously adopted:

Whereas, It is a fact well recognized among horticulturists that birds are the fruit growers' best friends, in the destruction of injurious insects, which annually injure and destroy a large percentage of our fruits and plants; and

Whereas, The amount of injury and destruction made by insects amounts annually to millions of dollars, and would largely increase, except for the friendly offices of insectivorous birds; and

Whereas, It is the patriotic duty of every horticulturist and well-meaning citizen to preserve and protect these little feathered friends and sylvan songsters, therefore

Be It Resolved, That the Arkansas State Horticultural Society favors and recommends the General Assembly of the State to throw the protecting arms of the law around these little friends of the farmers and fruit growers, and create suitable laws to accomplish that purpose.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

A Misprint.—Let us get the botanical name of the Casabanana straight, if it takes all summer. It should be (as my authority goes) "*Secana odorifera*." My usual s's and i's may be misinterpreted now and then, it seems. Mr. Thomas Meehan thinks this may not be the proper name after all. Mr. Normand of Louisiana wrote me that "Dr. Morris of Kew" recognized the plant as entitled to that name. I believe the name *Benincasa cerifera* was applied to "Casabanana" at least once, but this was found to be incorrect. Let the final decision be what it will, we can go on and make ourselves understood by calling it Casabanana, as this common name will doubtless stand.—SAMUEL A. COOK, Milledgeville, Ga.

A Pointer for Rockland County Farmers.—Many years ago fine peaches were grown in this county; gradually they died out. The ground has had a long rest, just what it needed. Many of the farmers have a few acres of land to spare, and as they are not making any money, why not set some peach trees? The cost is but little; the market is near, and we predict that the venture will be a success. Choice late varieties will pay as well as any.—VIDI.

A Suburban Garden.—I notice in a recent issue of your paper, your elaborate offers in premiums, and I doubt very much if such have ever been equaled. And verily if any one chooses to take hold of your valuable offers it need not be long before he can sit under the shade of his own fruit trees and vines, and view his flowers and vegetables growing in their luxuriance. Many a one in a suburban home, no matter how small the plot, would be astonished what an amount of flowers, strawberries and vegetables can be grown, and especially by taking up the good varieties of such things as you offer in your premium list, and I firmly believe that they are all of them good. There have been in times gone by much trouble and annoyance in many suburban homes on account of trespass, and many a one who has planted a garden has been disgusted by having the fruits of the toil destroyed by dogs, chickens, or something of that sort. But at a small expense in the purchase of galvanized wire netting they can be kept out. This can be purchased in very ornamental styles, and with vines and creepers a small garden may be made a thing of beauty and a joy forever.—MARYLAND.

Toy Incubators.—Last year an enterprising dealer put upon the market what

might fairly be called a toy incubator, viz., a machine of about one-half the usual smallest capacity, at a very low price, and intended to catch the boys and girls. The idea was an excellent one, and that other manufacturers appreciate the fact is shown by two of them putting forth such machines for the coming year. Hundreds of these machines will be sold; and scores of them will be absolute failures, through the fact that they are not what they profess to be. One of the makes, claiming an almost absolutely even heat throughout the egg chamber (less than a degree of variation) showed an actual variation of 8 degrees between different portions of the same. This is mainly because the machine is single walled. No reasonably favorable results can be expected from such a machine. If you buy a machine for the boys, be sure that it is double walled, with a good air space between the walls, and that it has a first class regulator. Otherwise it will be merely

Barberry as a hedge plant.—On page 39 of American Gardening for Jan. 16 is a short note on "Barberry as a hedge plant for Iowa." In 1840, while at the Union Academy at Red Creek, Wayne County, N. Y., twenty-five miles from Oswego, I saw a beautiful barberry bush growing on the lawn in front of a minister's house. Large wheat fields were near. I was anxious to take home a sprout of the bush to grow. I expressed my desire to the minister. He said he would rather I would take the entire bush, roots and all, for he had been notified by the farmers that if he did not destroy it, they would commence suits at law for damages. The minister said the wind blew so long from one quarter, and so long from several others, and then pointed out to me the blasted wheat caused by the barberry bush. The barberry bush had caused many acres of blast for ten years. I hope the Iowa farmers will not use it if they wish to grow wheat near it.—C. R. EDWARDS, N. Y.

(It cannot be too largely known that the wheat rust fungus passes a portion of its life on the barberry.—Ed.)

Ornithogalum Arabicum.—Replying to the note on page 94 this can be planted in pots or boxes the same as hyacinths until taken in the house. The bulbs like the temperature to be rather warm—60 degrees at night and 70 to 75 degrees in the day time, and a place as near the glass as possible to prevent them from getting too opindly. I have bulbs in bloom just now, a beautiful, large, white flower with a black center and a distinctly aromatic odor. O. A. album is pure white, dark center; O. A. aureum, golden colored. O. thyrsoideus has yellow flowers in dense masses, from ten to thirty flowers, borne on an erect scape. There is the pretty little P. umbellatum, or, as it is called in southern Europe, Star of Bethlehem, that has escaped from the gardens into the meadows and has become very troublesome.—N. BUTTERBACH.

COPIES OF

50,000

WILL BE MAILED TO

50,000 Buyers of Seeds and Plants

SATURDAY, MARCH 13, 1897.

We believe advertisers generally will recognize the value of a thorough representation in this Special Edition, and we herewith solicit your patronage.

Advertising Pays

But Advertising in American Gardening Pays Best.

No advance in rates over our regular charge of 25 cents per agate line will be made. Copy for your advt. in this issue must be in our hands not later than March 6th.

Mushroom Growing Puzzles.

(Numerous attempts, following carefully prescribed methods, have failed to produce a crop of mushrooms. Last spring a bed made in the winter that had entirely failed was not removed, being out of the way; this autumn mushrooms appeared clinging to the walls, and wherever there was any moisture, watering and attention then (the bed had not had a drop of water for nine months) produced a small crop, and ever since there have been a few mushrooms coming now and then, i. e., for three months.

How is this explained? Was the growth spontaneous? If not, how could the spawn start when it did, having failed to grow under most favorable circumstances? Can you give me any rational explanation of constant failure?—W. I., London, Ont.)

—Mushroom growing is at times a lottery, and the action of the spawn and ultimate success or failure difficult to account for. If, as stated, the beds were so favorably made and situated, failure would have to be credited to the following, either individually or collectively: Poor spawn, it perhaps having been exposed to extremes of heat or moisture, and so damaged; the presence of some harmful ingredient in the manure, perhaps caused through the feed or phylis given to the horses; spawning at too high a temperature and the beds thus dried out. Very probably this, last is the case. Should that be so, read the hints given on pages 793 and 802 of last volume.

Renovating Old Lawns—Bulbs in the Grass.

(In your issue of Jan. 2 Dr. G. H. Sadelson has an interesting article on "Ornamental Gardening," especially so about the lawn, on certain points of which I want information, viz.:

First—How should I treat old lawn before sowing seed and how much to one-eighth of an acre?

Second—We have a splendid water system. Is it wise to use water daily from hose and sprinkler?

Third—I use bone seed meal in the spring, about sixty pounds to one-eighth of an acre, and in, say, July about the same weight of cottonseed meal. What do you recommend as to quantity and frequency of these? I do not use manure at all. Is cottonseed meal merely a stimulant or is it a fertilizer?

Fourth—The doctor recommends leaving clippings of grass on lawn to mulch, etc. Does he mean to leave all the clippings during the whole summer?

Fifth—In front part of lawn, about 1,500 square feet, I have about 600 crocus bulbs in the sod. Do they hurt the lawn? It seems to me since they were put in that the sod is worse in the spring, more ragged and ground heaved up, than before.

Sixth—Should sod after sowing on it be heavily rolled? Could this be done while crocuses are getting above ground without hurting them?

Seventh—Should I add white clover seed to the fine mixed lawn seed we get from nurseries, and how much for one-eighth of an acre?—S., Pa.)

—If not prepared to dig up the lawn scarf it, in order to find lodgment for the new seeds; this can be done by thoroughly combing the turf with a heavy and sharp-toothed iron rake, or it may be gone over with a round-pronged steel fork and prised up in that way. Then sow about six quarts of good lawn mixture. If there be no objection to clover, eight ounces of white clover could also be sown. This last named makes a delightful green, but gets winter killed. After sowing the grass seed a dressing of fine earth is advisable. The time for these operations is immediately after the frost is clear out and the soil is slightly warmed. When growth has commenced use the

March Hood's Sarsaparilla

April, May are the months in which to purify, vitalize and enrich your blood, to prevent spring humors and serious illness. Now take

The best—in fact the One True Blood Purifier.

Hood's Pills cure Liver ills; easy to take, easy to operate. 25c.

GRAY HAIR MADE DARK

By a harmless Home Wash. Also makes the hair grow. Full directions and recipe for 25 cts. Mrs. A. HUNTLEY, 4212 Egan Ave., St. Louis, Mo.

Mention American Gardening when you write.

Danish Ballhead Cabbage.

IMPORTED RELIABLE SEED.

Pkces on application. Catalogue Free.

FRANK H. BATTLES, Seed Grower Rochester, N. Y.

Mention American Gardening when you write..

MY STRAWBERRY CATALOG FREE

of interest to progressive growers and careful buyers. SEND FOR IT.

C. N. FLANBURGH, Leslie, Mich.
Mention American Gardening when you write.

BEAUTIFUL TREES, PLANTS and NATIVE FLOWERS for parks, private grounds and the trade. Write for lowest prices W. M. HARRISON & SONS, Wyomansock Nurseries, Lebanon Springs, N. Y.
Mention American Gardening when you write.

"FLOWER QUERIES" New book on floriculture. 10 Chapters, written in questions and answers, discussing 500 floral topics. Price, 25 cts. The COURIER, Box A, Chatham, N. Y.
Mention American Gardening when you write.

BANANAS AND PAPAYAS

Greatest of all bedding plants, see illustration from life in American Gardening, Feb. 27. Our original catalogue tells about the TROPICAL ORCHARD HOUSE, a new horticultural industry of greatest interest. Send for it. ROSE VALLEY NURSERIES, Donogola, Ill.

Mention American Gardening when you write.

"Strawberry Plants That Grow."

Standard sorts: \$1.50 to \$2.50 per M. Best Rasp. and Blackberry plants, \$3.50 to \$5.00 per M. My 1897" catalogue mailed free.

C. E. WHITTEN'S NURSERY, Bridgman, Mich.
Mention American Gardening when you write.

BERKSHIRE, Chester White, Jersey Red and Poland China Pigs. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep, Fancy Poultry, Hunting Dogs, Home Dogs. Catalogue. S. W. SMITH, Cochranville, Chester Co., Penna.
Mention American Gardening when you write.

GLADIOLUS. A Superfine Mixture, made up of very best named varieties and choice un-named seedlings. Fine blooming bulbs at \$1.00 per 100, \$9.00 per 1000; by express, purchaser's expense.

J. A. REED, (Gladiolus Specialist), CANTON, OHIO.
Mention American Gardening when you write.

Southern Vermont Nursery

GREEN MOUNTAIN GRAPE VINES, 25 cents each. VERMONT BEAUTY PEAR TREES, 5 to 6 feet, 25 cents each. Send for Catalogue.

C. A. HINDSILL, Prop., Lock Box 459, North Bennington, Vt.
Mention American Gardening when you write.

Are You Interested in Horticulture in the SOUTH?
THE GLEANER, Austin, Tex.

...WILL TELL YOU ALL ABOUT IT...
Mention American Gardening when you write.

Have you read about THE COMET \$2.50 to \$5.00. Beats them all! Don't buy till you see them. Send postal card for free cata. A harvest for agts, write today. H. B. RUSLER, Johnstown, O.
Mention American Gardening when you write.

Blindness Prevented

The Absorption Treatment removes the cause of impaired vision and diseased eyes. It is the most successful and humane treatment ever devised. Hundreds who have been pronounced incurable have been successfully treated at our Sanitarium and at their homes.

No Knife. No Risk. Pamphlet Free. Read it. Address, BEMIS EYE SANITARIUM, Glens Falls, N. Y.

Mention American Gardening when you write.

POSTPAID 20 Strong GRAPE VINES for \$1.
4 Worden for 25c.; 4 Niagara, 25c.; 4 Moore's Early, 25c.; 4 Brighton, 25c.; or the whole 20 as above for \$1. Also Apple, Pear and other trees cheap. 10000 Strawberry plants, \$3 per 1000. Raspberry plants, \$2 to \$3 per 1000, by freight or express. Everything guaranteed healthy and true to name.

F. L. WRIGHT, Plainfield, Mich.
Mention American Gardening when you write.

GRAPE VINES

All old and new varieties. Extra quality. Arranged in time. Lowest rates. Descriptive Catalogue Free. T. S. HUBBARD CO., FREDONIA, N. Y.

Mention American Gardening when you write.

READER IF YOU RARE FLOWERS LOVE choice only, address ELLIS BROS., Keene, N.H. It will astonish and please. FREE. Mention American Gardening when you write.

1,000 Peach Trees One year, from bed 2 to 3 ft., mostly branched, with freight prepaid to any station east of Miss. River for \$20; or 500 for \$11.50. Sample prepaid, 25c. Other sized trees proportional prices. R. S. JOHNSTON, Box 21, Stockley, Del.
Mention American Gardening when you write.

HAIR'S FAVORITE. THE COMING NEW BERRY: does competition; the best introduced for years. Forty other kinds pedigree plants. Raspberries, Blackberries, Asparagus roots etc. How's quarters for Second Crop Seed Potatoes, double crop and earlier than other seed.

Descriptive Catalogue Free. J. W. HALL, - - Marion Station, Md.
Mention American Gardening when you write.

ALL THE LATEST NOVELTIES AND PLANTS THAT CAN'T BE HAD ELSEWHERE. Camellia, Italian and Anemone, at \$1 each. New Roses, New Fruits, New Shrubs, New Bulbs. 10 Cents for \$1.—\$ for 50 cts. Book on Cacti 100 pages, 100 cts. 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free. A. BLANC & CO., - Philadelphia.

Mention American Gardening when you write.

MILLER RED RASPBERRY

A SPECIALTY
Choice fruits, new and old. Our catalogue sent free will save you money.

MYER & SON, Bridgeville, De.
Mention American Gardening when you write.

ASTERS, Queen of Market, the earliest and fault's Pmony Perfection, pkt. 10c.; os., \$1.00. Trail White Comet, pkt. 10c.; os., \$2.25. Look like Chrysanthemums. Dracema, fine mixed, pkt. 25c.; os., \$1.00. Verbena, Mammoth, pkt. 5c.; os., \$1.25. Phlox Drummondii, dwarf, fine mixed, pkt. 10c.; os., \$1.50. Write for sample.

H. BEAULIEU, Woodhaven, L. I., N. Y.
Mention American Gardening when you write.

GREAT VALUES IN SURPLUS STOCKS

I will mail at 10c. os.; 30c. 1/2 lb.; or 90c. lb., the following first-class seeds: CABBAGE, Wakefield, Winnigstad, Succession, Flat Dutch. CELERY, White Plume, Golden Self Blanching, Giant Pascal, Golden Heart. ONION, Prize Yellow Globe. TOMATO and MELON, all standard sorts, and with every order direct from this advertisement, will include FREE a package of NEW EARLY IDEAL SEED CORN, worth \$1 a kernel to any gardener. Don't miss it!

ISAAC F. TILLINGHAST, La Plume, Pa.
Mention American Gardening when you write.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.60.
THE OHIO FARMER is a large, 30 page weekly, \$1 per year. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for Illustrations, Correspondence and Market Reports than any other of its class. It is the Best and Costs no more than others. Send for a SAMPLE COPY to THE OHIO FARMER, Cleveland, O.
THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1898—14 months. If ordered at once. Address all orders to AMERICAN GARDENING, P. O. Box 1697, New York

roller instead of the mower, and repeat this for two or three weeks.

In watering we should advise flooding with the hose at intervals.

Cottonseed meal is a fertilizer rich in nitrogen.

It is well to leave frequent mowings on the ground if well scattered and not very long at time of mowing, but to leave all would be apt to cause trouble and become unsightly.

Crocus bulbs do not to any appreciable extent hurt the lawn, other than that after time of flowering they are a little unsightly. If rolled before flowering they would be damaged. Of course, when very numerous in one spot they would cause slight upheaval when beginning their growth.

Fruit Growing in West Florida.

Having just returned from a brief visit of inspection to the West Florida Highlands, so called, I have thought perhaps your readers might be glad to know the opinions I have formed. We are apt to associate oranges, alligators and mosquitoes with Florida; but I was not in the orange belt, and as for alligators and mosquitoes, if they ever belong in that portion of the State included in my visit (and the local real estate men insist they do not), they were "under cover" while I was there.

It was delicious fruit growing that I was especially interested in. My first stop was at De Funlak Springs, a place well known within Chautauqua circles as the seat of the Winter Assembly. Though the people thus drawn here are not especially interested in fruit growing, enough has been done to demonstrate the adaptability of the soil to fruit crops. This is especially true of certain pears of the Asiatic type—Le Conte, Kieffer, and Garber. The peach also does well. The fig is grown to some extent, but perhaps not as much as it deserves. Among our Northern grapes the Niagara seems to stand in the front rank, although it is claimed that many others do well. The great grape of the South, however, is the Scuppernon. But they cannot or do not send it to Northern markets. It is a very rank growth, and yields immensely, but must be used at home or marketed in some manufactured state, as wine, marmalades, jellies, canned, etc. The soil at De Funlak is rather sandy for the best results in horticulture.

Forty odd miles east of De Funlak there is more clay and less sand. This is on the divide between the two great rivers, the Choctawhatchie on the west and the Apalachicola on the east. Here the prospects for Northern enterprise in fruit growing seem better. Some Northern men of my acquaintance, of eight or ten years' residence, are meeting with encouraging success in growing the pear, peach, plum, quince (the Asiatic varieties), grape, etc. I have not seen such wood growth, not even in California, as they produce here. It is not uncommon to meet with annual growths of from seven to ten or even twelve feet on the pear, peach, plum, mulberry, etc., while the growth of the vine is almost beyond belief. But the great drawback here, as in other highly favored regions, is the long distance and expensive shipment to market.

The climate is admirable and health is unquestionably good, or the people have a happy way of disguising the facts, and I am fully persuaded that the man of energy could live comfortably in this section of the South.

Greencastle, Ind. W. H. RAGAN.

You may get over that slight cold all right, but it has left its mark on the membranes lining your throat. You are liable to take another cold and the second one will hang on longer than the first. Scott's Emulsion is not an ordinary cough specific, but it is "the ounce of prevention." It builds up the system, checks inflammation and heals inflamed membranes. "Slight" colds never bring serious results when it is promptly taken.

Book on the subject free.

SCOTT & BOWNE, Chemists, New York.

FULTON'S STEAMBOAT 1897 I make a business of supplying private growers, who want the best that can be had with Strawberry, Raspberry, Gooseberry, and all other kinds of small fruit plants. Yes, and at prices just as low as any responsible grower.

Send for my descriptive price list.
W. B. FULTON, Kirkwood, Ohio.
Mention American Gardening when you write.

BEST SEEDS AT VERY LOW PRICES!
Yell. Gl. Danvers Onion Seed (best strain), .45c. per lb.
Mam. Long Red or Gol. Tankard Mangel, lb. 25c.; 5 lb. \$1
W. Cory or Ey. Champ. 8w. Corn, qt. 12c.; pk. 60c.; bu. \$2
Ev'g'n Sw. Cory (best grade), qt. 10c.; pk. 45c.; bu. \$1.50
Ey. Mohawk Beans, qt. 12c.; pk. 70c.; bu. \$2.50
Prem. Gem or Advance Peas, qt. 15c.; pk. 90c.; bu. \$3.25
Other things in proportion. Cat. Field & Gar. seeds free.
L. L. OLDS, Seedsman, Clinton, Rock Co., Wis.

Mention American Gardening when you write.

Hale's Fruits

Are up to date market and family varieties. 1200 acres fruiting fields enables me to sell more dollars worth of fruit annually than any ten other nurseries. Free book tells whole story. I get my money back selling trees and plants at half agents prices.

J. H. HALE, South Glastonbury, Conn.

Mention American Gardening when you write.



We have the largest and finest collection of
PALMS, ORCHIDS, FERNS
and **FOLIAGE PLANTS**
for Conservatories,
Hardy Herbaceous Plants,
Flowering, Shade and
Ornamental Trees, Vines.
Everything for a private place.
Estimates and Plans for Planting
Places and furnishing stock
(free).

SIEBRECHT & SON'S,

Rose Hill Nurseries, New Rochelle, N. Y.

Mention American Gardening when you write.

NEW PINK VIOLET

MRS. J. J. ASTOR.

(Named by permission.)

Similar in form and habit to Marie Louise, but more vigorous, stems longer, flowers larger.

Price, \$2.00 per doz.; \$10.00 per 100.

Orders booked now and filled in rotation after May 1.

G. SALTFOORD, Violet Specialist, RHINEBECK, N. Y.

Mention American Gardening when you write.



FLORA OF JAPAN & CALIFORNIA
Chinese Narcissus, over 100 varieties of Lily Bulbs, Camellias, Palms, etc.
HARDY PLANTS, Japan Maples, Iris K., Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan.

Send for our richly Illustrated Catalogue of 48 pages giving full descriptions of above.

H. N. BERGER & CO., San Francisco, Cal.

(ESTABLISHED 1878).

Mention American Gardening when you write.

Seeds at half-price
Garden Flower Field.
What others sell for 5, 10 and 15c., we sell for 2 1/2, 5 and 7 1/2c. Full sized packets. By the oz., 1-1 lb. and pound almost as low. Quality the best; same as been sending out for years. All kinds of Trees and Plants. Our beautiful illustrated catalogue of 112 pages, describing everything, mailed free.
THE LOVETT CO., Little Silver, N. J.

Mention American Gardening when you write.

Borberry, California Privet and Japan Quince

For Ornamental

HEDGES.

HARDY ROSES ON OWN ROOTS.

Write for Prices to

FAIR OAKS NURSERY, OAK PARK, ILL.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.



OUR NURSERY STOCK
is grown on the banks of the Hudson River. It is First-class. Prices are Low. 50 acres of
FRUIT TREES,
Plants, Vines and Ornamental Stock to sell. 1897 Catalogue free.
T. J. DWYER, Cornwall, N. Y.



Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the

Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

Roses

An elegant stock of large

2 year old, field-grown

HYBRID PERPET-

UAL, MOSS, and

CLIMBING ROSE PLANTS. \$3.00 per doz.; \$20.00 per 100.

All the best sorts, old and new, and true to name. Write for Catalogue.

W. E. WALLACE, Nurseryman, Hartford, Conn.

Mention American Gardening when you write.

-Peach Trees-

The extra early new Peaches, Sneed, Triumph and Greensboro, one year heavy trees, \$1.50 per doz.; June buds, 12 inches and up, \$5.00 per 100.

JAPAN PLUMS and all other fruit and ornamental trees.

D. BAIRD & SON, Manalapan, N. J.

Mention American Gardening when you write.

NURSERY STOCK

Apple, Pear, Plum, Peach, Cherry and other trees, Grape Vine, Currants, Rasp., Straw., Black and Gooseberries sold at lowest living prices.

We furnish large trees and plants by freight or express, and smaller but extra well rooted and thrifty ones by MAIL POSTPAID. Everything guaranteed TRUE TO NAME, NORTHERN GROWN AND HEALTHY. Will send you one yr. trees by mail as follows: Peach 7c., Apple 7c., Pear 25c., Plum 15c., etc. Large trees by freight or express at same price. Our price list is free, or our 84 page catalogue, which gives full descriptions, cultural notes, etc., for 20c., which amount may be deducted from your first order of \$2 or over. We can do you good and save you money. See our adv. of Grapes by Mail in another column. Nursery established in 1877.

F. L. WRIGHT, Plainfield Mich.

Mention American Gardening when you write.



**GOING FOR
WARNER'S
SAFE CURE**

is much better than going for the doctor, and is quite as effective and costs less money. You need always at hand a safe, sure remedy like

**Warner's
Safe Cure**

which will bring instant relief from sudden illness and work out a permanent cure.

**A POSITIVE CURE FOR
BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

Cures also, all those diseases arising from disordered Kidneys or Liver. Large sized bottle or new style smaller bottle at your nearest store. Try it and know the satisfaction of such a remedy.

ONE YEAR FOR 10 CENTS

We send our monthly 16-page, 46 col. paper devoted to Horticulture, Home Decorations, Fashion, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents. If you send the names and addresses of six lady friends, **WOMAN'S FARM JOURNAL**, 4818 Evans Ave., Saint Louis, Mo.

Mention American Gardening when you write.

POULTRY BOOKS. ABC Poultry Culture, 25 cts.; 500 Questions and Answers, 25 cts.; Poultry House Plans, 25 cts.; Pigeon Quarrels, 25 cts.; *Punch & a' it v'io* 1 year, 50 cts. All \$1.00. Any 2 books, 40 cts.; 3 for 50 cts. J. DARROW, CHATHAM, NEW YORK. Mention American Gardening when you write.

CALIFORNIA LANDS ARE RICH

and only \$35 to \$65 per acre AT ESCROW. Grows fine oranges, lemons, olives, prunes, apples, hay, grains, etc. Best summer and winter climate in U. S. Send stamp for illus. pamphlet to Escrow-Ido Land & Town Co. at Escrowido, Los Angeles or San Diego, Cal.

Mention American Gardening when you write.



HATCH Chickens BY STEAM With the **MODEL EXCELSIOR Incubator**

Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class Hatchers made. **GEO. H. STABLE**, 114 to 122 N. 6th St., Quincy, Ill.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO.
Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

LITTLE GEM CALLA.

Almost everybody is out of patience with this tantalizing little thing, and this is just where the trouble lies. It needs patience, more patience, some one says, than the average window grower possesses. "Extra size" bulbs are now offered at double rates. Doubtless these are of blooming size, and offer some prospect of satisfaction. People fail to read between the lines, and when the glowing advertisement says that the dainty thing begins to bloom when only a few inches high, they forget to notice that it only grows a few inches high anyhow, and that therefore this does not necessarily mean that it blooms white very young. Patience, friends; this gem may repay you later.

FAULTY BULBS.

Those who are wont to blame themselves for failures with bulbs may find a bit of encouragement in this experience. Several bulbs of a bunch-flowering *Narcissus* were placed in one pot, earlier in the season. All but one threw up flower spikes, and have been blooming nicely for two or three weeks past. The one exception, which was, apparently, as good a bulb as the others, has shown very little signs of growth till the present time. Now, as the others are just fairly out of bloom, this is showing a good flower spike. In this case we have proof that the variation was with the bulbs, perhaps through not being equally well ripened. Not always is the window-gardener at fault.

THE FREESIAS DISAPPOINTING.

The California hybrid *Freessias* have been referred to as the most interesting thing in the whole collection. This being the case, it was a matter of course, that, if disappointing, they would be the most disappointing of all. Two pots of these were grown in comparison with two pots of home-grown bulbs, the four receiving exactly the same treatment. It will be remembered that the claims for the new *Freessias* were that they were larger and more fragrant than the older type, and in several new colors and combinations of colors. They were neither larger nor more fragrant; more than this, they showed no new colors, and no more variations in the markings than is common in the old forms. Of course, one does not expect form a dozen mixed bulbs to get an endless variation from the original type. But surely one has a right to expect something. In this case there was absolutely nothing in exchange for the double price paid for these bulbs because they were supposedly a marvellous advance upon the old sorts. One hates to chronicle such a fiasco. Who is to blame?

BROODERS FOR EARLY CHICKS.

If one has in view early chicks for market, or early laying pullets for next fall's work, the chicks must needs be brought out soon. March for Asiatics, and early May for the early-maturing Mediterraneans, are the best months. The "betwixt and between" Americans may be hatched at almost any time between. Whatever may be the difference of opinion as regards incubators, those who have used brooders are almost unanimous in their favor. They save an endless outlay of time and strength, and if constructed upon right principles, will raise a larger proportion of the chicks than can usually be expected from hens. Some of the experienced ones say that the best time to raise brooder chicks is in early spring, before the weather gets too warm. On all up-to-date home plots some kind of a brooder will be tried this year, even if it be but a home-made one.

EARLY ASTER PLANTS.

Those who are to raise the late, tall growing *Asters* during the coming season, must needs be stirring. They need a long season for growth, and the earlier plants always do the best. Inquiries were received concerning the fine "exhibition" *asters* mentioned last fall in American Gardening. These were sown in boxes

"Mend it or End it,"

has been the rallying cry of reform, directed against abuses municipal or social.

For the man who lets himself be abused by a cough the cry should be modified to: Mend it, or it'll end you. You can mend any cough with

**Ayer's
Cherry Pectoral.**

about the middle of March, transplanted once or twice, and transferred to the open ground early in May. Frequent cultivation and two or three applications of commercial manure were afterward furnished them. The conditions for success are within easy reach of all.

ARAUCARIA EXCELSA.

If there is anything that could so satisfy the mind that has a symmetrical leaning as a well-grown houseful of *Aracaria Excelsa*, I do not know what it is. One of the best experts in growing decorative stuff in this country tells me that this is one of the finest of house plants; hardy, long-enduring and always satisfactory. It is not much known by the people at large, and I have never yet seen it in a window collection. In appearance it is much like a tiny Christmas tree, delicately beautiful, and of perfect symmetry of form. It is sometimes called Norfolk Island Pine. Unfortunately, it has never yet been obtainable at a low price. The cheapest pricing I have ever seen put upon it at retail appears in one of the present season's catalogues, where plants less than a foot high are offered at \$1 each.

CHLIDANTHUS FRAGRANS.

One of the regular mailing trade firms last year offered this bulb as a novelty. But as nothing was said as to its position in the plant world, or the proper method of growing it, the novice planter was pretty nearly as sure to fail as to succeed with it. It is a bulbous plant, allied to the *Amaryllis*, having yellow, fragrant flowers, which are quite showy, blooming in clusters. It comes from Buenos Ayres in South America, the latitude being about that of our Southern States. J. L. Childs' monograph on lilies and allied bulbs states that this *Chlidanthus* (which is the only one of the genus) can be grown in the open border, and that the treatment should be at all times the same as that of the *Gladolus*. Should this bulb bear out all that is said of it, it will prove itself an acquisition, indeed. Our own trial of it last season was without satisfaction, because of the poor quality of the bulbs received.

MYRA V. NORRIS.

A COMPETITION.

A first prize of \$500 and a number of smaller prizes have been offered by The Century Co., publishers of The Century Dictionary and Cyclopaedia, for the best answers to a hundred and fifty questions covering a broad range of information. An additional prize of \$500 is offered to any one who can answer 90 per cent. of the questions from any ten published works of reference other than The Century Dictionary and Cyclopaedia.

If you want to see a real useful, helpful farm and garden and fruit paper, send your name and address—no money—to *The Rural New Yorker*, New York. We can send it and AMERICAN GARDENING both one year for \$1.80 and your money back for *The Rural* in three months if you want it.

WHOLESALE MARKET REPORT

New York.

Speaking generally, the cut flower market for the week preceding Lent has been a failure. Usually it is the one week in the year that prices are stiffer and the market gets cleaned out closer than at any other time of the year. But it has failed the grower in both directions this season, the average on prices being to him very low. Roses and carnations have shortened up in supply. Violets are exceedingly plentiful, more so than ever before, and prices are below the half of former years at this date.

The fruit and vegetable market has improved considerably in tone, and on fair grade stock is cleaning out well. But buyers are shy at any advance in figures, and are quick to turn down any attempt.

Cucumbers are moving freely at \$2.00@2.25 per dozen for No. 1, with No. 2 at \$1.00@1.25.

Mushrooms are doing better than in several months. Good stock is realizing 40@50c. per lb. Stock a little off, 30@35c. per lb.

Hothouse tomatoes, if of good color, sell readily at 30c. per lb.; but considerable of this stock is sadly deficient in color and hardly comes up to the standard of that from the South.

Hothouse lettuce is also meeting with better trade. A limited quantity of very fancy makes 75c. per doz.; general figures rule from 25c. to 60c. per doz.

New potatoes (Bermuda Early Rose and Garnet) sell at \$6 to \$7 per barrel for No. 1. Havana stock \$5.

Some very handsome celery is on the market (Florida grown). This is shipped in the soil and trimmed upon arrival, making as high as \$1.25 per dozen stalks. Other stocks of prime celery move well at good prices.

Rhubarb sells at \$3 to \$4 per 100 bunches. Radishes, \$2.50@3.00 per 100 bunches.

Fancy hot-house strawberries maintain their price well.

English grapes are meeting with no competition, and, though falling off in quality, sell at \$1.25 to \$1.50 per lb.

Apples are weakening, and will hardly bear out quoted prices.

Apples.

Spitzenburg, fancy, per bbl. 2 00@2 50

—common to fair, per bbl. 1 25@1 75

N. Spy, fancy, per bbl. 2 00@2 50

—Common to good, per bbl. 1 25@1 75

Baldwin, Vt. and Northern, fancy, ... 1 37@1 50

Greening, Vt. & Nthn fancy, per bbl 1 50@1 75

Baldwin & Greening, Vermont, good, 1 12@1 25

Baldwin, w'n N. Y., gd to fcy, per bbl. 1 25@1 50

—Up-river, per bbl. 1 12@1 37

Greening, w'n N. Y., gd to fcy per bbl. 1 25@1 50

—Up-river, per bbl. 1 00@1 25

Greening & Baldwin, ordin'y, per bbl. 85@1 00

Grapes.

Catawba, prime to fancy, per small

basket 12@ 15

—Poor, 4-lb. basket 8@ 10

Vegetables.

Asparagus, Ch'n, choice, large, per

bunch 1 00@1 25

Beets, Florida new, per bush, crate, 50@ 75

Cauliflowers, California, per crate, ... 1 40@2 50

—Florida, 1/2-bbl. basket, 75@2 50

Cabbages, per 100, 2 00@3 00

—Danish, per 100, 3 00@4 00

—Florida, per barrel crate, 1 00@1 25

Celery flat bunches, per dozen bchs, 1 00@1 75

—California, large, per doz. stalks, 75@1 25

—State, fancy, large, per doz. stalks, 60@ 75

—Average, best, per doz. stalks, ... 30@ 50

—Small to medium, per doz. stalks, ... 15@ 25

—Florida, large, per dozen stalks, ... 75@1 25

—Florida, small to med., per doz. ... 20@ 50

Lettuce, Fla., prime to fancy, 1/2-bbl.

basket 2 50@3 00

—Fla., fr to gd, per 1/2-bbl. bask. ... 1 50@2 25

—Fla., inferior, per 1/2-bbl. bask. ... 75@1 25

Onions, Eastern white, per bbl. 4 00@6 50

—Eastern red, per bbl. 3 25@3 50

—Eastern, yellow, per bbl. 3 00@3 25

—State and W'n. yellow, per bbl. ... 2 25@2 65

—Orange Co., white, per bag, 2 50@4 00

—Orange Co., yellow, per bag, 2 50@3 00

—Orange Co., red, per bag, 2 00@3 00

—Havana, per box, 2 40@2 50

—Bermuda, per box, 2 50@2 60

Peas, Florida, per crate, 1 50@4 00

String beans, Fla., gd to fcy, per

crate, 3 00@4 00

—Beans Fla., poor to fair, 1 50@2 50

Spinach, Norfolk, per bbl. 75@1 25

Tomatoes, Fla., prime to fancy, per

carrier, 2 00@2 50

—Fla., poor to good, per carrier, ... 1 00@1 50

—Key West, per carrier, 75@1 25

Turnips, Canada, Russia, per bbl. 60@ 65

Philadelphia.

Business in this market has been very quiet the past week. There has been a falling off in receipts of stock, yet prices have not become any firmer. Very little stock has been received from the South, and most of what has arrived is of poor quality.

Hothouse lettuce is now being sent in and has been selling at 50c. to 65c. per dozen, but goes very slowly at these figures.

Mushrooms continue to move fairly well, selling at 35c. to 40c. per pound.

Hothouse cucumbers are held at \$3.00 per dozen. These also do not sell very well.

The apple market has been very brisk all the past week, a large quantity of stock being disposed of. There has been very little change in prices, but, if anything, they are a trifle firmer now.

Spitzenburg, fancy, per bbl. \$2.25@2.75
Spitzenburg, fair, per bbl. 1.50@2.00
Baldwins, fancy, per bbl. 1.50@1.75
Baldwins, fair, per bbl. 1.20@1.25
Greenings, West N. Y., fancy, 1.35@1.50

Vegetables are still scarce and generally in poor condition.

Brussels sprouts, per qt. 8@ 10

Cabbages, Florida, per crate, 1 50@ 2 00

Cauliflower, do, per basket, 1 50@ 1 75

Celery, extra, per doz. stalks, 50@ 60

—fair, 25@ 40

Kale, Norfolk, per bbl. 75@ 1 00

Lettuce, Florida, fancy, 1/2 bbl. bask 2 50@ 3 00

—fair, 1 75@ 2 00

—hothouse, per doz. 50@ 65

Spinach, Fla., per lb. 60@ 1 00

Tomatoes, hothouse, per lb. 35@ 40

—Florida, fancy, per crate, 1 75@ 2 00

—fair, per crate, 1 00@ 1 50

Onions, Eastern white, 4 75@ 6 50

—Eastern red, 3 25@ 3 75

—Eastern yellow, 2 75@ 4 00

—Bermuda, per box, 3 00@

DISCOVERED A few warts that will remove that gritty complexion and leave it soft and white in 10 minutes after washing, and in a week remove all pimples, blackheads and tan. Bleaches the skin without irritation. Perfectly harmless; contains no poisons. Cuts but five cents to prepare enough to last six months. Recipe and full directions, 25 cts. Mrs. B. HUNTER, 4513 Evans Ave., St. Louis, Mo.

Mention American Gardening when you write.

SEEDS. FREE

If you send 3 correct names of gardeners or those intending to buy seeds, we will mail FREE OUR NEW 1897 Seed and Gardeners' Guide; tells how to MAKE MONEY on a small piece of land. \$4.00 worth of Seeds for 25 Cents. 30 years experience.

JOHN BAUSCHER, Jr., box 902, Freeport, Ill.

Mention American Gardening when you write.

KOSS' SEEDS Always Give Satisfaction. Our German and English Catalogue Free to all who need seeds, no matter how much. Wholesale list for Market Gardeners and Truckers. Address THEO. KOSS, 241 Reed St., Milwaukee, Wis. Dealer, Grower and Importer. If Wanted, a few good salesmen.

Mention American Gardening when you write.

Seeds! Seeds!

73d Annual Priced Catalogue of

VEGETABLE, FARM AND FLOWER SEEDS

is now ready and mailed Free to all applicants.

BRIDGEMAN'S SEED WAREHOUSE,

37 East 19th Street, - New York City

Mention American Gardening when you write.

PREMIUM AMERICAN PANSY SEEDS

and plants grown by W. Toole, Pansy Specialist, Baraboo, Wis. 35 varieties and mixtures of Pansies. Heperian Pansy, 50c per pkt.; trade pkt., 50c. Selected mixed, pkt., 15c.; trace pkt., 30c. Extra choice mixed, pkt., 10c.; trade pkt., 30c. My Pansies have never been equaled at any show where competing. Complete directions "HOW TO GROW PANSIES," sent free to any address with catalogue of Pansies and other seeds and plants by

WILLIAM TOOLE, Pansy Specialist, Baraboo, Wis.

Mention American Gardening when you write.

SEED POTATOES.

Price per barrel:
Carman No. 1 \$1 25 | R. N.-Y. No. 2 \$1 15
Carman No. 3 1 15 | New Queen 1 50

Other varieties equally low.

Write for prices on what you want. All choice stock. Seed Corn, \$1 per bushel; Banner Oats, 45c. per bushel, in 10-bushel lots.

O. H. WHITE & SON, Miller Corners, N. Y.

Mention American Gardening when you write.



TRY DREER'S GARDEN SEEDS

Plants, Bulbs and Rootstocks. They are the best at the lowest prices. Calendar for 1897 mailed free. Address

HENRY A. DREER,
714 Chestnut St., PH LA.

Mention American Gardening when you write.

Protection for Farm Products

will be the policy of the

McKinley Administration.

PROTECTION OF THE FARMERS' INTERESTS

has always been the policy of the

BRADLEY FERTILIZER CO.

Bradley's Fertilizers contain more crop-producing plant-food for the money invested than any other brands.

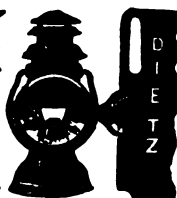
Send postal for Bradley's American Farmer for 1897.

BRADLEY FERTILIZER CO.

Boston, Mass. Cleveland, Ohio.
Rochester, N. Y. Augusta, Ga.

Mention American Gardening when you write.

TUBULAR DRIVING LAMP..



IT is the only perfect one.
IT throws all the light straight ahead from 30 to 300 feet.
IT looks like a locomotive headlight.
IT gives a clear, white light.
IT will not blow nor jar out.
IT burns kerosene.

Special Offer

CUT THIS ADVERTISEMENT OUT and send it to us and we will send book describing our lamp and will agree to send you one single lamp or a pair at our wholesale price (very much less than the retail price). This offer will appear only once in this paper.

R. E. Dietz Company, 60 Lighthouse St., New York.

Mention American Gardening when you write.

SPRAYERS EXP. PAID Any Point. We are the largest Sprayer Co. in U. S. Get our Catalogue and compare it with others. LENOX SPRAYER CO., 94 West St., Pittsfield, Mass.

Mention American Gardening when you write.

THE BEST SEED POTATOES.

FARM AND GARDEN SEEDS

EARLY MICHIGAN.

Are grown on Michigan new muck lands by

HARRY N. HAMMOND, Deatur, Mich.

SEEDSMAN.

Largest grower of SEED POTATOES in America. Write him to-day for his handsome illustrated catalogue FREE, describing the best new and standard varieties of

Potatoes, Oats, Corn and Garden Seeds.

Mention American Gardening when you write.



WEEBER & DON,

Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Illustrated Catalogue
of Vegetable and Flower Seeds
NOW READY.

EVERY GARDENER SHOULD HAVE ONE.
Free on Application.

Mention American Gardening when you write.

• AUCTION SALES.**William Elliott & Sons**

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, March 9.

3000 Hardy Roses including 500 standards. A large assortment of nursery stock. 25,000 Gladiolus Bulbs. 10,000 Tuberose, etc.

Friday, March 12.

Roses, Nursery Stock, Gladioli, Tuberose, 10,000 Caladium esculentum, 25 cases of Liliun auratum.

On view morning of sale. Catalogues free.

Sales every Tuesday and Friday.

Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at two cents per word each insertion, payable in advance.

The address will be charged as part of the advertisement, and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

STRAWBERRY PLANTS. Circular free. Wm. Carson & Son, Rutland, O.

STRAWBERRIES, Potatoes, Seeds. Catalogue free. Wm. Olds, Okemos, Mich.

MANWELL STRAWBERRY Plants. Catalogue free. Allen D. Manwell, Vinton, Iowa.

LOVELY ARBUTUS plants, ferns and flowers cheap. Wyomack Nurseries, Lebanon Springs, N. Y.

FOR SALE. Farm of 160 acres, 1-2 mile from village of Ovid, Mich. For particulars write N. O. Moyers, Ovid, Mich.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedsman, Rochester, N. Y.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

PINEAPPLE and Vegetable Lands on the Indian River. Cottages and Lots for sale or rent. Terms to suit. J. F. Powell, Melbourne, Fla.

THE RIDGEWAY. a new strawberry of great merit. For price of plants and free catalogue, address M. H. Ridgeway Box 292, Wabash City, Ind.

STRAWBERRY PLANTS. Try the Margaret Fountain, Michigan, Clyde, Glen Mary. Headquarters for Gan'y, Brandywine Marshall, Parker Earle and all choice standards. Catalogue free to all. C. N. Flansburgh, Leslie, Mich.

CEDAR OIL INSECTICIDE, better and cheaper than fir-tree oil, \$2.50 the gallon; \$1.00 the quart tin. Cedar Oil Soap, pound tins, 50 cents; half pounds 25 cents. Sold by seedsmen and florists. August Rolker & Sons, New York, P. O. Station E.

10,000 VIOLETS given away. \$1 per 100 pays for packing and postage, must have room in greenhouses at once. Young well-rooted plants, Lady Campbell. The earliest, freest bloomer, sweetest and healthiest of all double violets. C. E. Price, Smithtown Branch, N. Y.

SPANISH BAYONETS, 2 to 3 ft., \$3.00 per doz.; 4 ft., 75c. each. Air Plants, 6 in., 35c. each. Sisal Hemp, 18 in. high, \$4.00 per doz.; 3 ft., \$1.50 each. Century Plants, 18 in., \$6.00 per doz. All stock and will grow; there is nothing that will set a lawn off better. Boxed, F. O. B. Depot; full directions sent. Send P. O. Order or Draft. J. F. Powell, Melbourne, Florida.

When ordering goods subscribers will confer a favor on the publishers by stating they saw the advertisement in **AMERICAN GARDENING.** We admit only responsible business houses in our advertising columns. Avoid delay and disappointment by giving name and address legibly.

GOLD-COIN VINELESS. I am the originator of this improved strain of the vineless Sweet Potato, and I will send free a full history of it and how it was brought to its present state of perfection, and how to grow them successfully, or for 10 cts. in stamps I will include a sample potato, and the stamps may be deducted from the first order. William T. Simpson, Box 74, Pine Bluff, Ark.

GLADIOLI, CANNAS, CLIVIAS, Souchet and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings. Cannas, Italia, Austria, and best standards. New Hybrid Clivias. Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.

20 ACRES rich, level farm land, free from rocks and swamps, and especially adapted for truck, fruit, cotton and tobacco raising, for \$300, payable \$10 down and \$1 or more weekly. Convenient to great eastern markets. In thickly settled section of Virginia. Genial climate all year. Splendid water. Schools, churches, stores, mills and desirable neighbors. Deed free and title guaranteed. No malaria, mosquitoes, birds or floods. Taxes and freight rates low. For further information write to D. L. Risley, 211 S. 10th St., Philadelphia, Pa.

BINDERS—Every subscriber should have one. We offer the best to be had, sent, postpaid, for 65 cents, or given free for two new subscriptions and the renewal of your own. American Gardening P. O. Box 1697, New York.

WE HAVE BACK VOLUMES American Gardening for sale; of some years we have a good supply, others are short; bound and unbound. Will be pleased to quote prices on any year desired. American Gardening, P. O. Box 1697, New York.

PAPERS, MAGAZINES, ETC.—We will make you liberal concessions when you order other periodicals for the year, whether in connection with your own subscription or not. Send us your list for estimate. American Gardening, P. O. Box 1697, New York.

PAPER TUBES FOR MAILING PLANTS—The most perfect contrivance for shipping plants through the mail so as to reach their destination in best condition; furnished in all lengths and diameters. All dealers in plants should have them in stock. Send for our price list. A. T. De La Mare Ptg. and Pub. Co., Ltd., P. O. Box 1697, New York.

Business Cards.

Cards will be inserted under this heading at two cents per word each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, plans, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence improved with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

WANTED.

[Rates, etc., same as in "For Sale" column.]

WANTED—A married man to manage and work a place in fruit, flowers and vegetables, on 1/2 mile from city, either on a salary or to take an interest. To a first-class sober man this is a splendid opportunity. Address Evergreen, 272 Second St., Memphis, Tenn.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER and Florist, (American), sober, reliable, thoroughly understands commercial business; also care of gentlemen's places; long experience; write, state wages and particulars in full. References. G., P. O. Box 98, Milbrook, Dutchess Co., N. Y.

GARDENER and Florist's assistant. English, 35 years of age, single, 3 years' experience at florist work, also 3 years' at kitchen garden; understands growing vegetables in greenhouse, good references; desires situation with florist or market gardener near New York. Address A. care American Gardening.

HEAD GARDENERS.—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of graperies, greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 35 & 37 Cortlandt St., New York.

SITUATION wanted.—First-class Gardener with diploma from both sides of the Atlantic will guarantee financial success in producing choicest roses, also mushrooms under glass, in same building, and heat, thereby saving expense in labor, space and fuel; forcing vegetables under glass and European grapes specialties; thorough artist at table decorations; good landscape gardener; best city references. Wm. Thompson, 741 First Ave., N. Y. City.

For Sale

Farm of 160 acres, 1/4 mile from village of Ovid, Michigan. For particulars write N. O. Moyers, Ovid, Michigan.

Mention American Gardening when you write.

PRIVATE GARDENERS.**Appointment.**

G. J. Brown has succeeded A. McKenzie as gardener to W. S. Gurnee, Blauvelt, N. Y.

Spring Auction Sales.

The first sale of the season was held on Tuesday, March 2, by William Elliott & Son, Dey street. Roses, nursery stock and bulbs were offered. Sales will be held regularly after this date every Tuesday and Friday.

J. P. Cleary arrived from an extended European trip on the steamship Mohawk from London, Friday. The Cleary Company has opened its new auction rooms at No. 60 Vesey street, New York. Regular sales are expected to begin next week.

R. M. Gardner will open the season at No. 119 Fulton street, New York, about March 12.

Mount Kisco, N. Y.

On Friday, Feb. 26, a very successful meeting of the Westchester County Horticultural Society was held here. Mr. John Hunter, of Hempstead, L. I., read a paper on "Small Fruits."

New York.

The meeting and grand exhibition of carnations, standard varieties, and novelties of this season, to be held at the rooms of the American Institute, 111 W. 38th st., on Tuesday, will present an excellent opportunity for gardeners to make comparisons; also for anyone having seedlings of merit to exhibit. Of new frame Violets, a fine selection from various growers will also be on exhibition.

Orange, N. J.

The New Jersey Floricultural Society met on Monday last. Thos. Willey, East Orange, and J. Keenan, Orange, were elected to active membership. The Exhibition Committee reported adversely, having failed to negotiate with the memorial hospital regarding a fall exhibition. Considerable discussion followed upon the subject, and eventually the matter was left in the hands of Dr. Kitchen to enter into arrangements, if possible, with the ladies of the Orange Improvement Society, or any other organization. William Fitzwilliam read a short, practical paper on "Landscape Gardening," which was well received.

Boston, Mass.

Though not a prize day, a good display of flowers was made at Horticultural Hall on Saturday, Feb. 20. Oakes Ames (Carl Blomberg, gardener) sent six Cypripediums; Calypso Oakwoodemal of clear color with good form. C. Lathamianum superbum; C. Leeanum, var. a very fine variety which seems to be a hybrid of C. Leeanum with C. Spiceranum; C. longifolium; C. Lemoinei Calurne X porphyreum, and C. Sedenii candidulum longiflorum X Schlimii albidiflorum. Also fine specimens of Odontoglossum Roezili album, five varieties of Cattleya Trianae, one of which had five flowers on one spike. Asclepias Curassavica, a native of Florida; Cyperus alternifolius; Rosa sinica, the beautiful Cherokee Rose. Camellia japonica rubra, and C. jap. alba; several Begonia Roses and the old-fashioned Rubus rosaefolius coronarius. James Comley brought some forty vases of Camellias, Azaleas, Begonia and a vase of Cypripedium villosum, several vases of Coelogyne cristata, Cytisus albus, a fine broom from Japan, with white flowers which will probably prove hardy; Senecarpus sinuatus, with curious reddish flowers and large glossy, oak-like leaves; a very good seedling carnation of a greenish-white color, and the old-fashioned Isabel Sprunt rose. Mrs. E. M. Gill exhibited a collection of flowers, including Swainsona, Nasturtiums, Daffodils, Clivia miniata, Antirrhinums, Genista and Bougainvillea glabra Sanderiana.

Jacob W. Manning brought a new Hemerocallis from Japan. H. aurantiaca major with large orange-yellow flowers; it was awarded first-class certificate of merit.

George D. Morse exhibited radishes and Warren Heustis & Sons dandelions. Mrs. E. M. Gill brought a dish of mushrooms.

The Professional Gardener's Mission.

The admirable paper read by Mr. P. O'Mara before the Lenox Horticultural Society is a valuable contribution to the literature of gardening. It is full of wise saws and many illustrations which if read and noted by all interested in horticulture would prove of general benefit. There are many suggestions, tending to the advancement of the craft, that every gardener should carefully consider; they should not be cast aside after the first reading, but the many practical topics presented should be reperused and acted upon individually. I wish the lecture were published in pamphlet form and freely distributed, that it may kindle a greater enthusiasm in horticultural interests, with an awakening of appreciation of the work of those faithful gardeners who have done so much to improve our flowers and vegetables in the past, and also to act as an encouragement to those dormant talents which may produce improvements that will still more interest us and please our tastes.

PORTIA.

It gave me great pleasure to read the very exhaustive paper on the above subject, read by Mr. O'Mara before the Lenox Horticultural Society. Truly the "Gardener" does a great deal toward the advancement of horticulture by the establishing of flower shows; giving practical lessons in gardening to cottagers in this vicinity; distributing spare plants, cuttings, seedling ferns, etc.

His mission is a grand one, but where is the missionary who is to look after him and his family when on account of the place where he is employed being sold, or closed for an indefinite period, he is compelled to turn out and look for another place—and that place is not forthcoming?

First of all he must find a home for his little family and get in the necessities; his hand is continually in his very light pocket-book, and being a gardener, he hates to think of doing anything other than some branch of gardening. He starts on the rounds of the seed stores, wanting to know if there is "anything going," failing in this he gets the daily paper, where under the head of "Men Wanted" he finds an inquiry for a qualified gardener. He brushes up a bit, takes his papers along, presents himself in the front hall to be informed that they want a man without any children.

The poor fellow returns to his wife and tells the whole story, and in reply she says: "Well, I hope something will come soon, or I do not know how we are to live. I had to break our last fifty-dollar-bill this morning to pay the coal man." This is no imaginary tale, but it is what I have witnessed time and time again. Can there be no workable scheme to assist those men when they are out of situations, and until they procure one? Are there no nurseries where they could be employed profitably to the employers at a low pay, where those requiring the services of a gardener could come when they wanted one, and get a duly and well qualified man without having to resort to advertisements in daily papers?

I am under the impression that horticultural societies throughout the country have been very well nursed these last few years and have been appreciated, and are doing good, and those that are carried on without red tape are bound to succeed. Now, why not turn round and take the professional gardener into consideration.

TIMBER TOPPER.

Alfred Dimmock, representing F. Sander & Co., St. Albans, England, arrived on steamship Lucania, Sunday last; Mr. Dimmock says that this makes his thirty-third trip on the water, and that it was the worst he has yet experienced, the sea being like a boiling cauldron all the journey.

Burn Orchard Trimmings.—Fruit growers are not as careful as they should be in the disposition of their orchard trimmings. It would be well to burn them as soon as possible. This will prevent the further spread of any insects that may be harbored in such trimmings.—Horticultural Commissioner A. D. Pyral, California.

"Boy Wanted"



when planting with the "Improved-Robbins Potato Planter."

Results: 100% of the seed planted correctly. No buried seed, no packed soil, no misses, no doubles. Recommended by leading Potato growers and guaranteed to give satisfaction. Send for catalogue describing 50 different implements.

BATEMAN MFG. CO.,

Box 106.

Grenloch, N. J.

Mention American Gardening when you write.

Fruit Growers

Make Money.

READ



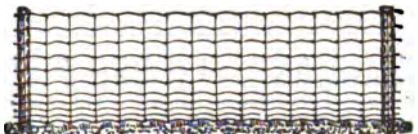
Dunkirk, N. Y.

SAMPLE FREE,

Embraces

Monthly Grape Belt.

50 cts. per year. Mention American Gardening when you write.



WANTED

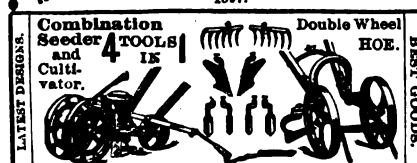
Live Deer, Elk, Moose, Buffalo and Bears

The Page fence has revolutionized the whole Park system. We have contracts for so many new parks and game preserves that we shall hardly be able to supply all the animals to stock them. Any one having one or more of above species for sale, please address

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

Standards of America NEW UNIVERSAL HAND GARDEN TOOLS Success of 1896. Better for 1897.



RECOMMENDED BY MARKET GARDINERS.
A dozen styles to select from. Write for circulars and address of nearest supply depot to
AMES PLOW CO., SOLE MAKERS,
New York and Boston.

Mention American Gardening when you write.

BUY BERRY BOXES of

32-page Illustrated Catalogue
for 1896-7 mailed FREE.



Climax Baskets for Peaches, Grapes and Melons.

Mention American Gardening when you write.

Successful

growers of fruits, berries, and all kinds of vegetables, know that the largest yields and best quality are produced by the liberal use of fertilizers containing at least 10% of

Actual Potash.

Without the liberal use of Potash on sandy soils, it is impossible to grow fruits, berries and vegetables of a quality that will command the best prices.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.

CANTON GARDEN PLOW

THREE SHOVELS AND RAKE ATTACHMENT.

WEIGHT, 20 POUNDS
\$3.75 EACH.
CASH WITH ORDER.

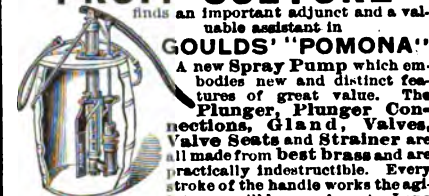
PARLIN & ORENDORFF CO.
Largest and oldest permanently established Plow Factory in America.

CANTON, ILLINOIS

Mention American Gardening when you write.

PROFITABLE

FRUIT CULTURE



finds an important adjunct and a valuable assistant in
GOULDS' "POMONA"
A new Spray Pump which embodies new and distinct features of great value. The Plunger, Plunger Connections, Gland, Valves, Valve Seats and Strainer are all made from best brass and are practically indestructible. Every stroke of the handle works the agitator as will be seen in cut. Long handle makes it work easy. Will supply 1 or 2 leads of hose. Valuable book on "How & When to Spray," FREE.

THE GOULDS MFG. CO.
11 Ovid St., SENECA FALLS, N. Y.

Mention American Gardening when you write.

Bennett's Stump Pullers



Strongest and Best Machines for the money on the market.

Made in ten sizes and three styles, Hand Power, Screw Power, and Horse Power. Also Manufacturers of a TILE

DITCHER that will dig 100 rods of ditch in 10 hours. And the BENNETT HANDY FARM WAGON, with or without dump-bed.

Write at once for prices to

H. L. BENNETT & CO., Westerville, Ohio.

Mention American Gardening when you write.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*We cannot undertake to reply by mail.

HONEYSUCKLES.

(What is the botanical name and synonyms, if any, of the upright or Tartarian Honeysuckle? What are the most useful Loniceras?—C. W. HAMILTON.)

—The Tartarian pink honeysuckle is *Lonicera tartarica* (no synonyms) introduced from Tartary in 1752. *Albiflora* came from the Pyrenees in 1739. *Rubrifolia* also came from Russia in 1752. In this section there are also *latifolia* and *lutea*. These are all obtainable now, or rather improved garden forms under the title var. *grandiflora* white or pink, all bush forms and deciduous. Among the trailing kinds perhaps the very best for covering low walls in exposed positions is *L. Halleana*. It flowers from July till late fall and holds its leaves right into midwinter; in fact it is almost evergreen. The flowers are white and are produced in great abundance; brachypoda and var. *aurea reticulata* are also excellent kinds. Then to these may be added *L. Belgica*. A monthly flowering kind blooms all the summer. Flowers red and yellow, very fragrant. *L. Periclymenum*, the common woodbine, is not to be despised. Among new kinds, but of this kind we have no experience, nevertheless it is well spoken of is *L. fuchsoides* (scarlet).

SHAPING HEMLOCK HEDGES.

(When is the proper time to shear a hemlock arch or hedge? Before or after spring growth or both? I have reference to making a nice, neat appearance and also maintaining the health and vigor of the trees.—Thomas T. Newby.)

—If so much time can be spared, and it is worth while doing so, prune the arch into shape with a knife, and do not torture the plant by stubbing with a shears. The plants can be made very shapely by cutting out branches and twigs. Do this first about two weeks before spring growth begins; then during the season of growth continue the practice, removing any branches or twigs that may appear out of position.

TREATMENT OF FRUIT TREES.

(To C. F. Mulford, O.): It depends a great deal on the size, kind and variety. Little definite advice can be given when a question does not even say whether the tree be apple, cherry, peach or quince. More attention to details when asking questions would be helpful for all concerned. Other points raised by C. F. M. are answered in the "Fruit Garden," this issue.

TRANSPLANTING QUINCES.

(Are three-year quince bushes too old for transplanting? Would you advise against purchasing them?—A. E. HOWARD.)

—We see no objection whatever. Three-year-old plants are often sold.

PIPE FOR HEATING.

(How much 1½-inch pipe as a coil will be required to heat 200 feet of 3-inch pipe? How much 2-inch pipe to heat house 45x25 feet, three-quarter span; front wall 4 feet high; back wall 9 feet high; exposed to east winds only? Thermometer goes to 10 to 15 degrees below zero, and I want 70 degrees in day and 60 at night time fully.—W. F. Oshana, Ont.)

—About 60 linear feet of 1½-inch pipe will be required in a coil heater for 200 linear feet of 3-inch black pipe. For a house as above described it will require about 500 linear feet of 3-inch black pipe, and would for this size of pipe have not to exceed two returns for each flow. We would prefer to use about 1,000 linear feet of 1½-inch pipe, or 225 linear feet of 2-inch pipe, arranged as five flows and 720 linear feet of 1½-inch pipe arranged as sixteen returns. For houses not over 100 feet long, would use two returns for each flow when the pipes are of the same size, but if the flows are larger than the returns, a corresponding increase in the number of the returns can be made.—L. R. TAFT.

ONIONS FOR MARKET.

(To J. R. J., Ont.): The selection of onion sets depends entirely upon your market and what color it demands. Some want red, others white or yellow. If not already done, you should find out which is required. Then possibly the three best to select from would be White Globe, Red Globe and Yellow Globe Danvers. These are all of a size and come in by the same date.

† Danger in Bananas.—A fruit dealer of Pittsburgh lately had a bad experience with a tarantula which was hidden among some bananas which he was handling. The creature severely bit the man's hand.

ARMSTRONG & McKELVY
Pittsburgh.
BEYMER-BAVIAH
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR } Cincinnati.
LOCKSTEIN }
ATLANTIC }
BRADLEY } New York.
BROOKLYN }
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MISSOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY } Cleveland.
SALEM } Salem, Mass.
CORNWELL } Buffalo.
KENTUCKY } Louisville.

DON'T be penny wise and pound foolish by buying the "just-as-good mixtures," "so called White Lead," or other substitutes for Pure White Lead.

In painting, the cost of labor so far exceeds the cost of material that the best only should be used. The *best* is Pure White Lead (see list of brands which are genuine) and Pure Linseed Oil.

FREE By using National Lead Co.'s Pure White Lead Tinting Color, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write

1840 Old Colony Nurseries. 1897

Hardy Shrubs, Trees, Vines,
EVERGREENS and PERENNIALS.

A large and fine stock of well-rooted plants grown in a sandy loam. Good plants, best sizes for planting, very cheap. Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.

Mention American Gardening when you write.

30 Years' Experience.

SMITH'S SMALL FRUITS
FOR 1897.

100 varieties. The best of the old and new sorts, including the new Egyptian Raspberry, one of the hardest blacks ever produced. Send for list.

B. F. SMITH,
Box 6, LAWRENCE, KANSAS

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
{ Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.
Mention American Gardening when you write.

GREENVILLE (formerly Downing's) APPLE

GREENVILLE STRAWBERRY or anything else in the nursery line. Send for free particulars.
Address. **E. M. BUECHLY, (Box 991) GREENVILLE, OHIO.**
Mention American Gardening when you write.

STRAW
RASPB
BLACK
GOOSE
DEW

ASK WM. O. BABCOCK, BRIDGMAN, MICH.,

For prices of strong STRAWBERRY PLANTS, dug out in solid blocks, not from between the rows, true to name. Competition Defied. QUALITY considered. Complete Stock of CURRANTS AND GRAPES. (Mention this paper.)

BERRY PLANTS

Mention American Gardening when you write.



NEW PEACHES

—Triumph, Greensboro, Sneed, Fitzgerald and Bokara No. 3.

NEW CHESTNUTS

—Numbo, Paragon, Ridgley. For description of these and other Fruits, Ornamental Trees, Shrubs, Roses, Plants, Bulbs, Seeds, etc. Send for our valuable free catalogue, a book of 168 pages, magazine size. One of the most, if not the most complete assortments in America. About a quarter of a million PEACH still unsold. Many other things in proportion. Seeds, Plants, Bulbs, Small Trees, etc. postpaid. Safe arrival and satisfaction guaranteed, larger by freight or express.

43rd Year. 1000 Acres. 32 Greenhouses.

THE STORRS & HARRISON CO., Box 122 Painesville, O.

Mention American Gardening when you write.

TREES-SHRUBS-ROSES

The largest and most complete collections of GENERAL NURSERY STOCK in America, including all desirable novelties. Beautiful Catalogue (168 pages—1896 edition) free to customers; to others 10 cents. Every intending buyer should have it.
ELLWANGER & BARRY, Mount Hope Nurseries, Rochester, N. Y.

Mention American Gardening when you write.

Thirteen Lovely Roses FOR ONLY 50 CENTS

All will Bloom Abundantly this Summer.



Flake, Red Pet, Agrippina, Beauty Inconstant, Safrano, Perle des Jardins, etc.

For 50 cents we will mail, postpaid, and labeled, any of the following collections:

- 13 Single Geraniums,
- 13 Double Geraniums,
- 13 Single and Double Geraniums,
- 13 Carnations,
- 25 Giant Pansies,
- 13 Double Violets, 4 Sorts,
- 10 White Everblooming Roses, for Cemetery,
- 10 Dahlias,
- 10 Rex Begonias,
- 10 Flowering Begonias,
- 13 Fuchsias,
- 13 Coleus,
- 13 Chrysanthemums.

Our Illustrated and Descriptive Catalogue of Everything for Garden and Greenhouse, New and Rare Roses, Chrysanthemums, Dahlias, House and Bedding Plants, will be mailed free upon application. Send for it to-day. We guarantee satisfaction.

A. B. DAVIS & SON,

Established, 1866.

Purcellville, Va.

Mention American Gardening when you write.

AMERICA'S The SWEET PEA. FAVORITE . 50 FLOWER . . POSTPAID FOR 10 cts. (Stamps or Silver.)

To introduce our HIGH QUALITY SEEDS, PLANTS AND BULBS into every section of the United States, we have made up from our enormous stock of Fresh Sweet Peas, a mixture of all the best varieties, including every color, shade and form known to the Sweet Pea family SUFFICIENT SEED FOR A ROW 40 FEET LONG.

35,000 COLLECTIONS RESERVED.

As we wish this distribution to cover as large a territory as possible, we would request that each subscriber order only one collection, unless they desire additional assortments to give to their friends.

PITCHER & MANDA, JOHN N. MAY, Short Hills, N. J.
RECEIVER.

Mention American Gardening when you write.

ONE HUNDRED DOLLARS AN ACRE

Can only be made from one source—POULTRY. Wheat and corn do not pay by comparison. You may smile, but have you ever tried keeping poultry right. The egg basket is a handy source of revenue these hard times. THE POULTRY KEEPER, Box 80 PARKSBURG, PA. sends a year tells how it is done. Sample free. The paper 1 year and four grand Poultry Books, \$1. Write to-day.

Mention American Gardening when you write.

The Savannah Line

1400 Miles at Sea and a Week's Board, \$36.

Ocean Steam
ship Co. of
Savannah &
New England &
Savannah
S. S. Co.

For a short time the Savannah Line will sell First Cabin Tickets calling for transportation 700 miles each way, unexcelled meals and accommodations aboard steamer, transfers in Savannah, and two days' stop at choice of three first-class hotels at Savannah; in all, nearly a week's board in addition to transportation, etc., for THIRTY-SIX DOLLARS.

Through Tickets to JACKSONVILLE, ATLANTA, and all Points South. Steamers sail Tuesdays, Thursdays and Saturdays, from New York, and every four and five days respectively from Boston and Philadelphia. (see sailing cards.) Electric Lights kept up all night so that passengers can turn them on or off at pleasure.

UNSURPASSED CABIN ACCOMMODATIONS, SEA SPRAY BATHS AND ALL CONVENIENCES.

Send three two-cent stamps for Savannah Line News, and beautifully illustrated book, something new, to RICHARDSON & BARNARD, Agents, 20 Atlantic Ave., Boston, Mass.; M. C. HAMMOND, Agent, Pier 18 S. W. Foot Spruce St., Philadelphia, Pa., or

G. M. SORREL, Manager, New Pier 35, N.R., New York

Mention American Gardening when you write.

SEE OUR UNEXCELLED

PREMIUM OFFERS

....OF....

Plants, Seeds, etc., in our issue of February 6th.

Our premiums are offered with a view to interesting present subscribers to obtain us New Subscriptions, and for so doing we expect them to obtain the new subscriber and retain the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. New names sent in direct are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

In our issue of February 6 we published Premium Offers, embracing a vast assortment of Standard, Fancy and Novelty Collections in Seeds, Fruits, Flowers and Vegetables, to which we invite the careful attention of every one of our readers, in the hope that, becoming interested, they will seek to earn these premiums and so increase our subscription list.

The Premiums offered are all of exceptional value; there is nothing bordering on the sensational in the various announcements, and great pains have been taken to secure offers from reliable growers and specialists. As we have previously stated, the publishers of AMERICAN GARDENING neither buy, sell, nor in any way do they trade in the stocks offered, except to mail the orders as received to the growers or dealers making the offers. This arrangement makes it satisfactory to our advertisers, who, in turn, being thus afforded an opportunity to introduce their specialties to likely new customers, at practically no cost for advertising in any of its ramifications, are thus enabled to give values which are unprecedented in the annals of Premium Offers.

If you want a copy of our Premium List let us hear from you and we will mail you one.

CAMPBELL'S EARLY Our Marvelous New GRAPE

Best and most valuable. Highest commendation from highest authorities. Hardy, healthy, vigorous, very productive. Early or late. Largest clusters, finest quality, not foxy. Seeds need not be swallowed. None genuine without our seals. We guarantee safe arrival by mail. Largest stock of Grape Vines in the World. Small Fruits. Introducer of unrivalled Red Jacket Gooseberry and Fay Currant. Catalogue free.

GEO. S. JOSSELYN, Fredonia, New York.

Mention American Gardening when you write.



Mention American Gardening when you write.

"Size and Quality combined, the Hopes and Expectations of the Chestnut Celebration (which THE R. N. Y. inaugurated years ago)." Realized. Nov. 10th Page 176, 1894.

HEADQUARTERS

FOR RIDGELY CHESTNUT TREES and WOOD for GRAFTING, also

Valuable Long Keeping

Native APPLES. General Line NURSERY STOCK. Also

SMALL FRUITS AND VEGETABLE PLANTS.

WYOMING AVENUE NURSERIES,

P. EMERSON, Prop.

WYOMING, Kent Co., DEL.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897

Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

WE OFFER AMONG MANY NEW THINGS

The Bismarck Apple—A fruit on 2-year grafts. A remarkable new fruit.
Hedysarum Multijugum—A beautiful Shrub of great beauty.
Lord Penzance's Hybrid—Worthy a place in every garden.
Viburnum Tomentosum—The finest shrub grown. Very rare.
Picea Concolor—An improved Spruce.
The Weeping Spruce.
Clematis Paniculata—Without a rival, a hardy climber, 30 cts.
Magnolias, Japan Maples.
The best stock of Herbaceous Perennials in the country.
Rhododendrons and Azaleas at lowest prices, quoted.

For all these, and full advice and plans for planting grounds and gardens, write us.

New Catalogue mailed for 10c.

THE SHADY HILL NURSERY CO., 102 State St., Boston, Mass.

Mention American Gardening when you write.



Beautify your Homes

FOR ONLY

20 CENTS

BY planting the following variety of selected seed, which will bloom the entire season, and cannot help but give you entire satisfaction.

Aurora Collection of Sweet Peas
A large pkg. weighing about one ounce and containing all the colors and varieties cultivated.

Aster, Elliott Rainbow Mixture,
an acquisition to any garden, and a premium winner. The plants are bushy in form, of a vigorous, robust habit, covered with large globular flowers fully imbricated.

Pansy, Elliott's Blended, produces flowers of a very showy nature and of unusually large size. The seed is selected from the most reliable growers in Germany, England and France, and comprises the finest shades.

Carnation Dwarf Marguerite (an illustration of which you will find on our catalogue cover) something unusually fine, also our annual, beautifully illustrated; actual value in all 40 cents. Remember, 20 cents buys them all.

Wm. Elliott & Sons., SEEDSMEN, 54 & 56 Dey St, N. Y.

Mention American Gardening when you write.

1897-1847

People Who "Don't have any Luck with Flowers"

are just the ones who need our "JUBILEE" CATALOGUE for 1897.

To commemorate our fiftieth business year, we have prepared the most beautiful and valuable SEED and PLANT CATALOGUE the gardening world has ever seen. Every copy costs us 25 cts. to produce, but in honor of this our "JUBILEE" year, we will send it this season FREE of 10c. (in stamps) to cover postage and mailing. This "JUBILEE" CATALOGUE of "EVERYTHING FOR THE GARDEN" is a magnificent book of 170 pages, on which are displayed over 500 beautiful illustrations of Seeds and Plants, the work of our own artists. Also six full-size colored plates which in artistic beauty have probably never been equaled, certainly never surpassed.

A "JUBILEE SURPRISE SOUVENIR" will also be sent without charge to all applicants for the Catalogue who will state where they saw this advertisement.

PETER HENDERSON & CO.,
35 & 37 CORTLANDT ST., NEW YORK.

THIS JUBILEE BORDER IS COPYRIGHTED.

Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan 14 y. 2 years, \$5.00 per 100.

E. S. PETERSON, Montrose, New York.
Montrose Nurseries.

Mention American Gardening when you write.

EVERGREENS.

FINEST STOCK IN THE COUNTRY FOR NURSERY PLANTING, OR HEDGES AND WINDBREAKS.

MANY THOUSAND COLORADO BLUE SPRUCE.

And all standard sorts. For lowest prices,

Write **C. L. WHITNEY, Warren, O.**

Mention American Gardening when you write.

TREES AND PLANTS.

FRUIT AND ORNAMENTAL, DECIDUOUS AND EVERGREEN, OLD STANDARD AND BEST NEW VARIETIES.

Large supply of SHADE TREES, 1 1/4 to 4 inch calliper.

KEENE & FOULK, BLOODGOOD NURSERIES, Flushing, N.Y.

Mention American Gardening when you write.

The choicest
MAGNOLIAS,
JAPANESE MAPLES
and other **TREES**
& **SHRUBS**
are accurately described in our New Catalogue. Profusely illustrated, including three lithographs. Contains prices of large and small trees, specimens for immediate effect; and special prices for quantities. A Guide to Tree Planting. The most complete catalogue of its kind ever published. 6 cents in stamps.

THOS. MEEHAN & SONS,
Germantown, Philadelphia.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 116.
COMBINED SERIES VOL. LI.

NEW YORK, MARCH 13, 1897.

5 CENTS A COPY
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Am. Institute Show.....	185	Day Lily, Giant.....	179	Gooseberry, The.....	171	Potato Scab, New Rem- edy for.....	178	Illustrations.	
Apiary.....	187	Diseases and Insects to Fight.....	173	Home Plot, The.....	182	Poultry Notes.....	182	Celery Storing, Success- ful.....	171
Blackberries.....	170	Drill, New Combination.....	176	Insects, Destructive. III.....	174	Private Gardeners.....	181, 184	Cordon Pear Trees.....	169
Books for the Vegetable Grower.....	173	Economy of Space.....	178	Lawn, The.....	177	Questions Answered.....	188	Drill, A Combination.....	176
Casabanana.....	180	English Varieties in America.....	179	Market Reports.....	188	Readers' Notes.....	180	Giant Day Lily.....	179
Celery Storing, Success- ful.....	171	Flower Garden.....	177	Money Methods. IV.....	186	Roses, Grafting.....	179	Plan for Home Grounds.....	175
Coal Ashes for Lawns.....	180	Freeze Before Forcing.....	174	Plan for Home Grounds.....	175	Scale Insects.....	189	Plant Box, New.....	173
Cordon Trained Trees.....	169	Fruit Garden.....	172	Plant Box, a New.....	173	Topical Summary.....	176	Plum Curculio, The.....	174
				Plum Curculio.....	174	Vegetable Garden.....	172		

Cordon Pear Trees.

In order to establish cordon trees, such as are shewn in the accompanying illustration (fig. 58), make a bed as necessary of good soil, 3 feet wide and 2 to 2½ feet in depth. Insert main pests at intervals of 6 feet, and so as to be about 7 feet out of the ground, then stretch six lines of galvanized iron wire No. 14, and draw them very tight. Take wooden slats

Bartlett, Duchesse, Louise Bonne, Beurré Diel, Clapp's Favorite, Beurré Hardy, Beurré Giffard, Andre des Portess etc.

After planting, attention must be paid to shortening back the main growth of the tree in order to throw vigor into the lower portion. Cut back to one-third of its length, and during the summer pinch out all shoots which throw to the front or back of the row, leaving only the laterals; and even these,

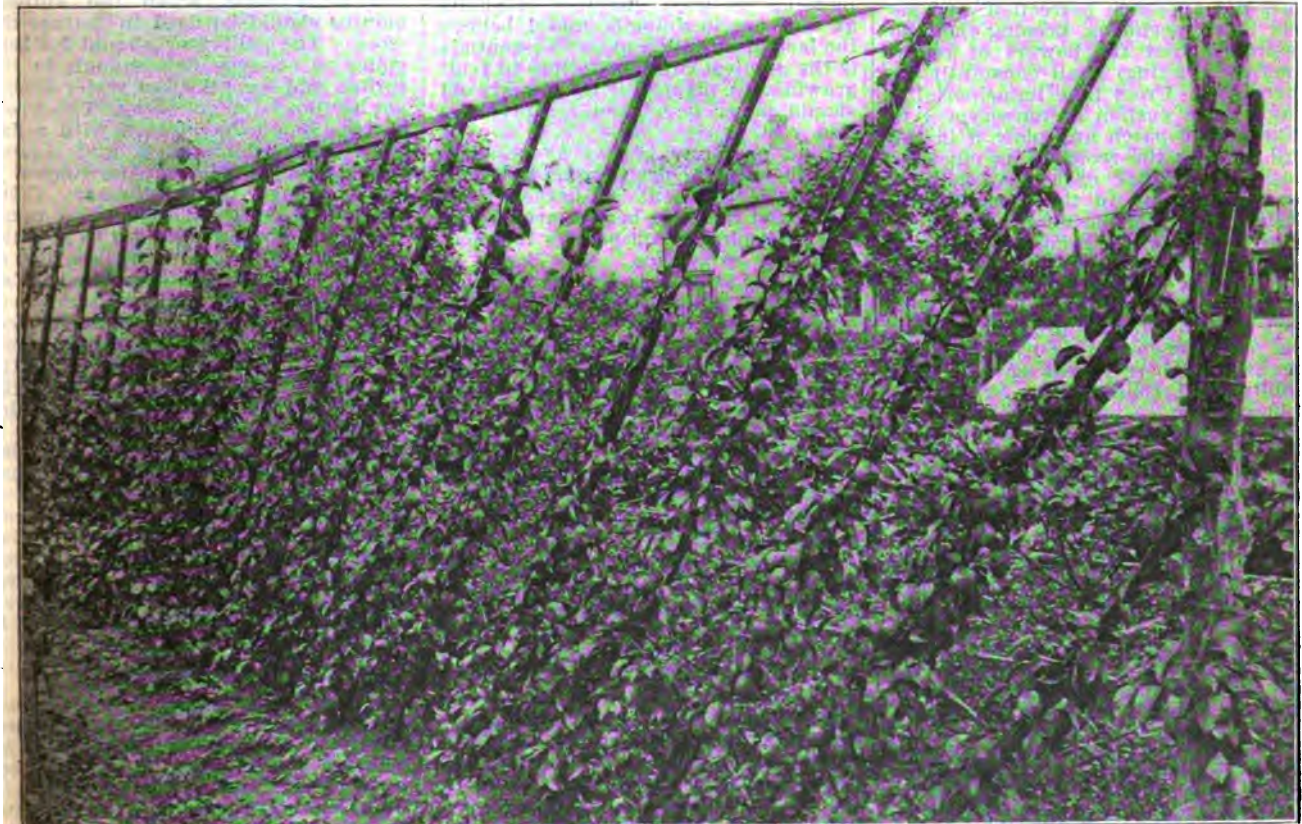


FIG. 58.—MAKING THE MOST OF THE SPACE.

one-inch wide and one-eighth inch thick, adjusting them on the wires so as to make an angle of 45°, using thin galvanized wire to secure them in place. These slats should be at a distance of 18 inches apart.

As to the trees to be used: select those one year grafted, and by preference have them on the quince stock, which has a dwarfing tendency, and it will also be well to plant only those varieties which come into bearing early, such as

if they grow too vigorously, are to be pinched back to leave three or four leaves, and tie up the leader which is to form the main body of the tree.

In the second year allow the main shoot to lengthen 6 to 10 inches, and so on each year, thus throwing strength into fruit spurs. It is well to thin out the crop, allowing the tree to carry a few very fine fruits rather than overtax its bearing capabilities.

By BONAVENTURE GARDNER

Great Crops of Blackberries, and How to Grow Them.

R. M. KELLOGG, Ionia, Mich.

For commercial work, there is a wide opening in blackberry culture. There is scarcely a community even partially supplied, and as generally grown the quality is so low that the consumption is the merest fraction of what it would be if such methods were adopted as would secure the highest development in flavor, size and productiveness. When grown, as I shall hereafter point out (under reasonably favorable location, soil and climatic conditions), the crop should exceed three hundred bushels per acre, of a grade that would rank with the luscious strawberry, and even outdo that king of the small fruits as a money maker. The berries come at a season when there is no other berry in the market, and make the connecting link between raspberries and grapes, so as to enable the small fruit grower to appear on the market every day throughout the season.

Causes of Failures.

Let us consider for a moment some of the causes that have led to the quite general failures in attempts at blackberry growing, either for market or for home use. I do not care whether it be plants or animals, the continuous breeding or propagation from scrubs will soon cause them to part with every good quality they possess; on the contrary, the only way to improve and accumulate good qualities in any variety is to discard everything which does not approach perfection, and select ideal specimens, keeping them so restricted that the powers of reproduction (fruiting) shall constantly be increasing. From time immemorial it has been a custom of nurserymen to take an old patch and plow it in the fall, cutting the roots up as much as possible, so that each year suckers would come up in the greatest profusion, and then the more plants that were dug the more came up, until the whole became a tangled mass. They were rarely or never pruned, and allowed to stand without tillage to support them during the drought, so that the strain of maturing even a small quantity of berries was beyond their ability, and consequently exhaustion followed.

Growers took these plants and fruited them eight to ten years, until run out, and then dug suckers from them, and set a new patch, and so on, successively, until, getting only seedy buttony fruit, they threw up the business in disgust. When a blackberry cane becomes weakened from any cause, it will throw up suckers until they become an intolerable nuisance, and we must never forget that in cutting either tops or roots of a plant we are only dividing the individual, and carrying into the new plantation whatever weakness it possesses.

When we dig a sucker plant we generally get only a few roots with it. The foliage absorbs the strength of what rootage there is, and, there being no calluses formed, few new roots start. Those already established grow only from the end, and in this way will often go out forty or fifty feet from the bush, while near the plant will be found very few roots. The sap, having to pass through these long roots before it can reach the foliage for assimilation, greatly aggravates the sucker nuisance, and the few ber-

ries secured are generally dry, seedy and flavorless.

The Ideal Blackberry.

Now let me describe my ideal of what a blackberry should be, and see if I can formulate a method of producing it and preserving the highest fruiting vigor, and put on the market a grade of berries so delicious that the demand shall always be in excess of the supply.

There should be no weak or puny bushes, but all uniformly large, and enriched with full blood and the strongest reproductive powers or fruiting vigor. Now, we cannot do this by propagating from anything less than perfection itself, and so we must go to the fruiting field early in the season to search for this ideal. Find the cane that is thickly studded with large, well developed buds, and examine the tips to see that it has stood the winter blast without the slightest weakening, and stake it, taking care to so prune it that its fruit shall be no more than it can bring to perfection. Carefully examine the stamens when blossoms first open, and note their size and general condition. Where stamens are plenty and well charged with the vital dust (pollen) score high, and give that plant bearing them the preference. I hold it of the utmost importance, and believe I have proven by actual test, that maximum crops of berries or any other kind of small fruits cannot be secured where plants, trees or bushes are allowed to shed their pollen year after year without restriction until the potency of the pollen has been destroyed; that restriction, selection and high feeding are as essential to building up good qualities in plants as they are in animals, and I believe the lack of attention to these essentials is the greatest cause of failure in fruit growing. A plant over three years old should never be chosen for propagation.

Find as many bushes as possible, give them high culture, so as to secure highest development. At harvest time, count and measure berries accurately, and determine which possess the most points of excellence. Now, early in the fall, or as soon as leaves are fallen and the plant is entirely dormant, dig up every root, select those about the size of a common lead pencil, cut into pieces three inches long, and bury them in clean, sharp, fine sand, placing the boxes in a cold cellar, kept just above the freezing point, so they will callus and form wood buds. If the cuttings be kept too warm they will start and grow; if too cold, the callus will not form.

Spring Treatment.

The following spring prepare a piece of rich sand loam, with plenty of moisture, on a south incline, and plant the cuttings in nursery rows, about two or three inches apart and not over two inches deep. If planted too deeply the shoots will damp off; and if too shallow, they will dry out. Some system of irrigation, in case of drought, should be provided. In the fall the plants should be taken up and roots cut back to about eight inches, and again packed in fine sand, keeping them as before until spring, when they will be thoroughly callused, and, when planted out in well prepared soil, will fill the ground with a mass of feeding roots all near the plant, thus bringing the "food gatherers" near the organs of assimilation. Under these conditions each plant occupies its own feeding ground without trespassing on the others, so we know where to apply

fertilizers and do the cultivating. As already stated, every cutting possessing any weakness has failed to grow, and we cannot now have anything but the strongest and most healthy plants.

Situations for Blackberries.

Blackberries will generally do well on low land, if winter protection is given; but if the hardy varieties are used without protection, high land should be chosen. The soil should be neither the light sand nor heaviest clay. In fertilizing, bear in mind that ground rich in potash and phosphoric acid makes strong, firm wood, and greatly aids seed formation, while that excessively rich in nitrogen makes the wood soft and succulent and easily winter-killed; hence, all the wood ashes should be saved for the blackberry patch.

Having our ground deeply worked and subsoiled, we plow furrows about eight feet apart and six inches deep, set plants about three feet apart, taking care not to expose the roots, loaded, as they are, with the calluses, but cover them at once and firm the soil, and cultivate shallow the same day of setting, so the water may draw up around the plant and nourish it at this critical period.

Hints on Cultivation.

The two chief difficulties in blackberry culture are the drought and winter-killing. These may be reduced to one difficulty, because the management during the summer is often the chief cause of winter-killing. Every possible effort should be made to force a vigorous growth early in the spring, and this should proceed regularly until fall rains come, when the autumn months should be used to mature the wood. The cultivator should be kept going as soon as dry enough in the spring, and the priceless water should not be allowed to get away. The whole surface should be covered with a fine loose earth all the time, and a crust should not be allowed to remain a moment longer than necessary. Cultivate every week and after every rain.

It is the greatest blunder to stop the cultivator when picking begins, just at the time when the bushes need moisture so much to fill their great loads of berries with their rich juices; the feet of the pickers tramp the ground down hard, and capillarity is perfect to the surface, and water passes off with the greatest freedom; the berries soon dry up, and the vitality of the bush is sapped by having its functions suspended in hot weather. The plant goes through the same process as if preparing for winter, buds form and foliage ripens. Later, the fall rains come, a new growth starts, and the early frosts destroy the leaves, rendering the proper ripening of the wood an impossibility, and winter-killing is sure to follow.

As to Pinching and Pruning.

It has been almost the universal practice to pinch new canes when about eighteen inches high, so as to make them throw out laterals and become stocky and self-supporting. If the ground be rich, so that a vigorous growth is made and no trellis used, the canes would sprawl around on the ground, so as to interfere with cultivating and picking, and thus pinching in may become a necessity; but I confess I have come to entertain the gravest doubts about the advantage of suddenly stopping growth by removing terminal buds when in full tide of growth. I am satisfied it brings on a congested condition, that seriously in-

terferes with the hardiness and the vigor of the canes. The better way is to set stakes about every thirty or forty feet, string a No. 9 wire about four feet high; then with well-gloved hands and a bundle of short willow pass along rapidly and tie each cane, spreading them out fan-shape, so they will have plenty of air and light, all out of the way of the cultivator, and so that pickers can get to the fruit with the greatest ease. No dirty berries, none threshed off by the wind, no broken canes, but pruning and all work done with an ease that much more than compensates for the cost of wire and tying the canes to it. Different varieties require different pruning, and on some soils the canes can be left longer than on others, but in any case it should be so close that there will not be any overbearing and consequent exhaustion of the plant.

Gathering.

A green blackberry is not the sweetest thing on earth; the fruit should be black at least three days before picking. Twice per week is plenty often enough to go over the bushes to gather from them. Exercise the greatest care that the berries do not stand in bright sun after they are in the boxes; they

Successful Celery Storing.

After testing the various methods of storing celery for winter use, I am convinced that, for my own purpose, at least, the one I herewith describe is best. I use Giant Pascal and New Rose for winter, and plant three rows close together (six or seven inches apart), and the plants about the same distance apart in the rows. The ground is heavily manured before planting and the plants are kept well watered and cultivated. They are given but one slight earthing up until slight frosts set in. Stakes are then driven in along the two outside rows, giving the tops a slight inclination toward the central row, and having the tops of the stakes about level with the tops of the celery. Earth is then banked up about two-thirds of the height of the plants and made firm. A ten-inch board is then set against the stakes on each side and the earth is banked to a level with the top of the boards. Two more boards are nailed together at right angles to one another and these are placed over the top.

Some straw is placed alongside of the rows and is put over the boards during a sharp freeze. In mild weather both straw and boards are removed

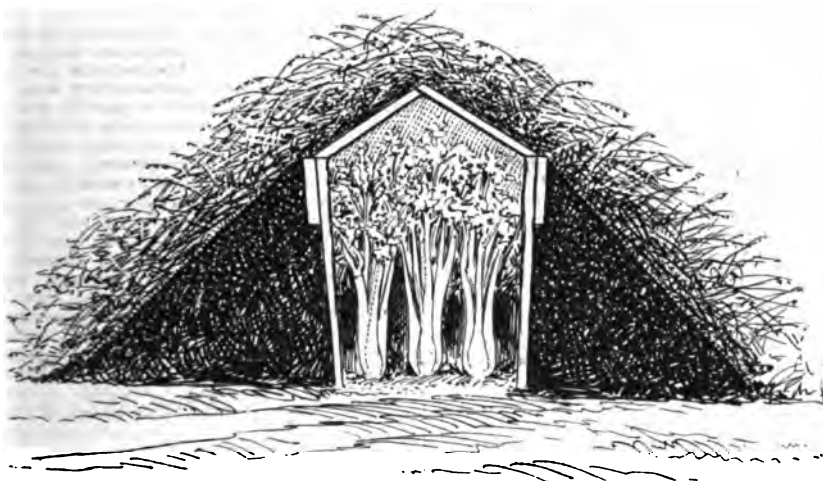


FIG. 59.—SUCCESSFUL STORING OF CELERY.

then quickly sour and turn red. Keep them in a cool, dark place.

Varieties.

The list of desirable varieties is not long. Of the extreme hardy sorts, Western Triumph and Snyder still head the list, Taylor's Prolific being the best late variety and of highest quality. Ancient Briton is a grand berry, and a leader in many localities. It is classed as hardy, but should be given winter protection in the North. The Erie has gained many warm admirers, and will remain with us until we find our ideal berry. It has many of the desirable qualities. Wauchusett's Thornless, Early Cluster, Lawton, Kittatinny and a few other sorts have nearly gone out of use in this section.

Of the new varieties, Eldorado is the most promising. I could not find a cane showing the slightest injury from cold the past winter, and its fruit is very fine. Wilson Jr. and Early Harvest rank high, but must have winter protection in all cases where fruit is expected. With improved methods of culture and a better knowledge of the requirements of the blackberry, we shall, in the no distant future, see it a leader in the berry market.

entirely. This is all the protection that will be needed until severe winter weather sets in, when the whole bank may be covered with leaves, straw and litter of any kind. The accompanying sketch may present a clearer idea of this method.

The point that appeals most strongly to my fancy is the fact that the plants are stored just as they grew and that they are able to continue growing, not having been disturbed at the roots, thus giving them the opportunity of making what is essential to late-keeping celery, viz., a late growth.

Millbrook, N. Y. I. L. POWELL.

[We are able to vouch for the excellent quality of the celery thus stored. Never have we enjoyed a sweeter or crisper sample than that sent in by Mr. Powell with the foregoing communication.—Ed.]

American Apples in Germany.

According to the Consular reports there has been a boom in American apples on the German markets, and during last year the Germans imported over twenty times as many as had been the case in any previous year. Consul at Frankfort thinks that this market can be made permanent if growers and shippers take proper care in sending only the best. The Victory is one of quality, not price.

The Gooseberry.

From Paper by Professor W. M. Munson Before the Maine Pomological Society.

Under good culture gooseberries will succeed well on a variety of soils, but as with the currant, the best results are obtained on a strong, rather moist, well-drained, clay loam. Thorough but shallow cultivation should be given.

As a commercial crop gooseberries are often grown between the trees in young orchards, as they do fairly well in partial shade. In ordinary field culture the plants should be set five feet apart each way, or in rows six feet apart and four or five feet distant in the row. Gooseberries are trained both in the tree form and in the bush form. Ordinarily the latter is preferable.

Pruning.

As a rule little pruning is required during the first three or four years, except to head back the strong new shoots and remove a few of the less vigorous ones for the purpose of developing fruit spurs all along the canes. The latter treatment consists in annually removing superfluous branches and checking growth sufficient to keep the bushes within bounds.

Propagation.

The gooseberry may be grown from cuttings as is the currant, or by mound layering. By this method the old plants are headed back to induce the formation of strong new shoots near the surface of the ground. Late in June or in July when the new wood has become somewhat hardened a mound of earth is made about the "stool," the earth being about four or five inches deep above the bases of the shoots. In the fall the earth is removed and the rooted shoots are cut off and planted at once in well prepared soil, or they may be tied in bundles and treated as cuttings until the following spring. If care is used in removing shoots during the winter, propagation from the same plants may proceed indefinitely from year to year.

Varieties.

The American varieties are those which have been developed from our native species and are of comparatively recent origin, for it is but few years since gooseberry growing came to be a profitable industry in this country. The European varieties are very large and have the advantage of a great variety of coloring. They are, however, susceptible to mildew.

Downing, Smith's Improved and Pale Red are the most valuable of the native varieties. Downing is much superior to the other in size and quality. It is not quite as prolific as Houghton, but the fruit is much more attractive and therefore it is the variety most popular in the market. Of the European sorts, Industry and Whitesmith lead.

Yield.

The yield of gooseberries as reported by different growers varies greatly, but about 100 bushels per acre is considered a fair average by many. From some of the bushes set in our own plantation in 1891 we harvested 12 quarts the past season. Even with an average of two quarts per bushel, however, the crop is a profitable one to grow.

The South.—We are in receipt of a brochure put out by the Ocean Steamship Company of Savannah in which is much information for the benefit of those who desire to go "down South." The book comprises 32 pages and has a profusion of halftone illustrations, which afford the reader a vivid idea of the luxuriance of navigation about Savannah; the views of the various parks are also interesting.

Combine Against Insects, Etc.

At a meeting of the Ohio State Horticultural Society in February, 1896, a resolution was passed requesting all State horticultural societies to send delegates to a national convention to be held at Washington, D. C., on the 5th of March, 1897, to consider and recommend the most appropriate Federal and State legislation for preventing the introduction or diffusion of noxious insects and fungi in the United States.

The convention assembled at the Ebbitt House on the date arranged, the sessions lasting all that day and the greater part of the next. E. H. Cushman of Ohio was elected president, J. H. Hale of Connecticut vice-president, Wesley Webb of Delaware secretary, and M. J. Daniels of California assistant secretary. Among those present as delegates were the following: William R. Sessions, Boston, Mass.; D. D. Denise, New Jersey; B. T. Galloway of the Agricultural Department, M. B. Waite, also of the Department of Agriculture; W. H. Farnsworth of Waterville, O.; S. A. Beach of New York, H. E. Van Deman of Parkersburg, Va.; W. B. Alwood, Blacksburg, Va.; H. Gorman, Lexington, Ky.; L. O. Howard of the Agricultural Department, M. V. Slingerland of Ithaca, N. Y.; Wesley Webb, Dover, Del.; Otto Luger, St. Anthony Park, Minn.; J. Van Lindley of Pomona, N. C.; Gerald McCarthy, Raleigh, N. C.; M. J. Daniels, Riverside, Cal.; S. B. Heigels of Washington, president of the Pennsylvania Horticultural Society; W. W. Miller, Columbus, O.; N. H. Lowe, Geneva, N. Y.; C. M. Hooker, Rochester, N. Y.; H. K. Snow, Tustin, Cal.; E. S. Henry, M. C., of Connecticut; H. J. Wibber of the Department of Agriculture, S. H. Derby, Woodside, Del.; C. M. Hobbs, Bridgeport, Ind.; Robert Gulick, Linkwood, Md.; E. S. Goff, Madison, Wis.; W. G. Johnson, College Park, Md.; J. W. Baker, Nashville, Tenn.; Walter H. Evans of the experiment station, Washington; E. H. Bissell, Richmond, Va.; E. M. Wardell, Los Angeles, Cal.; F. M. Webster, Wooster, O.; N. J. Bacheider, Concord, N. H.; Colonel E. S. Chamberlin, London, Va.; E. H. Cushman, Euclid, O.; Captain R. S. Emery, Chestertown, Md.; Colonel J. H. Brigham, Delta, O.; W. C. Barry, Rochester, N. Y.

Professor L. O. Howard, entomologist of the Department of Agriculture, read a paper on the introduction of foreign insect pests and methods of prevention to be taken. He said that in a collection of 600 species of noxious insects exhibited at the World's Fair, 111 species were introduced from other countries. Among scale insects alone 23 species were of foreign origin. The noxious insects from countries having climates similar to our own, such as Europe, China, Japan and Australia, are most to be feared. Those from tropical and sub-tropical countries are not so dangerous except in the extreme South. He showed that even with rigid inspection at the ports of entry, how difficult it is to guard against importation by giving the history of the Gypsy Moth, the Hessian fly, and the common cabbage butterfly. Judicious inspection might have kept out several pests in the past. He thought the establishment of adequate inspection at the ports of entry need not be expensive to the general government.

Professor B. T. Galloway read a paper entitled "Plant diseases and the possibilities of decrease by legislation." Plant diseases he divided into two groups (a) those caused by insects and fungi and (b) those which originated through unfavorable surroundings. He showed how difficult it is to expect aid from legislation owing to the difficulty of detecting diseases in their incipient stages. Again one state might make good laws while bordering States might take no action, thus rendering the work done of less importance than if all passed similar remedial measures.

A paper from R. M. Lelong, California, on the inspection of trees, fruits and plants in that State, was read by the secretary. After a recital of the various Legislative acts passed by the State showing that very satisfactory work had been accomplished, he cited several cases where large importations of badly infested trees had been

destroyed, among them a lot of 325,000 citrus trees, comprising one shipment which had been condemned and destroyed at San Francisco after fumigation had been found to be ineffective. He stated that California was no longer the dumping ground for pest ridden trees, and as all the States had been benefited by the legislation of California, other States ought to adopt similar legislation.

Mr. Gerald McCarthy of North Carolina read a paper on insect foes, their prevention and eradication.

Mr. McLaughlin, member of Congress from California spoke on the quarantine of trees at Los Angeles, and showed how the whole country had been benefited by the State laws prohibiting the introduction of pests. He thought that should a bill be drawn up governing the inspection of importations that Congress would be found in the humor to give the subject its earnest consideration.

At this point Mr. Wilson, the new Secretary of Agriculture, addressed the convention, and in the course of his remarks stated that he was in sympathy with and expressed his willingness to do all in his power to further the objects the convention had in view.

A committee on legislation was formed, consisting of ten members, with W. B. Alwood, Blacksburg, Va., as chairman. Several resolutions were reported by the committee to the convention for its consideration previous to drawing up a bill to be presented to Congress. These resolutions, which were adopted by the convention, recommended State legislation against the introduction of dangerous insects or plant diseases, and that each State provide inspectors of nurseries and premises for the detection of insects, and these inspectors be given power to order remedial measures when such be found necessary, and that each State provide the most approved remedial measures.

The bill subsequently reported by the committee is entitled "An act to provide for the inspection of trees, plants, shrubs, roots, buds, pips, scions, grafts or nursery stock imported into the United States, and for the inspection of plants grown in the United States which become the subjects of interstate commerce." It empowers the Secretary of Agriculture, at the expense of the owner, to place in quarantine all articles imported which are described as above, and to have them inspected for the purpose of ascertaining the presence of insect or fungoid diseases. When such trees, etc., are found to be infested with disease or insect pests, they are to be treated at the expense of the owner or destroyed if their condition warrant it. Appeals may be taken from the decisions of the inspectors to the Secretary of Agriculture within three days, the decision of the Secretary to be final. When the inspection shows the goods to be apparently free from disease a certificate is to be issued to the owner by the inspector, which precludes further inspection within the States. If found to have been treated abroad, and accompanied with a satisfactory guarantee, this will be accepted in lieu of inspection at the port of entry. The bill makes it unlawful to transport from one State to another all trees, etc., which have not been examined by inspectors and certified to be free from fungoid or insect diseases.

The committee on legislation was made a permanent one, with the power to appoint an executive committee to take charge of legislation. The convention adjourned sine die, subject to the call of the president and secretary.

June Beetle.—To prevent the laying of the eggs of the June beetle in the corn field in May or June, it is desirable that the ground should be kept practically free from weeds at that time, as it is well known that a surface growth of vegetation is a strong attraction to these insects searching for places suitable for the support of the young. Some of our more recent observations show that the beetles are likely to deposit their eggs in the field from which they themselves have emerged.

Cannas should now be divided up to increase stock.

The Vegetable Garden.

Cabbage.—It is now time to make another sowing of early and intermediate cabbage for succession. There are none better for this purpose than the Early Jersey Wakefield, with Henderson's Early Summer to follow. All seedlings as soon as they can be handled should be transplanted two to three inches apart.

Cauliflower.—The early Snowball is the most satisfactory all round cauliflower for general use. A sowing of this should be made at once to insure well established plants to set out as soon as the weather is favorable, so as to succeed in growing good heads before the hot weather sets in, for then it is difficult to grow the crop satisfactorily, other than in exceptionally suitable locations. Prick out the seedlings into other flats as soon as a pair of true leaves is formed, otherwise they are liable to damp off at the stem.

Celery.—Those requiring early celery and who have not yet made a start should lose, no time or it will be very late in the season before any can be had fit for use. By soaking the desired quantity of seeds in water for twenty-four hours, and mixing with dry dust or sand, for convenience in sowing, germination will be accelerated. For early use there is none equal to the White Plume variety, but for private use it is a good plan to grow some of the new Pink Plume with it, which two make a pleasing contrast upon the table. Seeds should be covered lightly, kept moist, neither too wet nor dry.

Egg Plants and Peppers.—If not already done sow at once, then keep in a steady, brisk heat of 70 degrees to keep them growing without check, as they damp off very easily. Cover the seeds in the flats with sand, and after germination keep as near the glass as possible to prevent spindly growth. When the temperature is rising to about 80 degrees with sun heat, fresh air should gradually be admitted, but the plants must not be chilled by sudden drafts of cold air, especially if they are near the opening ventilator. Seedlings showing a true leaf should be pricked out into other flats or potted in well-drained three-inch pots, using an open, sandy compost, with a small quantity of decomposed cow or sheep manure added. If in pots, they may be plunged in the hot beds, provided the heat therein is not above 85 degrees; thus treated they will not dry up so quickly and extra care in watering is avoided.

W. M. EDWARDS, R. I.

Freeze Before Forcing.

One of the earliest axioms we learned in early gardening days was that anything to be forced must have a more or less thorough ripening of growth and a period of rest. I have lately had two proofs that such is wisdom.

The earliest batch of rhubarb put in forcing house had only experienced a few slight fall frosts. It never started at all, and has not done so to this day. All successful batches that had a thorough freezing, though treated actually in the same way and placed beside the first, have been all right.

Another case is strawberries. Having more of them than the frames could accommodate, I put the batch I intended to force first in the nectarine house, where scarcely any hard frost reached them. All the rest got hard frozen in frames. Owing to certain circumstances, instead of forcing in successional batches, I put all the lot in at once (four benches in a house 100 feet long), and consequently all were treated alike, and the temperature adapted to the various stages of advancement in growth. As soon as the plants started the difference was apparent, and you could see to a row by the vigorous start of those that had been hard frozen and the weakly uncertain growth of the others what was the matter and where the treatment had been right. The plants are now in flower, but we have thrown out nearly one-half of the batch that came from the nectarine house, the growth was so weak and the weaker flower trusses giving no assurance of a profitable return for labor.

A. HERRINGTON, Madison, N. J.

New Books for the Vegetable Grower.

Within the past three months no less than five books devoted to the interest of the vegetable grower have appeared. On page 806 in our issue of Dec. 19 last attention of our readers was called to the significant fact that the industry of vegetable forcing was growing by leaps and bounds; that there was an awakened demand for the forced vegetables in Winter, especially outside of the great centers of population, such as the metropolis, Boston, Philadelphia, Chicago, Baltimore and other large distributing centers. These places have, of course, long been great consumers, and may be expected so to continue. What we had reference to is the smaller towns and cities of from eight to twenty thousand inhabitants, and in these the demand has become more apparent.

Within the past two months we have conversed with some large growers, who, taking advantage of this condition, have been enabled to sell all their stock at the home market in their own villages, and by so doing were able to realize better prices than were obtainable in New York, after counting express and commission charges against the latter.

Such circumstances as the foregoing tend to show that the vegetable growing industry is in a healthy condition, and it is in this respect much ahead of its sister enterprise the forcing of flowers; strange to say this is being left far behind in the way of home-written, practical handbooks, and the outlook is that the vegetable grower will very shortly have (if, indeed, works hereafter noted do not supply it) the most complete guide and assistance by way of his library, and this at a very moderate cost. In fact for the expenditure of \$5 or so such a mass of valuable instruction can be obtained that every one may be benefited no matter whether he be a young beginner, an advanced student, or an old hand. In the five books before us there is teaching for all.

Perhaps the most generally valuable book is that of Professor Samuel B. Green of Minnesota; it is a most excellent and eminently practical manual on the growing of vegetables for the home or the market. The author has specially prepared his work that it may be used as a class book for the classes in the agricultural colleges, and is ostensibly written to cover the latitude of St. Paul, Minneapolis and Minnesota. But the work has far more than a local character; it is to a very large degree suited to the grower everywhere in the United States. It is brimful of practical information and is very cleverly and carefully written. The author has solved the difficult problem of imparting exact practical information in plain terms. In chapter III, upon manures, the language is so much to the point and so plain, especially upon the values of the various bodies, that he who runs can read, and learn much. In tabular form are presented first the composition of the vegetable, next the component parts of farm manures, then an analysis of commercial fertilizers, followed by paragraphs upon the making and application of all, wherein are many excellent hints.

We are glad to note the Professor remarks, on page 23, "Commercial fertilizers should never be used until the home sources of manure have been exhausted, and then only to supplement rather than replace farm manures." He qualifies this statement as applying more to Western States, but, we think, there is a growing danger in the Eastern States to run wild on the value of commercial fertilizers, an extravagance that will one day rebound upon the cultivator to such a degree that the land will refuse to yield through sheer exhaustion and absence of humus. With the professor, we believe in the old-fashioned muck properly applied.

Chapter V, devoted to seed-sowing, is full of pointers to the young—aye, and even the old—farmer. Every year do we see enormous waste of labor and seed through injudicious planting, and oftentimes undue

haste. Chapters are devoted to information on cheap forms of glass structures, the hot bed, insect pests and their preventives. Accompanying this last chapter are excellent illustrations of the most injurious insects. At the close of the book are tables of longevity of seed, and showing the amounts of seed per acre required.

The Middle, Eastern and Western States are thus well provided for, and we turn now to the South; this section of the continent finds the outlet of Northern markets for its produce, and taking the necessities of the case from this cue Professor Rolfs² has prepared a book of plain, practical talk, providing much valuable information to the Southern trucker. The language used is always forcible and clear, and there can be no mistake about the writer's meaning; and when speaking of manure he does not hesitate to call it "muck." He shows a thorough knowledge of his subject, and seeks to give that to his readers in plain, terse language free from all technicalities. We very heartily commend the work to the attention of those for whom it is written, viz.: Market gardeners in the South.

The young market gardener is sometimes in want of a handy guide book, not so strictly cultural, but a guide to the



FIG. 60.—A PLANT BOX.

business in hand, and here Mr. Greiner steps in, taking the beginner by the hand at the very outset and reasoning with him in a plain, practical manner, so leads him through the three parts which he is pleased to facetiously term a "Little pit well built; a little plot well tilled; a little purse well filled." The book should have, as it deserves, a very ready sale among the class for which it is written.

But though the outdoor cultivation of vegetables is thus well provided for, the art of forcing is not without its handbook, which appears as one of Macmillan's Garden Craft Series.⁴

This volume treats almost entirely upon winter work under glass and of the structures themselves. It is very largely made up of extracts from the Cornell Bulletins upon the subject and the columns of American Gardening are also laid under contribution. The entire volume is a collation of facts carefully gathered and served up in such a manner as to be of the greatest advantage to the man who intends to put

money into the business of forcing or who, being already in it, needs help on material points. He has neither time nor money to travel around or to experiment, and this book his wants supplies at an almost infinitesimal cost compared to the sum of information to be gained. No vegetable forcer should be without it in his library. Two subjects exhaustively dealt with are Lettuce and Cucumbers, wherein much practical information, such as our readers are often seeking, is to be found. There has been wanting a handy reference book for the growing of vegetables under glass, and two previously issued have been noticed in these pages, but while they are good, so far as they go, Professor Bailey's contribution will leap into the first place and, we think, will stay.

A New Plant Box.

The style of box shown herewith I have been using for a number of years and find it is just the thing to transplant tomatoes, peppers or, in fact, any vegetable plant that is desired to put on the market early and get an extra price for. I use the boxes principally for early tomatoes, transplanting into them about ten days before I wish to market the plants. Tomatoes, peppers, asters and phloxes are transplanted for the third time into these boxes, and I get from three to five cents apiece for them, whereas if I sold them out of flats I would only get fifteen cents per dozen. As to the cost of this box: The material is such as is used in making the common market basket. Have it cut two and one-half inches in width and six and one-half inches in length, tapering on the sides from each end for two and one-half inches, thus leaving the center one and one-half inches square. Now score them for folding. To put all together take a three by three quartering, any length you wish, tapering the end to correspond with the taper of the box. Fasten a plate of iron on the top so that the tacks will clinch. Make a hoop of wire to slip over the end to hold the splints while the hoop is wrapped and nailed. The hoops should be three-eighths of an inch wide and ten inches long.

Made in this way the boxes will nest together, and can be made at any time for future use. The cost will not exceed 25 cents per 100 boxes. Material can be had at any basket factory.

Such a box can be used for layering strawberry plants. It makes a cheap, neat package, and people like to buy plants put up in this shape. They can be then transplanted into the garden without a setback. I put up thousands of tomato plants in boxes, each holding half a dozen or a dozen, and also do up single plants to put on the market. Vegetables grown in pots are too expensive to the grower. This box is also a package that your customer can take home easily, and he does not have to set it out until his soil is in a fit condition. There is no patent on this—I give it for the good of the plant culturist. As shown in the sketch the plant is small for the size of the box.

E. W. TURNER.

Newton Falls, Ohio.

Green pea tops, when young, have been advocated as a substitute for asparagus; but how they can be said to be a substitute for that vegetable passes our comprehension. It is also advised that they should be used in soups in early spring. Undoubtedly for this purpose they will answer admirably. Grown in boxes in a pit or frame until they reach the height of 5 inches or 6 inches, they certainly produce a very delicate and tasty vegetable for flavoring. The suggestion might be adopted with advantage.—Fruit Grower, etc. (Eng.).

¹Vegetable Gardening. A Manual on the Growing of Vegetables for Home Use and Marketing. By Professor S. B. Green. Linen boards; pp. 224; illustrations, 115 (St. Paul, Minn.: Webb Publishing Co.); price, \$1.25.

²Vegetable Growing in the South for Northern Markets. By Professor P. H. Rolfs, M. S., Professor of Horticulture and Biology in the Florida State Agricultural College. Pp. 255. Illustrated. Price, \$1.25. (The Southern Planter Publishing Co., Richmond, Va.)

³The Young Market Gardener, a beginner's guide, by T. Greiner; small 8vo. paper, pp. 119 (La Salle, N. Y.); price, 50c.

⁴The Forcing Book. By L. H. Bailey; 16mo. linen; pp. 266, illustrated. (New York: The Macmillan Company); price \$1.

Our publishers will supply any book wanted.

Destructive Insects and Methods for Controlling Them.—III.

The Plum Curculio.

PROF. W. G. JOHNSON.

The plum curculio is thought to be a native American insect, and has for many years been a ravenous pest in our orchards. Of fruits, perhaps, the plum and peach suffer more from the ravages of this insect than from any other pest. It has been particularly destructive to peaches in Eastern Maryland and Delaware during the past season.

Life History.

The parent insect, or the one responsible for the wormy fruit, is a beetle, and belongs to a family known as curculios, weevils, or snout beetles. It is a small, grayish or blackish beetle with a rather hunched back, about one-fifth of an inch long, as shown in the accompanying illustration. It passes the winter as an adult beetle under loose bark, rubbish, or, in fact, in any secluded spot where it can find protection and shelter.

Very shortly after the young fruit is formed on the tree the female insect appears, and, alighting upon a plum, she makes with her rather long snout a hole about one-sixteenth of an inch in depth in the fruit. She then lays her egg in this cavity and pushes it with her snout to the bottom. When this is done she cuts the characteristic and familiar crescent-shaped slit in front of the hole, so as to undermine the egg, and leave it in a sort of a flap, her object apparently being to wilt the piece around the egg and thus prevent its being crushed by the growing fruit. It is thought that a single female will deposit from fifty to a hundred eggs, laying from five to ten a day.

The egg can be seen distinctly with the naked eye by lifting the "flap" with the point of a knife. It is oval, somewhat oblong, and pearly white in color. In warm weather it hatches in three or four days, but oftentimes remains a week if it be cold.

The very small, soft, footless grubs feed for several weeks, usually from three to five, cutting a channel to the pit. The irritation arising from the wound and the gnawing of the grub causes the fruit to become diseased and gummy, and it falls from the tree before the worm is quite fully grown. When mature the worm leaves the fruit, burrows in the ground to a depth of from four to six inches and makes a little cell, in which it transforms into the pupa stage, as seen at "b" in the figure. From these pupae the beetles appear in from three to six weeks, and hunt up their winter quarters almost immediately, and are not seen again until the following spring.

Remedies.

When the beetles first appear in the spring they feed for a time upon the unopened buds, and later upon the young leaves of the plum, peach, apricot, cherry, apple, pear and possibly other plants. Taking advantage of this habit, many of the adults can be destroyed by the early spraying with paris green in water or by Bordeaux mixture.

The worms, or larvae, are beyond the reach of all insecticides, and therefore can be destroyed only by persistent and thorough gathering of all fallen fruit at frequent intervals throughout the early part of the summer. It is not an uncommon practice to turn chickens, turkeys, hogs, sheep, etc., into an orchard in order to have the fallen

fruit devoured. As a rule apples and pears do not drop as a result of curculio injury.

When the beetle is alarmed it folds its legs close to its body, turns its snout under its breast and suddenly falls to the ground, remaining for some time motionless, as if dead. By taking advantage of this peculiarity the beetles can often be collected in great numbers by jarring the trees, and collecting them on sheets or anything made for that purpose. There is on the market an excellent contrivance known as Hull's curculio catcher. It consists of a wheelbarrow, on which is mounted a large inverted umbrella split in front to receive the trunk of the tree. The machine is provided with a padded bumper, and can be driven against a tree with great force.

As a preventive measure a plum orchard should not be planted near a wooded tract, as this affords excellent winter quarters for the beetles, also avoid giving them the chance to shelter in an orchard which results from leaving rubbish of any kind around.

Natural Enemies.

The curculio has several natural enemies, but none of them seem to appear in numbers sufficient to do any appreciable good in keeping the pest in check. Of these, perhaps, the ground beetles are the most beneficial. These large blackish beetles can be seen running here and there over the ground whenever a board or stone is turned over.

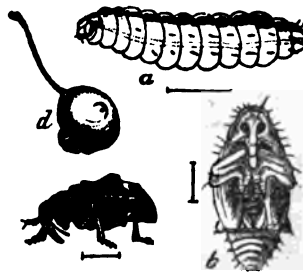


FIG. 61.—PLUM CURCULIO.

Taking it all in all, we must rely upon artificial measures for the destruction and suppression of this ravenous pest. Persistent and universal practice is desirable to obtain the best results.

Orchard Pests in California.—

The last report of State Horticultural Commissioner A. D. Pyral is in a joyous note: "Most of the orchards show a marked improvement over what they were a few years ago; they are generally free from injurious pests. The Australian ladybird (*Vedalia cardinalis*) *Rhizophila ventralis*, *Novius Koebele* and *Orcus Chalybus* are gradually destroying large numbers of the pests destructive to plant life. It would be well to devote a great deal of attention to the increase of propagation of these beneficial ladybirds. The *Anguillula* or Root Knot disease is yet unknown in this country. Fruit growers should discourage the importation of fruit trees from the Eastern States and decline to receive trees from any county, State or country that is known to have diseased trees or insects that are injurious to plant life. I have not found any new pests in the orchards inspected."

Flowers in Scilly Isles.—A recent number of the "Strand Magazine" contains a gossip article on the Isles, with special reference to their famous nurseries. The largest consignment of *Narcissus obvallaris* ever sent from the islands at one time was dispatched in the beginning of February from St. Mary's, in all 5,000 bunches, or 60,000 blooms, and from two other growers about the same quantity. The demand for this flower is very great in English markets.

The Fruit Garden.

Raspberry Supports.—A good support is made for these by driving in light locust or cedar posts fifteen feet apart so that they are three and one-half feet out of the ground. Then run one galvanized wire twenty-two inches from the bottom, and another on the top of the post, fastening with staples.

Trimming Raspberries.—The weakest canes should be cut back and tied to the bottom wire, and the others cut to six inches above the top wire. This will give plenty of fruiting cane, if they are laid in at from eight to nine inches apart. Cutting half the canes at the first wire will distribute the fruit and give the line a better appearance than if all canes were cut at one height. The tying material, if Ralfa, should be light—only of sufficient strength to hold the canes in place until the fruit is gathered. Select canes directly under the wire. This point should be borne in mind when cutting out the old canes directly after the fruit picking is finished, also at that time remove any surplus suckers.

Diseases of Raspberry.—These are Anthracnose, Orange Rust, and Blight. The first-named shows on the young growing canes, as minute grayish spots with a dark outline. The spots extend, and meeting others, form blotches or scabs, which live on the canes through the winter. Result: Girdling of the canes and therefore withered fruit. Remedy: Spraying the young growth several times with Bordeaux mixture. Orange Rust shows as an orange-colored dust (spores) on the under side of the leaves, also a common disease of the blackberry. Remedy: Dig out and burn every plant. Blight is similar in appearance to the pear blight. Remedy: Cut out and burn the diseased parts.

Strawberries.—Where the weather is open and the frost all out of the ground, see that the mulching is not too heavy on the rows after the plants begin to grow. For single lines I simply go over the lines and divide enough of the covering with the hands, so that the leaves can push through. Some growers believe in planting new beds as soon as the ground can be worked. I don't; when I can get a crop of Al berries in ten months from planting.

Ordering Fruit Trees.—I would caution the amateur against buying "Those fine large trees, ready to bear right off." It is much better to get the healthy straight whips, and head them away back. A heart-rending operation, I know, but a very necessary one for the good of all fruit trees, and especially so in regard to the peach, plum, nectarine and apricot.

Nut Trees.—Have you any? If not, get a few. Some can be found to suit your place, among the many being walnuts, hickories, chestnuts, filberts and pecans. The market cannot be said to be overstocked with nuts when the imports of walnuts and filberts alone reach something like 10,000,000 pounds a year.

J. HOLLOWAY, L. I.

Truck Farming.

Truck farming means intensive, high farming. Lands dedicated to truck must be heavily fertilized, not with commercial fertilizers only, but with such home-made manures as will insure large supplies of organic matter. The frequent incorporation of vegetable matter by the growing and turning under of some leguminous crop, supplemented by mineral manures, will in a few years render these soils adapted to truck growing.

If stable manures be used they should first be thoroughly composted and several times piled and cut down, in order to bring them into a most available condition as plant food. A compost of stable manure, cotton seed, acid phosphate and kainit, mixed in such proportions as will suit the crop to be grown, will be found a very effective fertilizer, perhaps superior to any other mixture.

Proper rotation must be observed in truck growing as in general farming. Melons, cucumbers and squashes belong to one family, and should not succeed each other. Egg plants, tomatoes and Irish potatoes form another; and beans and peas another.—*La. Expt. Stn. Bulletin.*

A Simple Plan for Home Grounds.

In the presentation of the accompanying plan it is hoped that its simplicity is such as to make it appeal to those who wish to have some properly developed ground at a minimum of trouble or expense. While it does not aim at any very elaborate effects, yet it will be found to contain all essentials of balance and artistic requirements as well as ample provision for utility; and this last so provided for as to be absolutely unobtrusive to the visitor. The plan, while having been prepared for actual use by Mr. Jos. Forsyth Johnson, landscape gardener, contains sufficient suggestion to enable any intelligent person to adapt it to his or her own requirements, hence its publication here.

It is not necessary to enter into a very detailed explanation of the construction, for it is simplicity itself and can be gathered from the design. However, it will be as well to draw attention to some of the chief points of value claimed. Primarily, and this is a point very often overlooked in combining grounds with the residence, provision is here made by placing the entrances to one side to avoid cutting up the expanse of garden ground as far as is possible; and in fact the entrance road or driveway is reduced to its smallest possible limits. If the chief entrance to the house be brought at the front, it is an impossibility to make any pictorial effect out of the ground lying between it and the boundary. Again, if the servants' entrances be entered directly from the back, it is impossible to make the best use of the surroundings of the house. Therefore, in this arrangement the servants' entrances are placed at the side beyond the clump of evergreens which will be seen immediately to one side of the main entrance, and which acts as a screen at all times of the year. At the same time a view of this clump is caught from the roadway entrance, and gives an air of comfort and repose to the approach.

Having secured for the house a pretty surrounding, it is important to give the house itself a suitable setting, for which purpose the "Terrace" around it has been arranged, from which also a general survey of the surroundings can at all times be had. At B is a closed-in drying yard conveniently placed, yet out of view; the walls facing on the entrance driveway could be very suitably covered by some creeper, or vines on trellis.

Immediately beyond the drying yard provision is made for the stables, having the driveway continued right under cover, and through into the open yard D beyond. This space is conveniently placed for the reception of manure from the stables; here it can be handled until such time as it is wanted in the kitchen garden and fruit grounds beyond, and to which it can be hauled with the least possible labor.

The mass of shrubbery shown on the right of the yard D is a suitable break to prevent a full and free sight line into the kitchen garden, and also screens the yard wall. Adjoining the house is the conservatory, which can thus be approached directly from the house at all times of the year—a very important consideration during the severe cold weather. Continuing in the same direction in the space marked A, a stove, or hothouse for grapes, may be provided for, and the same system of heating could be used for all the offices grouped around here. The stove hole entrance could very conveniently be placed in the corner of the stable yard or in the drying yard.

Referring now to the grounds: as shown on the plan, directly on the right side of the house, provision is made for the small flower garden, which could be reduced or extended according to fancy. Its proper place is, however, somewhere as shown, as there the beds, more or less formal, serve as a connecting link between the easy style of the garden proper and the more or less formal architectural features of the house and conservatory. The bushes, beds, and trees shown with some idea as to their relative heights, are so arranged as to produce the effect of extended area by leading the sight on to the furthest objects, yet without having the appearance of stepping stones, and not specifically

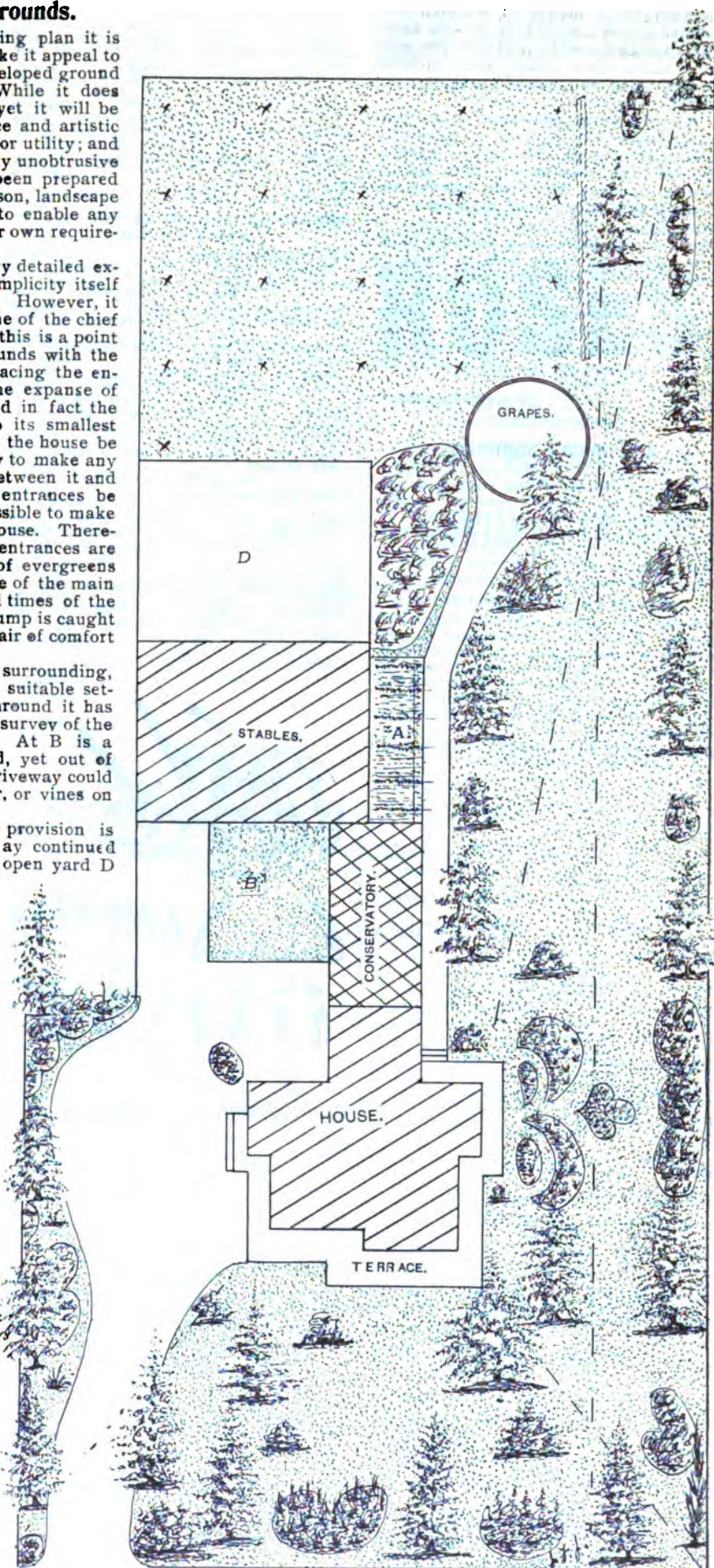


FIG. 62.—SIMPLE PLAN FOR HOME GROUNDS.
(Space 100 ft. front.)

denoting the boundary. The dotted lines carried across the plan in various directions are designed to illustrate the principal views which it has been intended to keep open, and thus add to the artistic effect.

A very little consideration on the part of the reader will explain the reasons for the existences of the various groups, etc., in the places shown; thus, for instance, opposite the flower garden the mass of shrubs is placed to secure, not only privacy, but from its intensity of greenery to serve as a suitable background for the flower beds to heighten their color effects. Of course, these various masses of shrubs can have herbaceous perennials, bulbs, etc., permanently planted on their margins, and the same treatment may also be given to the strip of ground on the left side of the entrance driveway.

LEONARD BARRON.

A Topical Summary.

As this issue of "American Gardening" will be seen by many who are not, as yet, subscribers and regular readers, we give the following Topical Index of some of the more important articles which have appeared in previous numbers of this year's volume. This is done to serve as a guide to the general tone of subjects treated.

REGULAR CONTRIBUTIONS.

Seasonable culture of Fruits, Vegetables, Forcing House, Lawn and Flower Garden, Apiary, Window Garden and Poultry Notes; Current News; Market Reports; Doings and Meetings of Horticultural Societies, Private Gardeners, etc. Also descriptions of Estates, Novelties, Tools, etc. (illustrated as necessary).

FRUIT AND VEGETABLE GROWING, MARKET GARDENING, ETC.

Agricultural Schedule	Mushroom Growing
Tariff Hearing, Jan. 16	Puzzles, March 6
Apple down South, Feb. 13	N. J. Horticultural Society Reported, Jan. 23
Apple Trees, How to Prune Young, Feb. 6	Orchards in Nebraska, Feb. 6
Apple Wismer's Desert (illus.), Feb. 27	Package Question, Jan. 2
Asparagus, Field Planting of, Feb. 13	Packing and Shipping, Jan. 9, 16
"Best" Variety, Mar. 6	Pedigree Strawberry Plants, Feb. 13
Birds in the Garden, Mar. 6	Peninsula Horticulturalists Meet, Feb. 6
Casabanana, Jan. 16, 30	Plant Registration Bureau, Jan. 2, 16, 23, Feb. 6, 13
Celery for Profit, Jan. 9	Potato Growing, Jan. 30
Cherries, Some Notes on, Feb. 27	Potato Tests, Mar. 6
Choosing Varieties, Jan. 16	Preparing the Soil, Jan. 16
Commission Man, Defence of, Jan. 9	Protection for the Horticulturist, Jan. 16
Conn. Pomologists Meet, Feb. 20, 27	Radishes Forcing, Jan. 30
Eastern N. Y. Growers Organize, Jan. 30	Russian Fruits, the Jan. 9, 23; Feb. 20
English Potatoes, Jan. 16	Seasons Novelties (illus.), Feb. 27; March 6
Field for Experiment, Jan. 9, 16	Sear Manning's Elizabeth (illus.), Jan. 30
Fruits in W. Fla., Mar. 6	Secretary of Agriculture, the Old and the New (with portraits), March 6
Grape Growing Under Glass, Jan. 23	Small Fruits in Indiana, Jan. 2
Grape Vines from Cuttings (illus.), Jan. 23	Strawberries in Matted Rows, Jan. 30; Feb. 16, 27
Grower vs. Commission Man, Feb. 27	Taxation of Farm Land, Feb. 6
Horticulture in Canada, Jan. 2	Vegetables in the Strawberry Bed, Jan. 2
Irrigation Plant, An, Jan. 30	W. N. Y. Horticultural Society Report, Feb. 6, 13, 20
Japan Plums, Feb. 27	W. Va. Horticulturalists Meet, Mar. 6
Lettuce Raising in Hotbeds, Feb. 13	Will Bees Destroy Grapes? Jan. 30
Liquid Manure, Jan. 30	
Manure, How to Apply (illus.), Feb. 6	
Money Methods in the Market Garden, Jan. 2, 30	

INSECTS AND DISEASES.

Bean Weevil, Jan. 2	Raupenlein, Uses of, Feb. 6
Club Root in Roses, Feb. 20	Rose Scale on Blackberry, Jan. 9
Codlin Moth (illus.), Jan. 16, Feb. 27	Steam Sterilization of Soil, Feb. 20
Destructive Insects and Methods of Control, Jan. 2, 16	

CONSTRUCTION, DEVICES, ETC.	Ornamental Fruit House (illus.), Jan. 2
Cutting Device (illus.), Jan. 9	Plan of Florist and Gardeners' Place, (illus.), Jan. 30
Drain Tile, A Cheap, (illus.), Jan. 9	Red Cedar Rustic Work, Jan. 9
Fruit Exhibiting Tray, (illus.), Jan. 9	Removing Fruit from Cellar (illus.), Jan. 30
Frost-proof Cellars, (illus.), Jan. 2	To Handle Fruit Without Bruising (illus.), Feb. 6
Hotbed, The Complete (illus.), Jan. 23	
Hotbed, Mat Making, (illus.), Jan. 23	
Making an Ice House, (illus.), Jan. 9	

ORNAMENTAL GARDENING, PLANTS AND FLOWERS.

Am. Carnation Society Reported, Feb. 27	Old Fashioned Border, Jan. 16
Arctic Flora, The, Feb. 13	Orchids, Feared Scarcity of, Jan. 23
Bananas and Papayas as Bedders (illus.), Feb. 27	Ornamental Gardening, Jan. 2
Bedding Plants, Jan. 30	Plans for Ground, Jan. 30
Begonia Raising from Seed, Jan. 16	Plant Beauty, Feb. 13
Bulbs in the Grass, March 6	Professional Gardeners' Mission in Horticulture, Feb. 6, 13
Jannas, Jan. 30	Protecting Shrubs, Jan. 23
Carnation Propagating (illus.), Jan. 30	Roses and Carnations, Jan. 2
Carnations, History and Culture, Jan. 16, 30	Roses, New Garden (illus.), Feb. 20
Jycas, The (illustrated), Jan. 2	Season's Novelties (illus.), Feb. 6, 13, 20
Free Seed Distribution, The, Jan. 9, 16, Feb. 6, 20, 27	Solanums as Pot Plants (illus.), Jan. 2
Garden Tools, Feb. 13	Sweet Pea Culture, Feb. 27
How to Grow Panicles, Jan. 9	Tree Staking (illus.), Jan. 9, 23
Lawns and Potash, Feb. 6, 20, March 6	Wax Plant for the Window (illus.), Jan. 16
Lawns, Renovating Old, March 6	
Liquid Manure for the Window Garden	



FIG. 63.—COMBINATION DRILL AND CULTIVATOR.

Combination Drill and Cultivator

Modern, economic and profitable garden culture demands that everything be planted in long rows rather than in the small square "beds," as was formerly the practice. This style of planting makes the use of garden tools profitable, and cuts off the expensive element of hand culture. We present herewith a cut of a combination tool that meets every requirement of this plan. It represents the New Universal Model Combination Drill, manufactured by the Ames Plow Company, of Boston and New York. The upper half of the cut shows the machine as a double wheel seeder, and below it appear the attachments for converting the seeder into a cultivator. The change from seeder to cultivator is quickly and easily made, and the construction of the attachments is such that they will cultivate every variety of garden crop. The drill will sow all varieties of garden seed, never failing to drop and cover the same. A very small garden may adopt this tool with profit.

Do you attend the farmers' institutes once a year? Readers say *The Rural New-Yorker* is a farmers' institute every week. We can send it and AMERICAN GARDENING, both one year to your own fireside, where every member of your family will have the benefit of it, for \$1.80.

Purify

Your blood with Hood's Sarsaparilla at this season. Expel the impurities, prevent and cure spring humors and that tired feeling.

Hood's Sarsaparilla

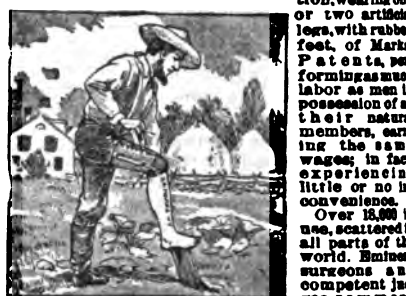
Is sold by all druggists. \$1; six for \$5. The best spring medicine.

Hood's Pills are the only pills to take with Hood's Sarsaparilla.

MARKS' Patent Artificial Limbs (PATENTS OF 1893)

With Improved Rubber Hands and Feet are Natural in Action, Noiseless in Motion, and the Most Durable in Construction.

It is not unusual to see a farmer working in the fields with an artificial leg, or an engineer with hand on the throttle, or a conductor, brakeman, fireman, carpenter, mason, miner, in fact men of every vocation, wearing one or two artificial limbs, with rubber feet, of Marks' Patents, performing as much labor as men in the possession of all their natural members, earning the same wages; in fact, experiencing little or no inconvenience.



Over 18,000 in use, scattered in all parts of the world. Eminent surgeons and competent foot doctors can and do fit the Rubber Foot and Hand for their many advantages. At every industrial exhibition where exhibited they have received the highest awards. They are endorsed and purchased by the United States and foreign Governments. A Treatise, containing 644 pages, with 88 illustrations, sent FREE; also a formula for taking measurements by which limbs can be made and sent to all parts of the world with full guarantee. Address

A. A. MARKS, 701 Broadway, New York City.

Established Forty-four years.

Mention American Gardening when you write.

BERRY BASKETS AND CRATES

of all kinds. Also material in the Flat. Write for Catalogue and Price List.

WEBSTER BASKET COMPANY.

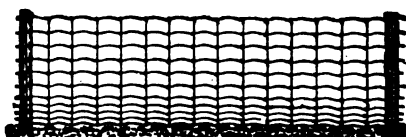
WEBSTER, Lock Box 43, Monroe Co., N.Y. Mention American Gardening when you write.

Cedar Oil Soap

is the best all-around insecticide for house and greenhouse use. Kills scale, thrip, spider, mealy bug, fly, etc. The best preventive if used often as a wash; keeps foliage bright and clean. Kills fleas on dogs, cats, fowl, etc.; on the mare. Put up in pound tins, 50 cts.; half pounds, 25 cts. each. Sold by Seedsmen and Florists. Half pound trial tin mailed on receipt of 25 cts., enough for two gallons solution. Address the Manufacturers

AUGUST ROLKER & SONS.

P. O. Station E. 126 W. 21st St., New York Mention American Gardening when you write.



FARMING DON'T PAY.

So says Jones, and he resolves to become a "manufacturer." He buys a fence machine, a "county right," etc., and starts in to compete with steam and capital. His neighbor Smith invests same amount in "fencers," thus realizing a good price for his crops, enriching his farm, and enabling him to "lift the mortgage" and fence with Page, while Jones "goes to the wall."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich. Mention American Gardening when you write.

Lawn and Flower Garden.

Arise.—Winter's rest is almost at an end, and if the "resting" time has been spent to the advantage of horticulture, there ought to be a considerable fund of knowledge stored away and developing into new experiments which, it is hoped, will give better returns for the labor expended. A careful horticulturist always sees work ahead, and if advice has been followed there should be no shortage of compost or good planting soil. Lawn mowers and garden utensils are in proper condition; in fact, everything is in such a shape as to be ready to be put into use directly it is wanted.

Protected Plants.—The herbaceous border must not be overlooked. In places here and there the storms of winter have removed the covering, which must be replaced at once for this alternate thawing and freezing is more dangerous to our plants than is the extreme cold. Our tender shrubs and conifers must also be looked to for their covering. Evergreen herbaceous plants should receive attention during wet weather by having the covering removed from them to prevent rotting. If covered by a wooden box or loose boards even, there is not so much danger of their decay.

Lawns.—Manure that was hauled on to the lawns during cold weather, and which consequently has remained in lumps should be raked uniformly over the lawns as soon as the weather permits. The spring rains will then have a better chance to wash down into the ground the food ingredients and there will be but little material left to be raked off later on.

Alterations.—Where changes in the flower garden were not accomplished last fall there has been during the long winter evenings plenty of opportunity for working out new plans, but a warning is not out of place. How often one sees too much flower bed and too little lawn. The effect is unsightly and in bad taste. Is there anything of greater beauty and of more perfect harmony with the surrounding buildings than an open lawn of fine mixed grass, bordered by trees and shrubs properly grouped, and with here and there in suitable places clumps and borders of herbaceous perennials? Not that I deride bedding plants; on the contrary, I use thousands upon thousands of them every year and I admire them—when used in their right place! It is an impossibility to display a flower bed to full perfection unless it has a fine stretch of green sward as a groundwork, and why treat to its disadvantage the plant of which you think so much. Put it where it properly belongs and where it can show its full beauty either in flower or foliage. So place it or leave it alone. I have seen gardens entirely of flowers, not a blade of grass, and these no small gardens either, but in almost every instance it has been the work of some eccentric woman.

The Average City Garden is undoubtedly too small for bedding plants to be used in it. Here they should be confined to a vase or two, or in some instances, perhaps, in a border, or an oval bed at the intersection of the walks. Let us leave greenhouse plants for portico decorations if the necessary work has not been done by the hardy vines, or for window boxes, and indeed this last scheme is to be more encouraged, for to many city people it is their only method of being able to enjoy a few flowers during summer.

Order at once trees and shrubs. Personally I prefer buying in the fall. The stock is then root pruned and heeled in. By spring the roots have callused and are ready to make active growth. Moreover, it is far more handy to pick out of the rows what is wanted in place of waiting for the nurseryman and then too often receiving the plants when the leaves are almost fully developed, which is certainly not to the best advantage of either the tree or the purchaser.

Seeds.—A number of seeds must at this time be put in the seed pans, with more to follow on. Hot bed sash needs looking after, for the hotbeds themselves will have to be put into use.

J. JENSEN,
Chicago, Ill.

We tell your doctor all there is in Scott's Emulsion, just how much cod liver oil, hypophosphites, glycerine. But we do not tell him how these are combined. You have your secrets; this is ours. This knack of making the very best thing has come to us from years of experience with just one thing. We make only Scott's Emulsion—all our energy is bent on making that better than any other emulsion in the world. We have no other business thought. Is it any wonder that it is the standard?

SCOTT & BOWNE, Chemists, New York.

CANTON GARDEN PLOW



THREE SHOVELS
AND RAKE
ATTACHMENT.
WEIGHT, 20 POUNDS
\$3.75 EACH.
CASH WITH ORDER.

PARLIN & ORENOORFF CO.
Largest and oldest permanently established Plow Factory in America.

CANTON, ILLINOIS
Mention American Gardening when you write.

"STRAWBERRIES THAT GROW."

Send for descriptive catalogue free.

Immense stock at low prices. Also best Raspberry, Blackberry, Gooseberry, Currant and Grape plants, at prices that defy competition.

C. E. WHITTEN'S Nursery, Bridgman, Michigan.
Mention American Gardening when you write.

3 Beautiful Chrysanthemums for 10c.



Crystal—Pure White. Puritan—Beautiful Pink.
Jewel—Golden-yellow.

A GREAT BARGAIN.

- 5 Lovely Ever-blooming Roses, all different....20c.
- 5 Of Our Best Geraniums, no two alike.....20c.
- 5 Ever-Blooming, Fragrant Carnations, different kinds.....20c.
- 4 Beautiful Begonias, including 1 fine Rex.....20c.
- 10 Mammoth Butterfly Pansies, immense flowers.....20c.

A Wonderful Offer. A Whole Flower Garden. The above 32 ELEGANT PLANTS FOR \$1.00, delivered free by mail. Directions how to take care of and grow plants, free with every order. Also our beautiful catalogue.

THE JOHN A. DOYLE CO., Springfield, Ohio.

Mention American Gardening when you write.

THE WM. H. MOON CO.

Glenwood Nurseries, Morrisville, Pa.

Offer, for the SPRING OF 1897, a Complete Assortment of

EVERGREEN AND DECIDUOUS TREES,

Flowering Shrubs, Grasses, Dahlias, Climbers and Climbing Roses.

Special attention is called to the following.

Chestnuts, large varieties Numbo and Paragon.
Asparagus Roots, strong 2-year olds, Palmetto.
Barr's Mammoth and Conover's.
Strawberry-Raspberry, a Japanese Novelty.
Burbank's Golden Mayberry.
Industry Gooseberries and Fay's Prolific Currants.
Purple-leaved Beech, 4 to 6 feet.
Elms, American and English.
Horse-chestnuts, Lindens and Magnolias.
Maples, Norway, Sugar, Sycamore, Ash-leaved and Silver-leaved. By the thousand, from 6 to 12 or 14 ft.
Oaks, English, Pin, Mossy Cup, Red, Scarlet and Turkey.
Poppers, Carolina and Balsam.

Willows and Weeping Trees, in variety.
Hedge Plants. Evergreen and Deciduous varieties, including 200,000 California Privet, from 1 to 5 feet.
Evergreens, Arber Vitis, dwarf and tall growing sorts.
Nerdsman's Fir, from 1 to 3 feet.
Balsam and European Silver Fir.
Hemlock, Colorado Blue, Norway and White Spruce.
Retinosporas, in variety of all sizes.
Pines, White, Scotch, Austrian and Dwarf.
Evergreen Shrubs, including Mahonias, Hollies and Rhododendrons.
Deciduous Flowering Shrubs. General assortment of various sizes.

DESCRIPTIVE ILLUSTRATED CATALOGUE of 48 pages, containing prices, etc., to be had on application. Correspondence solicited.

Mention American Gardening when you write.

New Single Violets.

Princess of Wales, Princess Beatrice, Admiral Aveilan. \$1.50 per doz.
Luxonne, Petit Blue. \$1.00 per doz.

My plants are all perfectly healthy, and have all been grown cold, insuring strong, healthy growth. Older varieties such as Chambrom, etc., prices on application.

FRANCIS SUPLOT,

57th and Lancaster Avenue, Philadelphia

ROSES

\$3.00 per doz., \$20 per 100.

Large 2-year old, field-grown plants that will bloom this summer. Best sorts, true to name. Write for catalogue.

W. E. WALLACE,

Nurseryman. Hartford, Conn.

MANWELL STRAWBERRY

The verdict given by competent judges. Prof. Budd, Iowa Hort. Station, says: "Have fruited it two seasons, its perfect foliage and capacity to resist drought, makes it very desirable. It bore good fruit than Parker Earle, Beder Wood, Warfield or Haverland." John Wragg & Sons, Wankee, Iowa, says: "There is no doubt it will be one of our very best varieties for shipping, and I think it the richest berry I have eaten of over a dozen of our best varieties; the plants are fine." R. M. Kellogg, Mich, says: "I am fully persuaded you have a grand berry. It is surely taking a lead in my trial plot; the quality and the color of the berries are superb and the vigor of the plants is simply splendid." C. G. Patton, Nurseryman, Iowa, says: "Its good size, bright color, firmness and quality combined give it high rank among strawberries, and being a strongly staminal variety, with the bearing quality that it has, makes it just what we have been looking for." Send for catalogue of plants and runner cutter to

ALLEN D. MANWELL, P. O. Box 605, Vinton, Ia.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1894.

PUBLISHED BY

A. T. DELAMARE PUBLISHING CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1897.

Publishers' Announcements.

Cheques, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issues. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per agate line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Potato Scab and a New Remedy. THE scab disease of potatoes causes annually an enormous loss throughout the country, and the fact that ground on which the crop is scabby one year is infected with the germs of the disease which will necessitate its being used for some other crop the next year, is an important factor in some sections where it is not customary to follow a strict rotation.

There have been various trials of germicides and antiseptics as preventives of the disease, but potato growers have generally followed the practice of soaking the "seed" for a couple of hours in a solution of corrosive sublimate, a substance which, while most effective as a germicide, demands that it be handled with great precaution because of its very dangerously poisonous properties. However, its use has been rapidly and largely extending, and we have not hesitated to advise its employment whenever asked to prescribe for potato scab. Dr. Byron D. Halstead, of New Jersey, in the year 1895, made a series of trials which led to the conclusion that flowers of sulphur dusted in the rows acted most beneficially as a preventive,* but we do not know that any extended trials with this material were subsequently made.

In the search for a preventive it is

highly desirable that some less dangerous body than corrosive sublimate be discovered, and it is, therefore, with much delight that we note Dr. J. C. Arthur, botanist at Purdue University, reports favorably on the use of formalin,† a substance which has been largely experimented with of late as an antiseptic and germicide by physicians and biologists generally in hospital and laboratory practice, and which has given much satisfaction. As this substance is not dangerous, not expensive, and is a powerful germicide, the preliminary notice just issued is an important vindication of Experiment station work. Further information is premised shortly; in the meantime the following quotation will explain the method of use:

"Eight ounces of the formalin are added to 15 gallons of water, and in this the seed potatoes are soaked for two hours. After being taken from the bath they can be cut and planted as usual, either at once or after some time. Formalin is not corrosive, and so can be used in any kind of vessel, and not being poisonous, there are no particular precautions to be observed. It does, however, make the hands smart if there are any raw spots, and the fumes irritate the eyes and throat. But these are only slight annoyances."

Economy ON the first page of this issue is presented an illustration of Space. tion of pear trees trained "en cordon." The system is one that, while not absolutely unknown in this country, is at all events not much practised; yet we venture to believe that there are many instances where such a method could be adopted, to very great advantage of the cultivator. The system has come to us from France, where it is quite a feature in the fruit gardens, and has found favor with certain amateurs in this country.

One of the most absorbing questions of to-day is how best to utilize the space at command so as to produce from the soil the greatest possible results from the smallest possible areas—a problem which is felt in its greatest intensity in the immediate neighborhood of the larger cities, and it is in such places that the cordon trained fruit trees may have a very useful future from the fact that a very large number of varieties can be thus grown together in a very small space; and, indeed, for the testing of varieties it would be hard to think of a more suitable plan. The trees are kept within reasonable bounds, 50, 100 or more can be seen at a glance, and careful comparisons facilitated.

While advocating the adoption of the plan in testing grounds and by the amateur, we fully realize that in a very large proportion of the area of this vast country the necessities for such a course do not arise, or, at all events, have not yet arisen, as they have in foreign lands. The difference between the methods of culture adopted in America as compared

with those of Europe, more particularly in France, are due to the fact that, in these latter, under the most intense system of cultivation, close cropping is carried down to the extreme point, and the land itself is also divided into very small areas under the cultivation of different individuals.

"La petite culture" is a feature of French cultivation with which we in this country are not as yet familiar. It has been brought about by the successive dividing up of the paternal estates among the heirs during a length of time. Who knows, however, but that the time is not far distant when in the neighborhood of great centers of population the system which has been evolved by the social conditions in that country will find its counterpart with us? Already, indeed, the pressure is felt. Intensive cultivation is the key-note of the American agriculturist's and horticulturist's progress, and is it not reasonable that we shall adopt, if not in its entirety, at all events in some portion, the lesson taught by nations elder than ours? Have not the signs of the times been that the methods of the horticulturist must become more and more those of the farmer?

Among the large army of horticultural amateurs whose inclinations would lead them to do more than the space at their command, and the leisure which the demands of business will allow, these methods, which may be included under the comprehensive term of "intensive cultivation," must find more and more favor as time rolls on. Certain it is that in the suburban districts there are hundreds, nay thousands of lots where the resident is also the owner in which a host more varieties of fruits could be included than is the case now under the present regime of the standard trees. Not only do the standards, by the size of their top, occupy perhaps 400 square feet of ground, but the shadow cast by the foliage, as well as the extension of the roots in the soil, precludes the possibility of cultivating to any extent close underneath; but by growing the trees to a single stem, as shown in our illustration above referred to, and which also allows of their planting sixteen to eighteen inches of each other, the possibilities of concentration are something immense. It is to be hoped that the subject now broached will receive a further elucidation at the hands of cultivators in all parts.

The matter is one for discussion. Will not those who have opinions to express let us hear from them?

THERE'S MONEY IN IT.

"American Gardening" is worth several dollars a year to me, at least.—E. F. BABCOCK.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send the price to the Publishers.

* AMERICAN GARDENING, Jan. 11, 1896, page 17.

† A commercial preparation of formaldehyde.

English Varieties in America.

Your remarks under this heading in issue of Feb. 27 are very pertinent and of the highest importance, especially to gardeners who, having learned their craft "on the other side," come to this country, and naturally think they can grow here what they grew there. They certainly cannot, and I have had recent experience on this point.

Potatoes.

On taking charge here I found last year a number of barrels of Windsor Castle, Snowdrop and Sharpe's Victor potatoes that were produced here the previous summer from stock imported early that year. Few were eatable and none of them were creditable samples of their kinds, although from familiarity with the varieties I can

friend gave me a dozen tubers when I was in England in February of last year. I planted them with extra care; they made the usual top and died off early, but I lifted not one as large as those that were planted.

It seems to me we have no early potato at all comparable in quality to the earliest grown in England, and if we are to have them they will have to be raised here. There is room for such, and every one who will take up potato raising along those lines—here is a chance and legitimate work for our experiment stations—will reap credit and confer lasting benefits all around.

Strawberries.

Not only are English potatoes a failure, but English strawberries likewise. I found here last year some experiment rows of Royal Sovereign, Sir Joseph Paxton and Auguste Nicaise. Only the first named gave any promise at all, and bore a few fine fruits in June, but the plants grew smaller and beautifully less under the August sun,

Giant Golden Day Lily.

In the accompanying illustration of *Hemerocallis aurantiaca* major is seen a half-sized sketch of the flower of this recently introduced Japanese plant. Few, indeed, are the plants which are more showy when properly employed in the garden than the Day Lilies, say as clumps in mixed borders or on the banks of some water pool. Almost any garden soil will be found suitable, and when such a gorgeous golden yellow flower as that of the one now seen can be had at so little trouble it is certainly worth a place in any garden.

We Were Right.

Our readers will doubtless have noticed that the portrait of Secretary Wilson, published in our last issue, differs from the reputed likenesses given by many of our contemporaries. The solution of the discrepancy is very simple—other papers have confounded the present Secretary with the Congressman of the same name. We owe our portrait to the courtesy of the Secretary himself.

The following will serve to show what manner of man this is: The brothers, James and Peter Wilson, cast lots as to who should go to the war or stay at home and manage the farm. For family reasons both could not well be spared. His brother, Peter, drew the prize, as he phrased it, and went. When Peter returned James divided equally with him lands acquired, cattle, and everything, to the last cent, he having been wonderfully successful as a farmer during the four years of the war.

Grafting Roses.

F. E. Palmer has made a hit in grafting roses which is worth relating for the benefit of those interested in the subject of grafted stock vs. cuttings. Owing to the ravages of the eel worm Mr. Palmer decided to import a few thousand Manetti stocks and see if these would defy the pest. It being May when the stock arrived, the first batch could not be expected to prove entirely satisfactory, owing to lateness of the season. However, the result was excellent and very encouraging even at that late date. This is his method of procedure: The stock is first trimmed, then the graft is put on, tied with raffia, and the whole dipped in a solution of the stick grafting wax. This does not hurt the plant in the least, as in about two weeks the tying material rots and falls away. After grafting the plants are potted in four-inch pots and kept in that state until time of planting into the beds. Side benches of a carnation house are utilized to stage the plants after being potted. No special treatment is required. With a little moss spread over the pots to retain the moisture, a percentage of 95 per cent. can be guaranteed, as there is no damping off or shriveling. The wood is obtained from old plants which, instead of being dumped after spring use, are taken from the bench and heeled in outdoors, together with the Manetti stocks, which have been already imported during the winter. The stock is kept in this condition until danger of frost compels the transfer to cold frames, so as to be able to commence the work of grafting early. At time of writing the stock for next season's use is being prepared. An early batch, now in four-inch pots, is immense, having four or five stout shoots and the red stems that denote vigor. But few suckers are seen, and these are soon crowded out when trimming the Manetti; the cuttings so made may be planted out so that these can in a short time be used and save buying a second supply. It will be seen that the cost by this system is practically nil, and the result is testified to by the splendid crops that have been cut and the repelling of those arch enemies, the grub and eel worm. W. M.

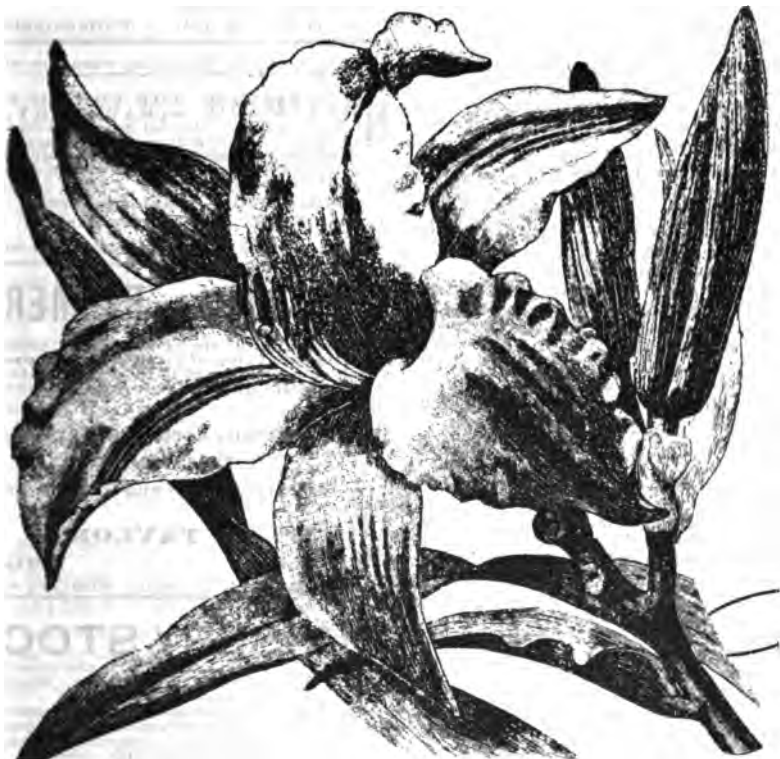


FIG. 64.—GIANT GOLDEN DAY LILY.

vouch for their being true to name. When potato planting time came I made up my mind to anchor my hopes in known and well-proved American kinds, but to experiment further with the English kinds, to see if they manifested any disposition to become acclimated.

When we came to dig them the last state of those potatoes was a deal worse than the first. In growth they were amazingly vigorous, and if you had judged from the tops of Windsor Castle you would have thought grand tubers must be underlying, but a more lamentable result I never saw. They were bad samples the first year, but infinitely worse as the result of the second year's growth, and I have thrown them away. Yet in England there is no better second early potato at this present day than Windsor Castle. I would place it at the top of the mid-season kinds on the strength of English experience.

Another test was with Sutton's A1, sent out last year, and of which a

even also strong runners that I had potted up to try for forcing. Before winter set in of 1,000 Royal Sovereign potted up I only kept 200, and had faint hopes of these. I threw them away this week. They were blind and flowerless.

Last year I also bought 100 Stevens' Wonder strawberry, having then the liveliest recollection of a visit to the originator's place in the south of England two years ago this very month, and where I saw 4,000 plants in fruit and many fruits of one and one-half ounces. I need give no details of my treatment here, for my 100 Stevens' Wonder are gone with the Royal Sovereign, and English strawberries will stay in England, as far as I am concerned.

By the way, we are all so apt to speak of our successes, but does not a record of our failures need to be made as well? There is no disgrace in admitting them when they serve as index fingers to others, pointing out plainly what not to do.

A. HERRINGTON, Madison, N. J.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Treating Potatoes for Scab.—The questions have been asked how to treat potatoes for scab with bichloride of mercury (corrosive sublimate), is it a sure preventive? Does planting on the same ground successively tend to increase the disease? Dissolve two ounces of corrosive sublimate in two gallons of hot water and let stand six to eight hours; then add thirteen gallons of water, making the final strength, two ounces of poison to fifteen gallons of water; let the potatoes remain completely immersed in this for one and a half hours, take them out, dry, and cut for planting. Corrosive sublimate is a very dangerous poison and all tubers not planted should be destroyed in some manner so that nothing can eat them. I believe this is the most positive preventive known. I would not advise planting ground from which scabby potatoes have been dug, often there once in four years, as the spores will live in the soil.—L. S. SPENCER, Pesotum, Ill.

(Flour of sulphur dusted into the rows has been found an effective remedy by Dr. Halstead. Has anyone else tried it?—Ed.)

Casabanana Again.—Casabanana was a common thing hereabouts eighteen years ago. No one mentions the small sort, and I do not know any one who has it now. But years ago it grew here. One vine covered two large peach trees. The flowers were large, like the Luffa, or dlahrag gourd. They began bearing earlier in the season, as early as June, I think, and kept on till frost. The fruits were no larger than a banana, and we used them green, cooked like squash. They were good, too. When ripe and yellow they looked and smelt just like a banana, and were preserved. Some people used them fried in butter. I have not seen any of the small ones for several years. The large ones do not bear as early nor as full as the small sort, nor are the vines or flowers as pretty, but for preserves they are the same. I think the best way to start them is to plant a seed in a small, thin, bottomless wooden box, and when it is warm enough, set the plant, box and all in a good rich hill (old manure is best), and give good support. One vine will cover a big place. Several years ago I sent to different seedsmen some seeds, and to a few some fruits of these casabananas, but if they ever did anything I never heard. I may here state that the preserves look and taste just like pineapple. The fruit gathered in November will keep good till March. If Northern people could get seed of the small, early-bearing ones, I think they could raise them as well as watermelons or cucumbers. Seeds of the casabanana were brought here thirty years ago from Honduras. I see the seed offered in but one catalogue, and that in Louisiana. I have not raised any for four years, but where they can be raised they are worth the little trouble.—MARGARET E. CAMPBELL, Louisiana.

Myatt's Ashleaf Potato.—In the issue of Jan. 16, page 40, Mr. Robbins writes about Myatt's Prolific Ashleaf Kidney Potato, replying to a former communication by H. P. Manton. I would state that I have grown about all the varieties of Ashleaf Potatoes and have always found them to be the first of all the earlies and of the very best quality. This is a well-known fact and never before have I heard anything to the contrary. Now here it is said they grew splendidly and gave a great crop of extra large tubers. This condemns the sample of Ashleaf potatoes. I have grown them in England and America, too, for over fifty years, and I must say they are the poorest croppers of all the potatoes I have known anything about. Here is my experience in England for one year only. A friend brought me a few of the new Ashleaf Kidney Potato, calling them Rosslyn Castle. He had received them direct from Ireland and could recommend them very highly. They were very good croppers, but reminded me of what your cor-

respondent states as "soppy" and "soggy," so bad, indeed, that we could not eat them. I would like H. P. to try again, getting his seed from a reliable house next time. Bear in mind the Ashleaf, or Walnuteaf, or Myatt's, is a very poor cropper, and it is for this reason that they are only grown by a few private families.—C. LONG, Rochester, N. Y.

Myatt's Ashleaf Potato.—Many thanks to G. M. Stratton, San Francisco, Cal., for the very interesting history of the grand old Myatt's Ashleaf. Perhaps it would interest him to know that I once lived on one of the Scilly Islands for a period of about three and a half years, where about fifty tons of this potato was planted annually for market, entire crop being marketed by middle or end of May. (Tubers planted in December.—JESSE ROBBINS.

The Codlin Moth.—On page 145 Feb. 27 of American Gardening J. R. Johnson recommends a barrel three-fourths filled with water, and a lantern hung over same, as a remedy for the codlin moth. Such a trap will destroy moths, but I have never yet found a codlin moth (*Carpocapsa pomonella*) attracted by a light. I have made this statement frequently and it has never been contradicted. Stick to spraying.—C. D. ZIMMERMAN.

Toy Incubators.—On page 159 (last issue) was a paragraph on this subject, which, owing to a printer's error, appeared without its concluding words and signature. The last sentence should have been: "Otherwise it will be merely money thrown away.—MYRA V. NORRIS."

Coal Ashes for Lawns.—In your issue of Feb. 20, page 127, W. G. Gomersall speaks of wood ashes for lawns, then says, "Coal ashes, too, make a good and valuable top dressing for lawns, especially for heavy soils." I burn hard (Pennsylvania) coal in hot air furnace (fire not out since fall, so no mixture of kindling or wood ashes). Result, with screening, a fine, dusty, purely coal ash. My yard was filled with a mixture of yellow clay and heavy loam, is well drained, but gets very dry and hard in hot weather. Would it be beneficial to top dress with above described ashes? If yes, how heavy a dressing and when should it be applied?—C. W. J.

"Coal ashes" added to such a soil as described would be exceedingly beneficial. The lack of potash would make no difference; such a soil should not require it. The ashes can be put on the land, three inches in thickness, either spring or fall. If done in the fall, plow or dig in with the ashes a heavy dressing of long manure, leaving the ground very rough. This will leave the ground open to the frost's action, which will disintegrate and make a friable loam out of the clay soil. Great care should be exercised not to work such a soil when it is wet, or it will take several years to bring it back to a good condition. For potatoes, the ashes are sown in the furrows half an inch thick. The ashes may be applied in the spring by spreading on the land before digging or plowing.—W. G. GOMERSALL.

English Potatoes in America.—Your article on page 142 was quite a disappointment to me, as I was intending to make another trial of growing Myatt's Ashleaf potato in this country, but I have neither time nor space to waste and so must reluctantly give up the hope. I would, however, very much like to know the name of the "possibly one exception" referred to in your article, and also seek information as to where tubers of same can be gotten.—JESSE ROBBINS.

—The possible exception referred to is a variety known as "Jumbo," of which the origin is doubtful, though reputed to be English Champion. It is described as coarse and has been dropped from cultivation for some years. So far as we can trace it does not appear in any list this year, but possibly some reader may have it, if so we should be glad to hear from him.—Ed.

An Opinion on Free Seeds is given by the secretary of the Colorado State Horticultural Board: "In the light of my experience, I feel it necessary to advise those who desire to be assured of results, not to trust to Government seeds."

Business Cards.

Cards will be inserted under this heading at two cents per word each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT. consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 187, New York City.

"FLOWER QUERIES" New book on floriculture 10 Chapters, written in questions and answers, discussing 500 floral topics. Price, 25 cts. The COURIER, Box A, Chatham, N. Y. Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan Ivy, 3 years, \$3.50 per 100.

E. S. PETERSON, Montrose, New York. Montrose Nurseries.

Mention American Gardening when you write.

ALL THE LATEST NOVELTIES

AND PLANTS THAT CAN'T BE HAD ELSEWHERE. Cammas, Italia and Austria, at \$1 each. New Roses, New Fruits, New Shrubs, New Bulbs. 10 Cents for \$1.—5 for \$5 cts. Book on Cacti 25 Cents, 125 cts., 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free.

A. BLANC & CO., Philadelphia.

Mention American Gardening when you write.

HALL'S FAVORITE. THE COMING NEW does competition; the best introduced for years. Thirty other kinds pedigree plants. Raspberries, Blackberries, Asparagus roots, etc. Hear of quarters for Second Crop Potatoes, double crop and earlier than other seed.

Descriptive Catalogue Free. J. W. HALL, - Marion Station, Md. Mention American Gardening when you write.

BIG MONEY for FARMERS.

Thousands of dollars have been lost trying to make the spring crop of potatoes pay. The second or fall crop always pays if you know how to grow them successfully. Send at once \$2.00 for my treatise on

"How to Grow, Keep and Market Fall Potatoes."

Ten years' experience growing truck in the South for market. Address,

P. H. TAYLOR,

Vicksburg, Miss. Mention American Gardening when you write.

NURSERY STOCK

Apple, Pear, Plum, Peach, Cherry and other trees, Grape Vines, Currants, Rasp., Straw., Black and Gooseberries sold at lowest living prices.

We furnish large trees and plants by freight or express, and smaller but extra well rooted and thrifty ones BY MAIL POSTPAID. Everything guaranteed TRUE TO NAME, NORTHERN GROWN and HEALTHY. Will send you one yr. trees by mail as follows: Peach 7c., Apple 7c., Pear 25c., Plum 15c., etc. Large trees by freight or express at same price. Our price list is free, or our 84 page catalogue, which gives full descriptions, cultural notes, etc., for 20c., which amount may be deducted from your first order of \$2 or over. We can do you good and save you money. See our adv. of Grapes by Mail in another column. Nursery established in 1877.

F. L. WRIGHT, Plainfield, Mich.

Mention American Gardening when you write

Knight's . . . Catalogue . . .

OF SMALL FRUIT PLANTS

Should be in the hands of every one who intends to purchase plants. Michigan northern grown plants are the best obtainable and my price was never so low. I can save you money. Millions of plants of all leading varieties.

DAVID KNIGHT,
Sawyer, Mich.

Mention American Gardening when you write

BEAUTIFUL TREES, PLANTS and NATIVE FLOWERS for parks, private grounds and the trade. Write for lowest prices. **W. M. HARRISON & CO.** Nurserymen, Lebanon Springs, N. Y. Mention American Gardening when you write.

BANANAS AND PAPAYAS. Grandest of all bedding plants, see illustration from *Life in American Gardening*, Feb. 27. Our original catalogue tells about the **TROPICAL ORCHARD HOUSE**, a new horticultural industry of greatest interest. Send for it. **ROSE VALLEY NURSERIES**, Dongola, Ill.

Mention American Gardening when you write.

WINTZER'S NEW AMERICAN PEDIGREE CANNAS

1897 set—12 magnificent varieties, including *Duke of Marlboro*, *Duchess of Marlboro*, *Maiden's Blush*, *Gloriosa*, *Triumph*, *California*, *Sunset*, *Champion*, *Pillar of Fire*, *Brilliant*, *Lorraine*, and *Golden Pearl*—embracing the newest and most distinct colors and the highest types of Cannas yet produced. Descriptive List of New and Rare Cannas, with Catalog of New Rose Plants, Flower Seeds and Garden Fruits, FREE. **ALFRED F. CONARD**, Box C, West Grove, Pa.

Mention American Gardening when you write.

BETSCHER'S BULBS AND PLANTS

GROW AND BLOOM. Gladstoll our specialty, over 250 kinds. Undoubtedly the best in America.

Try some of our Bargains.

12 Extra choice Gladstoll.....	15c.
1 Fine Gold Band Lily, or 1 Caladium.....	15c.
3 Very choice French Cannas.....	25c.
8 Roses, Carnations or Petunias.....	25c.
8 Geraniums or Chrysanthemums.....	25c.
8 Fine Tuberoses or 8 new Chrysanthemums.....	25c.

Send for our catalogue, free.

BETSCHER BROS., Canal Dover, O. Mention American Gardening when you write.

POMONA CURRANT.

Is sweetest and best in quality. Has fewer and smaller seeds. Hangs longer on plant in good condition. Retains its foliage longer. Continues its profitable bearing longer. Is more productive. Comes into profitable bearing earlier. Is more easily and cheaply picked, and brings more \$s per acre to the grower with less work than any other fruit.

For circulars and prices of **POMONA** as well as a full line of other fruit and ornamental plants, trees, vines, etc.

MILLIONS OF PLANTS GROWING
1-2 MILLION TREES

Address, **ALBERTSON & NOBBS.**
Bridgeport, Maine Co., Ind.
Mention American Gardening when you write.

GOOD STOCK—NONE BETTER

All in 4 inch Pots, Cool Green, Flowering Size, For Immediate Delivery.

Per Doz.

Hollyhocks, Yellow, Rose, White.....	\$1 00
Canterbury Bells, mixed colors.....	1 00
Geraniums, Finaghty's Improved Evening Primrose, an improvement on Geraniums Glaucus Fraisel.....	1 50
English Ivy, 8 ft. long, 8 plants in pot.....	1 25

Cannas, started in 4 inch pots, for delivery April 1st: Mme. Crozy, per dozen, \$1.00; Alphonse Bouvier, per dozen, \$1.00; Capitaine Riviere, per dozen, \$1.00; Mixed Dormant Roots, now ready, 50 cts. per dozen.

All by Express. Plants are too large to mail. **CASH or C. O. D.**

MARTIN FINAGHTY, Overdale Nurseries, Lenox, Mass.
Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO.
Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

NOT HOUSE FRUITS A SPECIALTY.
Mention American Gardening when you write.

The Private Gardener and His Employer.

I was much interested in the paper of Mr. O'Mara, and still more so in the letters from Portia, and Timber Topper, on page 165. Allow me to take the latter's remarks from an employer's standpoint. I am sure this view will be of benefit to all.

We will first speak of the poor fellow who is out of place in consequence of the place being sold, or closed. This is usually the case when the owner has become tired of the extreme expense entailed, which is often owing to the ambition and want of practical knowledge in the gardener. He commences with his employer with a place containing fruit, a kitchen garden, lawn, some flower beds and one or two greenhouses; he immediately commences to increase the work, which necessitates employing more men. Beds are made in the lawn to be filled with bulbs, and with a succession of other small plants; a rose home is built, also an orchid house, perhaps a graper; tomatoes and other vegetables are to be raised under glass—all this at a large expense, more than would be spent if the gardener were working for himself. If he were in trade he would manage to be more economical, with quite as good results. Oftentimes he experiments and makes failures, but these are premiums to experience at his employer's expense.

All these possessions are very charming to one who is a lover of horticulture, and an employer like myself, and who is also willing to spend lavishly in this way, and if the gardener is willing to consult his taste in plants, etc., goes on with the improvements; but, on the other hand, after a couple of years, the expenditure is greater than the pleasure derived. Of course, the present gardener is not willing to grass over the beds, have the orchids sold, and the place made as it was while he remains. I have seen this happen again and again; the owner closed the place to get rid of a drain on his purse, which was without good enough results, and then recommenced to have very pretty, less elaborate grounds.

Now, permit me to say one line about the gardener's family, who usually lives in a cottage on the grounds. The wife either makes or mars her husband's career. I have often heard it said: "Smith is no good, but Mrs. Smith is so very nice; she keeps the cottage so neat and pretty, and the children are so well behaved." Or it may be (from the mistress of the house this is): "I cannot have those Smiths another summer. Mrs. Smith is such a gossip, and everything is so untidy around the cottage."

I cordially, I heartily applaud the idea of the gardener trying to interest his employer's family in plants and their cultivation. When it is so fashionable to do everything that is English, I much wonder that the American woman does not take up gardening. All English women are interested in it; even those of rank and great wealth often work in their own flower beds, tying up plants, pruning and so forth, and they can all understandingly discuss plant culture.—AN ORANGE COUNTY FRIEND.

A Baffled Florist.

Now Gladys sends for catalogues
From seedmen far and near,
And studies them with diligence,
As she does every year.
Most lovingly she turns the leaves,
And lingeringly she looks
At pictures of plants never seen
Except in seedmen's books.

A new kind of Chrysanthemum
Just fills her with delight.
A pictured Sweet Pea is a thing
To dream about at night.
And so fair Gladys turns the leaves,
And makes her mental choice,
And when she speaks of flowers, you hear
The love tones in her voice.

Well, when she's looked the book all through,
And made her little list,
She foots the figures up—and then
You see a sudden mist
Of fleeting tears in Gladys' eyes
Her order represents
An eighteen dollar outlay, and
Her limit's fifty cents.

—Somerville Journal.



The "IRON AGE" WHEEL HOES

High Steel Wheels cause them to run easily and steadily, not yielding to inequalities of ground.

Tubular Frame coupled to malleable castings give extreme lightness, with freedom from breakage.

We make 30 different implements, among them a full line of garden tools. Send for catalogue.

BATEMAN MFG. CO., Box 106, Granloch, N. J.

Mention American Gardening when you write.

SPRAY PUMPS AND THEIR USES

12 KINDS AND PRICES

being the contents of an illustrated book on the subject. Tells WHEN, WHERE AND HOW to Spray

Valuable for moults for insecticides, etc., sent FREE for the asking.

BOULDS MFG. CO., 11 Ovid St., SENECA FALLS, N.Y.

Mention American Gardening when you write.

DIETZ DRIVING LAMP

In From On

it you get the results of much experiment and outlay, also of much reflection.

it you get an astonishing flood of clear, white, penetrating LIGHT.

it we shed still more LIGHT in a little book for a copy of which address

R. E. DIETZ CO., 60 Laight St., N.Y.

Mention this paper and get special discount.

Mention American Gardening when you write.

CYPRESS

IS MUCH MORE DURABLE THAN PINE.

CYPRESS SASH BARS

UP TO 32 FEET IN LENGTH OR LONGER.

GREENHOUSE


AND OTHER BUILDING MATERIAL.

Send for our illustrated Book "CYPRESS LUMBER AND ITS USES."

Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.



**WARNER'S
SAFE
CURE**

**A
RAY OF HOPE**

reaches out to suffering humanity in the form of a safe, sure and effective remedy for the ills to which flesh is heir. That is why restored millions pay willing homage to

**WARNER'S
Safe Cure**

All experiment was passed long ago. It is known to be a positive cure for

**BRIGHTS DISEASE,
URINARY DISEASES,
FEMALE COMPLAINTS,
GENERAL DEBILITY,
AND MALARIA,**

and all diseases arising from disordered Kidneys and Liver. Easy to take, leaves no unpleasant taste, produces no ill effects.

Large sized bottles of new style smaller one at your nearest store.

INCUBATORS \$25, \$15, \$12 each. Brooders, 8 styles, \$6. Fowls, eggs, Ill. dir., Jo. J. A. Chelton, Fairmont, Md. Mention American Gardening when you write.

GAMES FREE & useful articles for only 2-4mo. subs. to Poultry Keeper at 25c. Every poultry raiser wants this leading poultry paper. Sample free. Address POULTRY KEEPER CO., Box 39 Parkersburg, Pa. Mention American Gardening when you write.

MONITOR-INCUBATOR
Illustrated Catalogue for stamp.
Medal and Diploma awarded at the World's Fair.
A. F. WILLIAMS, 76 Race St. Bristol, Ct.
Mention American Gardening when you write.

POULTRY BOOKS. ABC Poultry Culture 25 cts.; 500 Questions and Answers, 25 cts.; Poultry House Plans, 25 cts.; Pigeon Queries, 25 cts.; Fanciers' Review 1 year, 50 cts. All \$1.00. Any 2 books, 40 cts.; 3 for 50 cts.; J. DARROW, CHATHAM, NEW YORK. Mention American Gardening when you write.

CALIFORNIA LANDS ARE RICH
and only \$25 to \$50 per acre AT ESCROWING. Grows fine oranges, lemons, olives, prunes, apples, hay, grains, etc. Best summer and winter climate in U. S. Send stamp for illus. pamphlet to Escrow-able Land & Town Co. at Escrowide, Los Angeles or San Diego, Cal. Mention American Gardening when you write.

HATCH Chikens BY STEAM
with the **MODEL EXCELSIOR Incubator**
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class Hatcher made.
GEO. H. STAHL,
114 to 122 E. 6th St., Quincy, Ill.
Circulars free. Send 6c. for Illus. Catalogue.
Mention American Gardening when you write.

HIVES
and all supplies for the apiary. Send for (34 page) illustrated catalogue of "Cook's complete Hives," and pure Italian Bees.
t tells how to make a start in beekeeping. It gives valuable hints. Address
J. H. M. COOK, 62 Cortlandt St., N. Y. City.
Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

BOTTOM HEAT.

There is no denying that both seeds and cuttings will move a little faster if a trifle of bottom heat is applied. If it can be had even a portion of the time there will be appreciable gain. A simple way of attaining the desired object, without the trouble of manufacturing the necessary appliances, is to set the flats on a common, broad, flat stone, moderately warmed. This will hold mild heat for several hours, and can be reheated in five minutes when necessary.

A "WINTER-BLOOMING" CANNA.

It was only by expectation, and not in actuality, a winter bloomer. In November it was bought as a "strong plant, ready for blooming," at double the usual price per root. It was recommended to bloom continuously throughout the winter and to furnish a display of brilliant flowers that would give more satisfaction than could possibly be gotten from the same amount invested in other plants or bulbs. It was also said to begin to bloom when from six to eight inches high. It has had the choicest position in the best south window, and by the first of March has just attained the to-be-desired six or eight inches, but even yet shows no apparent anxiety to bloom. Narcissus, Hyacinths, Jonquills, Frezias, by its side, all have come forward, given their wealth of bloom and sweetness, and are gone. Alliums are covered with pearly white blossoms, and promise thus to round out the season. But the Canna, so far as any return is concerned, has been a mere cumber of the ground, a standing refutation of the glowing statements made concerning it.

COLOR AFFECTING QUALITY OF EGGS.

The battle still rages around the question as to whether that "rich brown egg" is really any richer or of better quality than the white shelled egg. Strange to say, only those who keep the brown egg breeds as a rule believe the brown eggs the richer. Most people see no difference, but a few consider the white egg of better flavor. One fair-minded breeder says that the dark eggs might be richer, from the fact that the fowls which lay dark colored eggs do not lay so many as those breeds which give white eggs. Since quality depends more on feed than breed, the fewer the eggs the richer, is his idea. Be that as it may, and be the difference wide, or none at all, if your market calls for white eggs do you supply them; if for brown eggs, make every effort to have them. But don't, as you value your customer's favor, supply mixed eggs. The customer doesn't know it, but he will invariably be attracted by the basket of evenly colored eggs, be they white or brown.

COMPARATIVE SIZE OF BREEDS.

If a man knows about how heavy a fowl he wants there is little to hinder his having just what he wants. From the 20 ounce bantam to the 35 pound bronze turkey should be wide enough range for any reasonable individual. Between are the 5½ to 8½ pound Wyandotte, the almost any weight Leghorn, the 8 to 12 pound light Brahma, the 15 to 20 pound goose, and plenty of others.

FINE NEW CARNATIONS.

Since, under right conditions, there are few finer window plants than the carnation, it behooves one to keep open eyes for all improvements therein. A year ago, at the meeting of the American Carnation Society, three sorts which gained official recognition and universal admiration were Jubilee, Flora Hill and Mayor Pingree, respectively, red, white, and yellow variegated. Jubilee is of magnificent color and a long keeper. This year at the society's meeting the six general premiums for best hundred blooms were taken by Flora Hill (white), Emma Wochee (light pink), Rose Queen (dark pink), Jubilee (scarlet), Mayor Pingree (yellow variety) and George M.

The Woman, The Man, And The Pill.

She was a good woman. He loved her. She was his wife. The pie was good; his wife made it; he ate it. But the pie disagreed with him, and he disagreed with his wife. Now he takes a pill after pie and is happy. So is his wife. The pill he takes is Ayer's.

Moral: Avoid dyspepsia by using

Ayer's Cathartic Pills.

Bradt (white variety). All these are among the newest sorts. Quality alone, however, is not the only necessity for a window carnation. Persistency of bloom is always especially desired, and the length of stem so necessary to the commercial grower is only an added trial to the window gardener, who should look for low growing sorts.

EARLY SEEDLINGS.

If the outdoor beds are to make any show during the early part of the season it is imperative that the advance window work should be well handled. It is quite time to begin this, for the seedlings to be used for outdoor bedding must have, first of all, an early start. Getting the plants up is, however, the easiest part of the work. Thriving, satisfactory plants, such as one can rely on, can result only from the best of treatment. There must be full light, abundant ventilation, light shading from extreme sunshine, and, with nearly all subjects, a cool temperature. The flats in which the plants are carried on should be rather narrow in order not to bring any of the plants too far from the light. They should be turned daily, also, that all plants may have as nearly an equal chance as may be.

STRIKING CUTTINGS.

There is no better time of the year than March for striking cuttings from the general run of plants. There are two easy ways of managing this in window work, both of which allow of placing several cuttings in the same receptacle and thus saving space. Many plants, especially hard-wooded ones, may be rooted easily in water in full sunshine. Given time enough almost anything will root in a saucer of sand placed in direct sunshine and kept pretty moist. Cuttings may be stood quite thickly in such a vessel, but had better not be so close as to hinder free circulation of air.

PRESCRIPTIONS FOR AMARYLLIS.

It is a rather noticeable fact that those who neglect their plants the most, or who know the least about growing plants, most often succeed with the Hippeastrums, commonly known as Amaryllis. Probably this results from the fact that neglect gives a chance for ripening the bulbs which those too well attended never get. The writer lately buttonholed two growers of these bulbs, commercial dealers, in the attempt to find out the last word on Amaryllis growing. The first said the chief cause of failure was improperly ripened, perhaps too quickly ripened, bulbs. The other, who considers that he knows about all that is to be known concerning these bulbs, said that they were pretty sure to bloom if you only kept them dry long enough. If they sulk, just keep them dry and in the light till they get over it, was his prescription.

NITROGENOUS FOODS FOR FOWLS.

The list embraces milk, lean meat, peas, beans, wheat, clover and grasses. Feather-making and egg-laying both call for large proportions of this class of fowls.

MYRA V. NORRIS.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

SUFFERN, Voorhies, Ill.—List of Field Seeds.
H. W. LANDRETH, Battle Creek, Mich.—Seed Catalogue.

WOOD BROS., Fishkill, N. Y.—List of Plants and Rooted Cuttings.

WM. P. PEACOCK, Atco, N. J.—Descriptive Trade List of Dahlias.

C. L. BRUNSON, Paducah, Ky.—Price List of Cut Flowers and Plants.

J. JEROME SMITH, Wilmington, Del.—Descriptive Catalogue of Seeds.

T. R. WATSON, Plymouth, Mass.—Trade List of Old Colony Nurseries.

WM. BENNIE, Toronto.—Illustrated Catalogue of Seeds, Plants, etc.

VICK & HILL, Rochester, N. Y.—Wholesale Plant Catalogue, illustrated.

DEMING CO., Salem, O.—Illustrated Catalogue of Spray Pumps and Nozzles.

BUSH & SON & MEISSNER, Bushberg, Mo.—List of American Grape Vines.

CHARLES BLACK, Hightstown, N. J.—Wholesale Price List of Nursery Stock.

R. H. BATH, Wisbech, England.—Catalogue of Carnations, Dahlias, Roses, etc.

WM. C. BABCOCK, Bridgman, Mich.—Descriptive Catalogue of Fruits and Plants.

MISS EMMA V. WHITE, Minneapolis, Minn.—Catalogue of Choice Flower Seeds.

NANZ & NEUNER, Louisville, Ky.—Illustrated and Descriptive General Catalogue.

A. J. MCMATH, Olney, Va.—Price List of Strawberry Plants, Fruit Trees, etc.

J. ROSCOE FULLER & CO., Floral Park, N. Y. Catalogue of Seeds, Bulbs and Plants.

C. HUMFELD, Clay Center, Kan.—Wholesale Price List of Plants and Rooted Cuttings.

POPE MANUFACTURING CO., Hartford, Conn.—Illustrated Catalogue of Bicycles, etc.

O. DICKINSON SEED CO., Salem, Oregon.—Price List of Vegetable and other Seeds.

NATHAN SMITH & SON, Adrian, Mich.—Descriptive Trade List of Chrysanthemums.

O. A. E. BALDWIN, Bridgeman, Mich.—Price List of Strawberry, Raspberry Plants, etc.

J. E. JACKSON, Gainesville, Ga.—Catalogue of Useful Greenhouse and Bedding Plants.

INGLESIDE FLORAL CO., Alhambra, Cal.—Price List of Hybrid Gladiolus and Cannas.

G. HANCOCK & SON, Grand Haven, Mich.—Trade List of Rooted Cuttings, Carnations.

FRANK H. BATTLES, Rochester, N. Y.—Catalogue of Garden and Farm Seeds, illustrated.

WILLIAM G. MCTEAR, Princeton, N. J.—Descriptive Price List of Fine Chrysanthemums.

STUART & HAUGH, Anderson, Ind.—Price List Carnations, Roses, Chrysanthemums, etc.

THE GOULDS MANUFACTURING CO., Seneca Falls, N. Y.—Catalogue of Spraying Pumps, etc.

D. M. ANDREWS, Boulder, Colo.—Price List of Hardy Perennial Plants of Rocky Mountains.

FREDERICK W. KELSEY, New York.—Illustrated Descriptive Catalogue of Fine Nursery Stock.

ROYAL PALM NURSERIES (Reasoner Bros.), Oneco, Fla.—A Very Complete Illustrated Descriptive Catalogue of Tropical Plants, Orchids, Cacti and Miscellaneous Stock.

WEBER & DON, 114 Chambers st., New York.—Illustrated and Descriptive Catalogue of Flower and Vegetable Seeds, Plants, etc.

A full list of novelties is given, the best only being selected. A colored plate of canna John White accompanies the catalogue.

SUNSET SEED & PLANT CO., San Francisco, Cal.—An Attractive Catalogue of Seeds, Plants, Bulbs, etc. One feature is the photographic reproductions of plants from life. There is a full list of novelties, particularly of sweet peas. The open golden gate cover illustration is a beautiful conception.

THE DINGEE & CONARD CO., West Grove, Pa.—New Guide to Rose Culture; a very interesting catalogue of roses and other plants, the list of novelties of the former being especially valuable. The covers are handsome, bearing representations of new hybrid tea roses, "Coronet," and of "Princess Bonnie" and "Pink Souper." Charming colored plates of canna Flamingo, etc., accompany the guide.

JOHNSON & STOKES, Philadelphia.—Garden and Farm Manual. This is a handsomely gotten-up catalogue of vegetable and flower seeds, etc.; especially attractive are the photographic reproductions of the products, which embrace among others the Black Boulder watermelon, New Winter Queen celery, and the new branching asters and fringed hollyhocks. The list of novelties is very complete.

SEEDS. BULBS.

1 Oz. ECKFORD'S SWEET PEAS,
1 Doz. OXALIS BULBS, for borders,
and your choice of 5 Packets of the following seeds for 15 cts.

Phlox Drummondii. Double Hollyhocks.
Salpiglossis. Nasturtium.

Larkspur. (Double). Cleome (Spider
Nicotiana affinis. flower).

Echinus (Castor Bean). Calliopais.
Morning Glories. Four O'Clocks.
Nigella.

STILL BETTER. For a club of 4 sent to one address, I will send all the above seeds and bulbs.

J. W. STEVENS, Hazleton, Pa.
Mention American Gardening when you write.

VINELESS SWEET POTATOES, tubers and plants. "McKinley's Choice," and (no one else has them), "Gold Coin Prolific," (genuine home grown, no Arkansas Yams). Address with stamp for full instructions, worth dollars. The only original introducer and grower. G. Camerer, Madison Ind.

Mention American Gardening when you write.

MAULE'S SEEDS

Prices Cut in Half
for '97.

The most complete and most beautifully illustrated Seed and Plant Book of the year, free to all gardeners who mention this paper. Address

WM. HENRY MAULE,
1711 Filbert Street, Philadelphia, Pa.

Mention American Gardening when you write.

SWEET PEAS FOR THE MILLION

In same size packets, the Seven Superb Sweet Peas described below would have cost \$3.10 in 1896, but are sold now for only 25 cents.

25 Cts. buys these Seven
Superb Sweet Peas:

CROWN JEWEL. Pale standards, tinted and veined with violet-rose; the wings are creamy, slightly tinted with rose; a most profuse bloomer.

GRAY FRIAR. Entirely unlike any other Sweet Pea. A most beautiful scalded purple on white ground, the heaviest coloring being on the back of standard. The flowers, of hooded form and large size, are borne three and four on a stem.

LITTLE DORRITT. Carmine-tinted pink; standard of finest form, large white wings, slightly tinted, the colors beautifully harmonized; a superbly lovely variety.

METEOR. Truly an exquisite variety. Standards bright orange-salmon, wings delicate pink, with slight veins of purple.

MRS. JOS. CHAMBERLAIN. The flowers are truly enormous, and produced generally three to four on a stem. The color is very effective—a white ground heavily striped and flaked bright rose; of fine form, very striking.

RAMONA. Grand flowers of very large size, borne three or four to the stem; color creamy-white, daintily splashed with pink.

"1897" Special Superfine Mixed. This mixture is composed of twenty-three of the finest New Large-Flowered Sweet Peas. It is a choice blending (each grown separately and mixed by ourselves), which can be easily recognized when in flower.

25 Cts. Buys all the above.—Seven
full-size, separate packet, true to name as described, and mailed, postpaid, to any address.

For ONE DOLLAR we will send five complete collections as above (in all 35 pkts.), and give FREE as a premium one full-size packet each of CUPID and AURORA,—provided, it is stated where this offer was seen.

Please try to get up a club of Five for One Dollar.

With every collection we enclose a copy of "How to Grow High-Grade Sweet Peas by the Hamilton Method." Tells plainly just how to succeed in growing to full perfection the finest High-Grade Sweet Peas,—such as are contained in this unequalled collection.

BURPEE'S SEEDS GROW!

We will mail FREE to any address

BURPEE'S
Farm Annual
For 1897.

The Leading American Seed Catalogue.

A handsome new book written at Fordhook Farm. Tells all about the BEST SEEDS That Grow. Hundreds of illustrations; grand new vegetables and beautiful rare flowers painted from Nature.

Send a postal card for it TO-DAY!

W. ATLEE BURPEE & CO.,
Seed Growers,
PHILADELPHIA.



True to Nature
both by
Pen and Picture.

WEEBER & DON,

Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Illustrated Catalogue

of Vegetable and Flower Seeds
NOW READY.

EVERY GARDENER SHOULD HAVE ONE.
Free on Application.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, March 16, 11 A.M.

A large shipment per "S. S. Werkendam" including all the leading kinds of Roses, in bundles of ten, in five varieties. A large quantity of well budded Ghent Azaleas, also Hardy Rhododendrons. Spring Bulbs of all kinds will also be offered.

Friday, March 19, 11 A.M.

Roses, Nursery Stock, Gladioli, Tuberoses, Caladiums.

At each sale a choice assortment of house plants, Ficus, Palms, etc., will be offered.

Goods on view morning of sales. Catalogues free.

Mention American Gardening when you write.

CLEARY & CO.,

60 Vesey Street,
New York City.

Auctioneers of Plants, Bulbs, etc., will begin their season on

Tuesday, March 16, at 11 A.M., with a complete assortment of Irish Grown Roses, Nursery Stock, Tuberoses, Caladiums, Dahlias, Canna Roots, Gladioli, etc., etc.

Sales every Tuesday and Friday hereafter.

Catalogue on application.

Mention American Gardening when you write.

R. M. GARDNER & CO.,

199 Fulton Street, NEW YORK.

Will sell every TUESDAY and FRIDAY at their rooms at 11 a.m. H. P. and Standard Roses. A general line of Nursery Stock and Spring Bulbs.

Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at two cents per word each insertion, payable in advance.

The address will be changed as part of the advt. and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

STRAWBERRY PLANTS. Circular free. Wm. Carson & Son, Rutland, O.

STRAWBERRIES, Potatoes, Seeds. Catalogue free. Wm. Olds, Okemos, Mich.

STRAWBERRIES.—Best plants of the best varieties. 60 cts. per 100 by mail. Wm. Perry, Cool Spring, Del.

LOVELY ARBUTUS plants, ferns and flowers cheap. Wyomanock Nurseries, Lebanon Springs, N. Y.

FOR SALE, Farm of 160 acres, 1-2 mile from village of Ovid, Mich. For particulars write N. O. Moyers, Ovid, Mich.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedman, Rochester, N. Y.

GLASS at wholesale, rock bottom prices. Also paint for greenhouse. The Reed Glass & Paint Co., 456 W. Broadway, New York.

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 715 Wharton St., Philadelphia. Three shipping points, can save you freight.

NEW PINK VIOLET Mrs. J. J. Astor (named by permission), very fragrant, \$2.00 per dozen, \$10 per 100. Also Marie Louise, \$1 per 100, any quantity. Orders filled in rotation. G. Salford, Violet Specialist, Rhinebeck, N. Y.

PRIVATE GARDENERS.

We solicit for publication under this heading notes on the work being done by private gardeners, changes in appointment, and all matters of interest to horticulturists generally.

Auction Sales.

Tuesday, March 16.—Hardy Roses, Standard Roses, Lilacs, Hydrangeas. Nursery Stock, Spring Bulbs, at Elliott's Rooms, New York.

Irish Roses, General Nursery Stock, Bulbs, and Spring Plants, at Cleary's Rooms, New York.

Dwarf H.P. and Standard Roses; Azaleas, Paeonies, and Flowering Shrubs, at Gardners' Rooms, New York.

Friday, March 19.—Sales will also be held as indicated above.

SECOND crop seed potatoes make early kinds larger and earlier. Be first, sure! New Queen, Thorburn, Burpee's Extra Early, etc. Prices very low. Free Pamphlet. John C. Pearce & Co., 430 W. Main St., Louisville, Ky.

STRAWBERRY PLANTS. Try the Margaret Fountain, Michigan, Clyde, Glen Mary. Headquarters for Gandy, Brandywine, Marshall, Parker Earle and all choice standards. Catalogue free to all. C. N. Flansburgh, Leslie, Mich.

CEDAR OIL INSECTICIDE, better and cheaper than fir-tree oil, \$2.50 the gallon; \$1.00 the quart tin. Cedar Oil Soap, pound tins, 50 cents; half pounds 25 cents. Sold by seedsmen and florists. August Rolker & Sons, New York, P. O. Station E.

BEST offer yet. Hay's seeds, bulbs and plants are good as known. Lowest price for best quality. Send list of what you need for quotations. Our list and ten packets, your choice, flower or vegetable seeds, our selection of sorts, for 10 cts. John S. Hay, Oneida, N. Y.

CHRYSANTHEMUMS. Fine plants, true to name, postpaid. New York, Liberty. Invincible, Autumn Bride, 15 cts. each. Indiana, Mrs. Perrin, Gretchen Buettnier, Violescent, Pink Ivory, 10 cts. each. Standard varieties, 6 cts. M. V. Myers, Florist, St. Joseph, Mo.

10,000 VIOLETS given away. \$1 per 100 pays for packing and postage, must have room in greenhouses at once. Young well-rooted plants, Lady Campbell. The earliest, freest bloomer, sweetest and healthiest of all double violets. C. E. Price, Smithtown Branch, N. Y.

WIXON PLUM TREES. Very extra stock, have no stunted mailing sizes. Over forty varieties oriental plums now being tested. Can furnish many of fruiting age. The largest size are really the cheapest trees to plant. Our stock is clean, healthy, vigorous, with perfectly formed heads. Address Bridgeport Nursery, Conn.

COLLECTION J.—1 vine of the new red grape, "Alice," \$1.00; 1 vine each Worden, Brighton, Niagara and Diamond, 50 cts. Free by mail for \$1.00. Collection K.—One vine each Agawam, Brighton and Delaware (reds); Concord, Moore's Early and Worden (blacks); Diamond, Niagara and Pocklington (whites). Free by mail for 75 cts. Address M. H. Ridgeway, Wabash City, Ind.

GOLD-COIN VINELESS. I am the originator of this improved strain of the vineless Sweet Potato, and I will send free a full history of it and how it was brought to its present state of perfection, and how to grow them successfully, or for 10 cts. in stamps I will include a sample potato, and the stamps may be deducted from the first order. Will am T. Simpson, Box 74, Pine Bluff, Ark.

GLADIOLI, CANNAS, CLIVIAS, Soucheit and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings. Cannas, Italia, Austria, and best standards. New Hybrid Clivias. Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.

BERMUDA GRASS is the greatest lawn grass in the world and it ought to succeed wherever winter wheat is grown, so easy to grow too. I supply the roots in bags or barrels very cheaply. March and April is the time to order. If you want anything in the way of seeds or plants grown in the South, write me for it and I will procure you the best at reasonable prices. Samuel A. Cook, Drawer N., Milledgeville, Georgia.

20 ACRES rich, level farm land, free from rocks and swamps, and especially adapted for truck, fruit, cotton and tobacco raising, for \$500, payable \$10 down and \$1 or more weekly. Convenient to great eastern markets, in thickly settled section of Virginia. Genial climate all year. Splendid water. Schools, churches, stores, mills and desirable neighbors. Deed free and title guaranteed. No malaria, mosquitoes, blizzards or floods. Taxes and freight rates low. For further information write to D. L. Risley, 211 S. 10th St., Philadelphia, Pa.

LARGEST STOCK of Strawberry, Raspberry, Blackberry, Gooseberry, Currant and Grape to select from in Michigan. Crescent, Warfield, Lovett, and Michel's Early, \$1.50 per 1000. Greenville, Haviland, Jessie, and Cedar Wood, \$1.75 per 1000. Bimbach, Dayton, Enhance, Gandy, Parker Earle, Tibbrell, \$2.00 per 1000. Cuthbert, Hansel, and Turner, \$3.25; Palmer, \$4.00. Kittatiny, Early Harvest, and Wilson, \$4.00. Concord Grapes, \$12.00 and \$16.00 per 1000. True to name. No. 1 stock. Address Wm. C. Babcock, Bridgman, Mich.

Appointment.

Mr. James McGary, for many years in the employ of R. G. Dun, Esq., at Narragansett Pier, has accepted the position of gardener with Mr. John N. Hazard, Peace Dale, R. I.

Boston, Mass.

At the exhibition of the Massachusetts Horticultural Society on Feb. 27, James Comley contributed a beautiful basket of orchids, mostly *Coeloglyne cristata*, but interspersed with *Cattleya Mossiae* and *Cypripedium villosum*, and the whole fringed around with foliage of *Grevillea robusta*, he also brought a collection of roses, including *Gloire Lyonnaise*, *Safrano*, *Francis B. Hayes*, *Oakmont*, *Isabella Sprunt*, the *Bride*, *Reine Marie Henriette*, and a large bunch of very fine California violets. Mrs. E. M. Gill brought several varieties of *Pelargonium*, three *Narcissus* and two of *Antirrhinum*; also *Bougainvillea glabra Sanderiana*, *Corceopsis*, *Abutilons*, *Cyclamens*, *Tropaeolums*, *Amaryllis*, *Tulips*, *Carnations*, *Genista*, *Begonias*, etc. Mrs. P. D. Richards exhibited *Pinus palustris* from Pinehurst, N. C. Arthur F. Coolidge exhibited Tennisball lettuce, Round Globe radishes, beet greens and parsley; George D. Moore, radishes, and Hon. Aaron Low, spinach.

Poughkeepsie, N. Y.

The programme of the Dutchess County Horticultural Society, just received, has the following topics for discussion: April 7: "Grape Growing Under Glass," by Mr. James Withers, of "American Gardening." May 5: "Rose Culture Under Glass," by Mr. James Blais, Staatsburgh. June (at Annandale Rose Show): "A Plea for Garden Roses," by Mr. Patrick O'Mara, of Messrs. Peter Henderson & Co. September: "Outside Fruits for the Family Table," by Mr. Thomas Harrison, Rhinecliff. Oct. 6: "My Experience with Greenhouse Grapes Grown Outside," by Mr. William Russell, Millbrook. Nov. 3: "Vegetables for the Family Table," by Mr. Herman Asher, Rhinebeck. Dec. 1: "Peaches and Nectarines Under Glass," by Mr. William Turner, Tarrytown. Jan. 5: "Hints and Hints for the Amateur," by Mr. Wallace G. Gomersall, Fishkill-on-Hudson.

The Dutchess County Horticultural Society met at Poughkeepsie, March 2. Three new members were elected and three nominated. The membership now stands at 105. It was resolved that the June meeting be held at Annandale, June 16, in conjunction with the Annandale Rose Show, June 16 and 17. At this meeting Mr. Patrick O'Mara of Peter Henderson & Co. will read a paper entitled "A Plea for Garden Roses." It was resolved to offer a \$25 premium, to be competed for at the Annandale Rose Show for the best collection of Roses, 26 varieties, 3 blooms of each. It was also decided that the September meeting be held at Millbrook, when it is expected an exhibition of Flowers and Vegetables and Fruits will be held, under the auspices of the Millbrook Horticultural Society. At this meeting a paper will be read by Mr. Thomas Harrison, on "Outside Fruits for the Family Table." It was decided to place a \$25 premium, in the form of a cup or cash, at the disposal of the Millbrook Horticultural Society.

A number of replies to questions were read at the meeting. Among them a reply from Mr. John N. May to the question, "What is the Best Formula for a Fertilizer for Roses Under Glass." From Mr. Robert Cameron of Cambridge Botanic Garden answers to the questions: (a) "What Are the Best Twenty Annuals for Cut Flower Purposes?" (b) "What Are the Best Twelve Annuals for an Amateur's Garden?" (see below), and from Mr. John R. Fotheringham, of F. R. Pierson & Co., to the question, "What is the Best Collection of Hardy Perennials to Give a Succession of Bloom the Whole Year?"

The next meeting will be held Wednesday, April 7, when Mr. James Withers of "American Gardening," will talk on "Commercial Grape Growing Under Glass."

The Best Annuals.

What are the best twenty annuals for cut flower purposes?

Antirrhinum majus and its varieties. If the seeds are sown early in March in pots or boxes in the greenhouse and grown along until May then planted out in the garden, in good rich soil, and in a sunny position, plants will bloom early and continue flowering until late in the season. The plants grow about two feet in height and are of various colors. The self-colored kinds are very good.

China Asters are indispensable for cutting, but they are so well known that they need no comment here.

The *Calendulas* have good yellow flowers and if they are not needed early in the season

they can be sown in the garden. Orange King, Meteor and Prince of Orange are desirable kinds to grow.

Iberis coronaria grows from one foot to one and a half in height, and has good sized spikes of white flowers. It grows freely in a rich, loose soil and requires room to develop into strong plants. It can be sown out of doors early in the season.

The annual *Chrysanthemum* are excellent for cutting; if required early they can be sown in the greenhouse in April and when the weather is favorable can be planted out of doors. They do well also sown in the garden out of doors in May.

The annual *Crocus* are also good and are easily raised by sowing them in the open ground early in the season. Some of the best species are *Drummondii*, *tinctoria*, and *Atkinsiana*.

Dianthus sinensis and its varieties are very useful and last well.

Gaillardia picta, variety *Lorenziana*, has brownish, crimson, purple flowers and are useful for cutting.

Lathyrus odoratus, the sweet pea, is without doubt one of the most useful annuals. *Mignonette* also is an essential plant; there are many desirable varieties. *Phlox Drummondii* and all its varieties are well adapted for cutting purposes. *Scabiosa atropurpurea* has flowers of various colors and they last well when cut.

The garden stocks have good lasting qualities and they well deserve a place in this list. The double *Zinnias* are showy and the flowers last well. *Centaurea Cyanus* and its varieties are useful, although their flowers are not large. *Cosmos hybrida*, especially the white form, is good where it can be had in flower before the frost comes. *Hellianthus cucurbitifolius* is very good and has clear yellow flowers. The annual *Larkspur* have showy spikes of flowers and they last for some time. The *Tropaeolums* are always useful and last well. The *Helichrysums*, "everlastings," are very useful for winter bouquets.

The best twelve annuals for an amateur garden are: *Tropaeolums*, Sweet Peas, *Clarkia elegans* and *pulchella*, *Phlox Drummondii*, China Asters, *Crocus Drummondii* and *tinctoria*, *Convolvulus tricolor*, *Dianthus sinensis* and varieties, French and African Marigolds, Shirley Poppies, *Petunias*, *Mignonette*.

(Signed.)

ROBERT CAMERON.

New York.

The carnation novelty exhibition at the American Institute, New York, on Tuesday proved a marked success. More than twenty exhibitors from various parts contributed some superb samples of cultivation. Carnations predominated, and of these fifteen kinds were new, many being exhibited for the first time. Those presented to the judges for certificate as a novelty were submitted to the crucial test of the American Carnation Society's rules, and one only passed muster.

Carnations.—The certificated variety was seedling No. 3, from Dailledouze Bros., Flatbush, L. I. This is perhaps one of the highest ideal carnations yet introduced. The grass is deep green, slightly curling, stems rigid and lengthy, flowers fairly large, with perfect form and outline; color a delicate blush on white ground, the color in the center being a deeper salmon, fragrance very marked (100 points).

This same firm presented Bay Ridge and seedling No. 8; Also grand vases of Helen Keller and Lizzie McGowan.

B. Leavitt, Stamford, Conn., staged Mrs. A. T. Plummer a very fine red seedling. This received 79 points. Mr. Leavitt also put up some Spanish varieties. The petals of these are very deeply fringed.

C. Besold, Mineola, staged a large vase of Mrs. Joost, and Nero. These scored 79 and 55 points respectively.

Victor, a sport from Daybreak, presented by Hugh Graham, Philadelphia, scored 76 points. Daylight, exhibited by Joseph Towell, Paterson, N. J., was, in the opinion of the judges, identical with Victor, and received the same number of points. Mayor Pingree, after its long journey from Detroit, Mich., appeared in excellent condition and does the exhibitors, Breitmeyer & Sons, much credit. Galety, Saginaw and Amazon were exhibited by Albert Hake, Manchester, Pa. J. N. May, Summit, N. J., had Maud Dean and Lily Dean. Both these had been certified by the Institute at a previous meeting. This exhibitor also put up a vase of President Carnot rose. A. Herrington, Madison, N. J., made a grand showing with carnations—Storm King, Daybreak, Madam Duhamel, Albertini, Princess May (English) and Church Warden (English). He also contributed a spray of mignonette with nine spikes of bloom, all of great size and vigor. Also a vase of

Narcissus Horsfieldi. Harrison Quimby, Parsippany, N. J., put up a vase of Minnie Cook of great merit (a cultural certificate was awarded). C. H. Allen, Floral Park, made a grand showing of W. Scott.

Violets.—Ferd. Boulton, Sea Cliff, N. Y., received a certificate for Princess of Wales, a most exquisite lot of violets, with stems ten inches long and blooms nearly two inches in diameter; bunches of Luxonne and California came from the same exhibitor. George Saltford, Rhinebeck, N. Y., exhibited the new Pink Violet, Mrs. J. J. Astor, which has been previously described in these columns.

F. G. Mense, Glen Cove, L. I., put up two large bunches of Marie Louise—one lot grown in cold frames and the other indoors. Both were superb.

Miscellaneous.—John Lewis Childs, Floral Park, L. I., showed *Antirrhinum majus albus* (very fine) and *Amaryllis sulcata platypetala*. John White, Elizabeth, N. J., exhibited his variegated leaved Canna John White, for which a certificate of merit was awarded. From plants in a number of small pots it was proven that the variety comes true from seed. Julius Roehrs, Carlton Hill, N. J., made a nice exhibit of Tulips, Hyacinths, and *Narcissus Golden Spur*, in pans. Messrs. Siebrecht & Son had Palms in variety.

There was a large attendance both of the trade and general public at the afternoon meeting, at which C. L. Allen, C. H. Allen, Henry Bird, J. White, A. Herrington, J. Withers and J. F. Johnson spoke.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION wanted by married man, age 27, no children, to take charge of gentleman's place, 10 years' experience in greenhouses, etc., 2 years in last place, can furnish best of references, Scotch. Address 1121 Hill Crest, N. Broadway, Yonkers, N. Y.

BY women, each with an infant or young child, situations in the country (general housework, plain cooking, etc.) in New York and adjacent States. Small wages expected. Railroad fare paid by Association. Apply State Charities Aid Association, 105 East Twenty-second St., New York City.

GARDENER, Scotch, married, three children, ages respectively 5, 13, 15; desired position in first-class private place; thoroughly conversant with gardening and greenhouse work in all its branches, good all round grower, sober, honest, industrious, can give exceptional references. W. F., P. O. Box 2541, N. Y. City.

HEAD GARDENERS.—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of graperies, greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 35 & 37 Cortlandt St., New York.

GARDENERS, farmers, etc.—Employers desiring the services of reliable men to fill positions as above, are invited to correspond with us. On our Register are the names of excellent men whom we have known for a long time. No fee charged to any one.—R. & J. Farquhar & Co., Seedsmen, 16 and 19 South Market St., Boston, Mass.

SITUATION wanted, by a gardener and grower; 23 years' experience; conversant in all branches of business, especially forcing grapes, roses, miscellaneous cut flowers, palms, orchids, mushrooms and ornamental bedding. Would like a position where neatness and accuracy are required. Can furnish proof. H. N. Birth, 14 Prospect St., East Orange, N. J.

A LADY wishes to recommend her thoroughly experienced head gardener, as an able, skillful, industrious man of good character, especially good with flowers, and all greenhouse work, married, with one little girl. I want to get him work by the first week in April, near the Hudson or the coast if possible. Address Mrs. W. L. P., 28 Gardener Park, Rochester, N. Y.

GARDENER and florist, Swiss, 48, married, no family, thoroughly understands his business in all kinds of greenhouse plants, palms, crotons, dracaenas, ferns, chrysanthemums, water plants, roses, carnations, violets, graperies, fruits and first-class vegetables under glass and out-of-doors, ornamental shrubs, lawns, and roads; life experience, to take charge of a gentleman's place, best references. Address P. Haessli, Hoosick, N. Y.

SITUATION wanted.—First-class Gardener with diploma from both sides of the Atlantic, will guarantee financial success in producing choicest roses, also mushrooms under glass, in same building, and heat, thereby saving expense in labor, space and fuel; forcing vegetables under glass and European grapes specialties; thorough artist at table decorations; good landscape gardener; best city references. Wm. Thompson, 741 First Ave., N. Y. City.

WANTED.

(Rates, etc., same as in "For Sale" column.)

WANTED.—A married man to manage and work a place in fruit, flowers and vegetables, one mile from city, either on a salary or to take an interest. To a first-class sober man this is a splendid opportunity. Address Evergreen, 272 Second St., Memphis, Tenn.

PEACH TREES \$2. per 100.
List Free. RELIANCE NURSERY CO., Geneva, N. Y.
Mention American Gardening when you write.

READER IF YOU LOVE RARE FLOWERS
choice only, address ELLIS BROS., Keene, N.H. It will astonish and please. 13¢ FREE.
Mention American Gardening when you write.

SAVE MONEY ON FRUIT PLANTS
Strawberries a specialty. 3 Farms Immense stocks. A No. 1 plants. 50 best varieties strawberries for. Our '97 catalogue tells why I can sell such choice stock so cheap. We ship all over U. S.
O. A. E. BALDWIN, M St., Bridgman, Mich.
Mention American Gardening when you write.

Southern Vermont Nursery
GREEN MOUNTAIN GRAPE VINES, 25 cents each.
VERMONT BEAUTY PEAR TREES, 5 to 6 feet, 25 cents each.
Send for Catalogue.
C. A. HINSDELL, Prop.,
Lock Box 459, North Bennington, Vt.
Mention American Gardening when you write.

VINELESS YAM SEED POTATOES
Slips after April 1, 75c. per 100. Pure Stock can be had for \$1.50 per bushel of
J. R. G. HEFLIN, Box 466, Austin, Tex.
Mention American Gardening when you write.

PRIZE WINNING DAHLIAS
\$1.00 per doz. Catalogue Free.

LOTHROP & HIGGINS, E. Bridgewater, Mass.
Mention American Gardening when you write.

Buy "Direct from Nursery" Best.

TREES AND PLANTS
At WHOLESALE PRICES, Catalogue FREE.
RELIANCE NURSERY CO., Box 800, Geneva, N. Y.
Mention American Gardening when you write.

TREES At Very Low Prices.
Send now for Free Catalogue.
Established 1869. 150 ACRES
THE GEO. A. SWEET NURSERY CO.,
BOX 1591, DANVILLE, N. Y.
Mention American Gardening when you write.

For Sale
Farm of 160 acres, 1/4 mile from village of Ovid, Michigan. For particulars write N. O. Moyers, Ovid, Michigan.
Mention American Gardening when you write.

GRAPE VINES

For 25 cents I will mail my practical treatise on "Grape Culture." Or for \$1.12 first-class vines—4 each Niagara, Brighton and Worden, best White, Red and Black varieties, with book free; or 20 Concord and book. Order now. Will mail book at once, vines in early spring. Postpaid; safe arrival in good condition guaranteed. Price list free.

J. H. TRYON, Willoughby, Ohio.
Mention American Gardening when you write.

100 BEST EVERGREEN SEEDLINGS

delivered free by mail, only \$1. 100 best evergreens 2 to 12 ft. delivered vase of 2000 lbs., only \$10. Write for free catalogue and price list & 50 big bargains, selections from complete nursery stock. Cash paid for getting up clubs or to salesmen with or without experience. Address

D. HILL
EVERGREEN SPECIALIST, DUNDEE, ILL.
Mention American Gardening when you write.

FLORA OF JAPAN & CALIFORNIA
Chinese Narcissus, over 100 varieties of Lily Bulbs, Camellias, Palms, etc.
HARDY PLANTS, Japan Maples, Iris K., Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan.
Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above.
N. H. BRONKHORST & CO., San Francisco, Cal.
(ESTABLISHED 1878).
Mention American Gardening when you write.

More Potash

in the fertilizers applied on the farm means larger and better yields of crops, permanent improvement of the soil and

More Money

in the farmer's pocket.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.



SNIPS Then The best for florists, florists, gardeners, etc., is **Kelley's Florists' Shears** and Flower Catherers. Circular free. **FLORISTS' SHEAR CO.**, Fremont, Ohio.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.

BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

GLASS For Greenhouses, Grap-eries, Conservatories, Hothouses and Hotbeds. GLASS

VANHORNE, GRIFFEN & CO.

Importers of French Glass.

13, 15 & 17 LAIGHT ST., AND 52, 54 & 56 VARICK ST., NEW YORK.

Mention American Gardening when you write.

GARDEN CROPS

of every kind may be greatly increased in quantity and improved in quality by liberal use of **NITRATE OF SODA**, either singly or in combination with other fertilizers. Best results from **EARLY VEGETABLES** are impossible without the use of nitrogen in soluble form. **NITRATE OF SODA** is the most soluble, cheapest and most reliable source of nitrogen. Your soil may contain all the other fertilizing elements in sufficient quantity and fail to yield good crops because it is deficient in nitrogen. Over this deficiency by using **NITRATE OF SODA**. All about its source, use and the profits resulting therefrom in book on "FOOD FOR PLANTS." Sent FREE. Address..... **S. M. HARRIS, Moreton Farm, P. O., N. Y.**

Mention American Gardening when you write.

DON'T WASTE ANY MORE

of your God-given time and strength in growing any kind of a farm or garden or p without using one of the Z. Breed Weeders. They will save three-fourths to nine-tenths of your time, and it is a pleasure to use one. Thousands of farmers and gardeners all over the U. S. will testify to this. Will work corn, hills and all, until it is 18 inches high, potatoes 8 to 10, and all other crops in proportion. Will work corn, potatoes, peas, beans, cucumbers, squashes, melons, cabbages, tomatoes, celery, asparagus, strawberries, beets, carrots, onions, etc., to your perfect satisfaction, and give better crops than by any other method. This may seem impossible to you but it is true nevertheless.

"I used your No. 4, or Onion Weeder, the past year. When I tried it first my very conservative uncle, an old onion grower, tried to find the onions that were pulled out. He said it did not pull up as many as the boys would. I ran over the 3-acre lot every few days and the boys began to think they would not have any more work from me. The surface of the ground on my carrot field baked hard and I do not think they would have seen the light of day had I not used the weeder to break up the crust. I would not part with it at any price if I could not get another." **ORLANDO F. NEWHALL, Peabody, Mass.**

There are many reasons why you cannot afford to do without a weeder this year. Send today for circulars giving full information. Nine sizes and styles of walking, riding and hand weeders. One of these will hit your case surely.

THE Z. BREED WEEDER CO., (Desk 9), 26 Merchants Row, Boston, Mass.

Mention American Gardening when you write.

SLUG SHOT Kills Insects.

Sold by Seed Dealers.



Sold by Seed Dealers.

The value of all work or action must be measured by the ultimate result.

There has been sold through the seed dealers considerably over five million pounds of **SLUG SHOT**. Unless **SLUG SHOT** had proved a useful and valuable article for common use, no amount of advertising could have developed the trade or held it. As a general insecticide it stands unrivaled.

BENJAMIN HAMMOND.

For pamphlet address

HAMMOND'S SLUG SHOT WORKS,

Fishkill-on-the-Hudson, N. Y.

Mention American Gardening when you write.

DISCOVERED A few wash that will remove that greasy complexion and leave it soft and white in 10 seconds after washing, and in a week remove all pimples, blackheads and tan. Removes the skin without irritation. Perfectly harmless; contains no poisons. Cuts out five cents to prepare enough to last six months. Recipe and full directions, 25 cts. **Mrs. E. HUNTER, 6815 Evans Ave., St. Louis, Mo.**

Mention American Gardening when you write.

Money Methods in the Market Garden.—V.

Money in the Strawberry Field.

The purpose of this article is not to describe methods by which the largest berries can be grown to sell at fancy prices, nor how to produce fine exhibition berries, but to describe how to get the most bushels per acre, and berries of good size and quality for the general market. For twenty years I have been growing strawberries, and in that time have tried many experiments, and the plan now settled upon in growing them for market has not failed to give me good crops, and has made some money for me.

In starting a new bed begin very early in the spring, and, in order to get the ground in condition to work very early, it is plowed in the fall, stable manures being drawn on in the winter and the ground covered by two or three inches in depth, or about 30 tons per acre. In this place I can buy plant food more cheaply in manure than in chemical fertilizers. When the ground is sufficiently dry in the spring harrowing is commenced, first using a harrow made something like the "Cutaway" harrow, which is about equal to plowing the ground. This is followed by a fine-toothed smoothing harrow and finished with a light plank drag. With a small plow open furrows four or five inches deep and about three feet apart.

For transplanting I use plants from the new bed which were set the year before and have not yet fruited, a few rows being allowed to run together, completely covering the ground. With a spading fork dig up the plants in sods and load them on a low wagon, taking up a space about sixteen inches wide between the rows. Draw the plants along the furrows which have been made for them, and unload them in piles one or two rods apart. In transplanting I like to have three men—one to break the plants apart, leaving some soil on the roots, and drop them about sixteen inches apart; another man following puts them in place and draws a little soil around them with his hands; the other man with a hoe draws more soil around the plants and presses them down with his foot. This is the easiest and most satisfactory way I have found to set strawberry plants in large numbers. The plants are set so early in the spring that the leaves have only just started. With so small leaves and with so much moisture in the ground nearly every plant will live.

As some soil is left on the roots in transplanting, their growth is but little hindered by the transplanting and they get a very early start. A few rows are set with the plants very close together, so as to have plants to fill in if any should fail to live or are destroyed by the white grubs.

Cultivation is commenced soon after transplanting, and the horse cultivator is followed by a wheel hoe, which leaves but little weeding to be done by hand. If I am not satisfied with the growth of the plants nitrate of soda is given.

All the fruit stems and runners are kept cut until about the first of July, so that cultivation can be carried on close to the plants; at that date I let one runner on each plant set in the rows, and a little later more runners are allowed to grow out around the plants, being so trained as to set plants six to eight inches apart. When the row is filled out in this way to about twenty inches wide, I try to



"I am so well pleased with my No. 4 Weeder that I thought I would write and tell you that I have tended twenty-three acres of corn, one and a half acres of beans besides sweet potatoes, garden truck, blackberries, raspberries, not using any other tool of any kind. I made a perfect success of it. Have done it all with one horse, going over the entire lot in less than two days."

DAVID HANSBARGER, Ansonia, O.

keep all other runners cut. These small spaces between the plants may be worked with a narrow hoe, and the soil should be stirred very frequently to keep it loose and to stop the weeds from growing. The bed is mulched with manure when the ground freezes and the next year the cultivation and weeding are kept up until the berries are nearly grown.

For the general market the best strawberry I have found is the Warfield. It is very prolific, a good shipper and a very handsome berry when well grown; it does well on all kinds of soil, and with me it is a money maker. I have a trade at nearby summer resorts for some very large berries at a fancy price, for which purpose I grow Bubach and Marshall.

The Warfield and Parker Earle will set so many berries that they will not all grow to a good size with ordinary culture, but on very rich ground and with irrigation I get large crops, generally over 200 bushels to the acre, and portions of my field have yielded me at the rate of 500 bushels per acre.

W. H. JENKINS.

Delaware County, N. Y.

The Apiary.

In a few weeks' time our bees will want pollen; they are now breeding rapidly and consume a considerable quantity of food; they also want water very badly. During warm days, when they are flying, set out a flat dish with water and throw a lot of little pine sticks on top, so that the bees can sit on them and sip the water. This means a saving of the lives of many bees, for they will go where they can get water, and often get chilled, and can never return to the hive.

Fine rye flour makes the best substitute for pollen. Place some in a shallow dish and see how eagerly the bees go for it. The water and rye meal should be close to the apiary in a sheltered nook.

See that there is plenty of honey, as a great deal is required to build up properly in the spring. If the colony is short of feed, it will economize and not raise enough brood, with the result that you will have a weak colony when you want a rousing strong one to gather the honey. It does not pay to underfeed our bees any more than it does to practise the same falsity with our vegetable plants or berries. The result is ultimately the same—no profit or entire starvation.

The best way to feed colonies that need food now is by taking pulverized sugar and working honey into it until it is a stiff dough; lay a cake of this right on top of the brood nest, cover snugly; the bees will do the rest. Only see you keep enough there for them.

Be very careful in examining the bees that you do not chill them. Under no circumstances tear the brood nest apart; the honey is at the sides and on top, and if you cannot find much there, feed at once. I have had cases where there was too much honey, but that does not occur often, but if a hive be found that seems to have every frame filled with honey and a small cluster of bees, it will be well to take a frame out close to the cluster, not out of the cluster, and insert it into a hive that wants food, putting an empty comb in its place to make room for the bees to extend the brood nest.

Some colonies are slow at building up, even if they have plenty of honey in the spring, and right here I learned that even some bees are like my neighbor, always afraid there will not be enough, and too stingy to use what there is already. How do I know? Well, whenever I cut off the cappings from part of a comb, every few days, they will use the honey much faster and breed up much better. You see, they think I put so much new honey in and that they do not take of their own.

L. W. LIGHTLY.

ARMSTRONG & McKELVY
Pittsburgh.
REYNOLDS-BAUMAN
Pittsburgh.
DAVID-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR
Cincinnati.
ROCKSTEIN
ATLANTIC
BRADLEY
BROOKLYN
New York.
SEWELL
ULSTER
UNION
SOUTHERN
Chicago.
SHIPMAN
COLLIER
MINNESOTA
St. Louis.
END SEAL
SOUTHERN
JOHN T. LEWIS & SONS CO
Philadelphia.
MORLEY
Cleveland.
SALEN
Salem, Mass.
CORNELL
Buffalo.
KENTUCKY
Louisville.

CONSIDER THE COST. Suppose the building is 60x25x20. It will require to paint it, 14 gals. ready-mixed paint at \$1.25 per gal.—\$17.50.

Or, four 25-lb. kegs of white lead, \$6.00; five gals. pure linseed oil, \$2.00; four cans tinting colors, 80 cts.; ½ pt. Japan dryer, 15 cts.; ½ pt. turpentine, 5 cts. Total, \$9.00—a saving of \$8.50 in favor of **Pure White Lead** without considering its greater durability. Examine the brand (see list).

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

BOWKER'S FERTILIZERS
for HOUSE PLANTS, LAWNS, GARDENS, FARM CROPS.
A book on "Window Gardening," and enough odorless fertilizer for thirty plants three months, sent by mail for **25c.**
Catalogue free. State for what purpose fertilizer is wanted when writing.
BOWKER FERTILIZER CO., Boston.

Mention American Gardening when you write.

FARMERS
REDUCE the Price of Your Insurance by roofing your building with our **CORRUGATED IRON AND STEEL ROOFING.**
No more fires from defective fires, where the chimney passes through the roof, or from sparks falling upon the roof. Cheaper than shingles, because the first cost is no greater, while the lasting qualities are double. A **GOOD CORRUGATED STEEL ROOF** at 2½ cts. per square foot. A building roofed with iron or steel is entitled to the same rate per thousand of insurance as one which is roofed with slate—the difference in first cost is in favor of iron and steel.
For circulars, prices and estimates, address
THE BERLIN IRON BRIDGE CO., EAST BERLIN, CONNECTICUT.
Mention American Gardening when you write.

LORD & BURNHAM CO., HORTICULTURAL ARCHITECTS AND BUILDERS. STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York.
Mention American Gardening when you write

WHOLESALE MARKET REPORT

New York.

The Patriarchs' ball in this city, March 1, and the inaugural ball at Washington, March 4, helped materially to sustain the flower market for the whole week, otherwise there would have been a collapse. Roses and carnations are off crop. Bulbous stock also lightened up considerably. Among the new stock now coming in is Hybrid roses, including Mabel Morrison, Merville de Lyon, Baroness de Rothschild, Ulrich Brunner, General Jacqueminot and Mrs. John Laing. Sweet peas are also plentiful; Gladiolus Shakespeare is also on the market in limited quantity.

The vegetable market apparently is clearing out better than any other at this time, and business generally in this line is very fair. But with fruit of any kind things are different.

Strawberries are becoming plentiful and demand poor; prices uncertain.

Apples show no improvement.

Cucumbers are moving freely at \$1.50@1.75 per dozen for No. 1, with No. 2 at \$1.00.

Mushrooms are cleaning up well. Good stock is realizing 40¢@50¢ per lb. Stock a little off, 30¢@35¢ per lb.

Hothouse tomatoes, if of good color, sell readily at 30¢ per lb.

Hothouse lettuce is also meeting with fair trade. A limited quantity of very fancy makes 75¢ per doz.; general figures rule from 25¢ to 60¢ per doz.

New potatoes (Bermuda Early Rose and Garnet) sell at \$6 to \$7 per barrel for No. 1. Havana stock \$5.

Celery sells well when prime.

Radishes are not over-plentiful, but when good make \$2.00 to \$3.00 per 100 bunches.

Asparagus is getting plentiful and makes for No. 1 \$1.00 to \$1.25 per bunch.

Rhubarb \$3.00 to \$5.00 per 100 bunches, 4¢@5¢ sticks in a bunch.

Onions still remain good property and prices show a tendency to stiffen rather than otherwise.

Apples.

Spitzenburg, fancy, per bbl. 2 00@2 50

Common to fair, per bbl. 1 25@1 75

N. Spy, fancy, per bbl. 2 00@2 50

Common to good, per bbl. 1 25@1 75

Baldwin, Vt. & Northern, fancy, 1 87@1 50

Greening, Vt. & Nthn fancy, per bbl. 1 50@1 75

Baldwin & Greening, Vermont, good, 1 12@1 25

Baldwin, w'n N. Y., gd to fcy, per bbl. 1 25@1 50

Up-river, per bbl. 1 12@1 25

Greening, w'n N. Y., gd to fcy, per bbl. 1 50@1 75

Up-river, per bbl. 1 00@1 25

Greening & Baldwin, ordin'y, per bbl. 85¢@1 00

Grapes.

Catawba, prime to fancy, per small basket 12¢@15

Poor, 4-lb. basket. 8¢@10

Vegetables.

Asparagus, Ch'n, choice, large, per bunch 1 00@1 25

Beets, Florida, new, per bush. crate 50¢@75

Cauliflowers, California, per crate 1 40@2 50

Florida, 1/2-bbl. basket. 75¢@1 50

Cabbages, per 100 2 00@3 50

Danish, per 100 3 00@4 00

Florida, per barrel crate 2 25

Celery, flat bunches, per dozen stalks 1 00@1 75

California, large, per doz. stalks 75¢@1 25

State, fancy, large, per doz. stalks 60¢@75

Average, best, per doz. stalks 30¢@50

Small to medium, per doz. stalks 15¢@25

Florida, large, per dozen stalks 75¢@1 25

Florida, small to med., per doz. 20¢@50

Lettuce, Fla., prime to fancy, 1/2-bbl. basket 1 50@2 00

Fla., fr to gd., per 1/2-bbl. basket 1 50@2 25

Fla., inferior, per 1/2-bbl. basket 75¢@1 25

Onions, Eastern, white, per bbl. 4 00@6 00

Eastern red, per bbl. 3 25@3 50

Eastern, yellow, per bbl. 3 00@3 25

State and W'n, yellow, per bbl. 2 25@2 65

Orange Co., white, per bag 2 50@4 00

Orange Co., yellow, per bag 2 50@3 00

Orange Co., red, per bag 2 00@3 00

Havana, per box 2 40@2 60

Bermuda, per box 2 50@2 80

Spinach, Norfolk, per bbl. 75¢@1 25

Tomatoes, Fla., prime to fancy, per carrier 2 00@3 00

Fla., poor to good, per carrier 1 00@1 50

Key West, per carrier 75¢@1 25

Turnips, Canada, Russia, per bbl. 60¢@65

Philadelphia.

The market has presented a much better appearance this past week; all kinds of vegetables have been in better supply, but even for new things it is difficult to obtain any high prices.

Strawberries, Fla., are arriving in much larger quantities, but are mostly of second grade; first quality sell at 30 to 35¢ per qt.; the bulk go at 20 to 25¢.

Hothouse tomatoes are more plentiful and bring 25¢ to 30¢ per lb.

Mushrooms are selling very well, but good prices cannot be obtained, the best quality sells at 25¢ to 30¢ per lb.

Cucumbers are very plentiful, and do not sell very well; prices have fallen to \$1.50 and \$2.00 per doz.

Apples are still held firm, but many sales

were made below the quoted figures. Fruit is now changing rapidly. Apples keep a very little time after being unpacked.

Apples.

Spitzenburg, fancy, per bbl. 2 00@2 25

Fair, per bbl. 1 50@1 75

Baldwin, fancy, per bbl. 1 50@1 75

Fair, per bbl. 1 00@1 25

Greenings, N. Y., per bbl. 1 00@1 25

Vegetables.

Beets, Fla., new, per 100 bunches 3 00@4 00

Cauliflowers, Fla., per 1/2-bbl. basket 1 25@2 00

Cabbage, Fla., per bbl. crate 1 25@1 50

Celery, extra large, per doz. stalks 60¢@75

Fair 25¢@50

Lettuce, Fla., 1/2-bbl. basket, fancy 2 50@3 00

Fair to good 1 00@1 50

Onions, Eastern, white, per bbl. 4 00@6 00

Red, per bbl. 3 25@3 50

Yellow, per bbl. 3 00@3 50

Peas, Florida, per crate 2 50@3 75

String Beans, Fla., first quality 3 50@4 00

Second quality 2 00@3 00

Spinach, Norfolk, per bbl. 50¢@75

Tomatoes, Fla., per case, fancy 2 00@2 50

Fair to good 1 50@1 75

New cabbage is becoming quite a glut, and scarcely pays freight. Savannah steamer in on Monday had a large quantity on board.

Small Fruit Growers Combine.

At Fredonia, N. Y., on March 6 a number of small fruit growers met and formed a union on lines similar to those of the Grape Union lately organized. The purpose of the association is mutual protection in marketing.

A Truck Gardeners' Trust has been

formed by the truckers of Louisville, Ky. It has already over seventy members, who complain that by dealing through a commission man proper profits are not had by the growers.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*We cannot undertake to reply by mail.

CALADIUMS.

(Will you please inform me how to keep Caladiums all winter, from the time I take them up in the fall? Many of mine have rotted.—MRS. P. L. B.)

If it be Caladium esculentum that is meant, there should be no difficulty in keeping the root of that during the winter months. A dry warm cellar or under a greenhouse bench usually serves. Rotting must be the results of too cold a temperature and damp or injury in some way. The roots need but little, if any, attention, to start them. If forward large plants are needed roots may be put in a warm sunny position with just a little soil around them, and they will start growth at once. But without this trouble good results can be obtained by planting them outdoors when all danger of frost is over. When the weather warms up they will then make rapid growth.

PRUNING FRUIT TREES.

(Last fall I set out trees of following varieties: Duchess of Oldenburg and Jonathan apples, Bartlett and Kieffer pears, Early Richmond cherries and Abundance plums. All bought through local representatives of two different nurseries. One of said agents tells me I should this spring cut all back, leaving but two or three shoots, and these shoots should be shortened down to five or six dormant buds. The other agent says the trees should not be cut back or trimmed further than removing of shoots that start out from

St. Vitus Vanquished.

What Cured Little Stanley Nichol of Chorea.

From the Republican-Journal, Ogdensburg, N. Y.

A letter was lately received at the office of the *Republican-Journal* from Hammond to the effect that the cure of an extraordinary severe case of St. Vitus' dance had been effected on the person of little Stanley Nichol, the eight-year-old son of Mrs. Charles Nichol, of that village.

A reporter was accordingly dispatched in that direction, who, after some inquiry, found Mrs. Nichol's residence about a mile outside the village. Mrs. Nichol said:

"A little over a year ago my boy, Stanley Nichol, who is now only eight years old, alarmed me one day by being taken with a strange gurgling in his throat. After the first the attacks became quite frequent. Stanley did not complain of any pain, but said he could not help making the noise. At that time there was a New York doctor stopping in the village who was a specialist on throat and nasal diseases. I took my son to him, and after a careful examination, he said that there was nothing the matter with the boy's throat. The gurgling, in his opinion, was caused by a nervous contraction of the muscles of the throat. He asked who our family physician was, and said that he would consult with him before he prescribed.

"Stanley rapidly grew worse. He was always a sickly boy. One day I noticed that he was jerking his arm up in a very peculiar manner. A few days later he seemed to lose control of his legs; first one, and then the other would be pulled up, and then straightened out again. He was a perfect bundle of nerves, and was rapidly losing all control of himself. When eating at the table or drinking, his arm would often twitch so as to spill what he was drinking. One day he scared me terribly by throwing back his head and rolling his eyes up so that only the white parts showed. I took him to our family physician, who prepared some medicine

for him. He took it, and commenced to improve. The dose, however, had to be increased, and Stanley rebelled against taking it. It was very disagreeable medicine, and I don't blame the boy for not wishing to take it.

"Our physician went to New York City on business, and while he was away the medicine became exhausted, and we could get no more. Stanley was still very bad. About that time I read about a little girl who had been cured of St. Vitus' dance by taking Dr. Williams' Pink Pills. I thought I would try them and procured a box. I followed the directions that came with the pills, and gave only half a pill at a dose. I did not see much improvement, and increased the dose to a whole pill. The effect was noticed in a day. Stanley immediately commenced to get better and did not object to taking the pills, as he had the other medicine. He took seven boxes of the pills, and to-day appears to be perfectly well. He discontinued taking them some time ago. He weighs nearly fifteen pounds more than he did and is strong and hearty. A year ago we took him out of school, but he is so much better now that he is going to begin again this fall.

Dr. Williams' Pink Pills for Pale People contain, in a condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are also a specific for troubles peculiar to females, such as suppressions, irregularities, and all forms of weakness. They build up the blood and restore the glow of health to pale and sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, over-work, or excesses of whatever nature. Pink Pills are sold in boxes (never in loose bulk), at 50 cents a box, or six boxes for \$2.50, and may be had of all druggists, or direct by mail from Dr. Williams' Medicine Company, Schenectady, N. Y.

....2,000,000....

Strawberry Plants**FOR SALE.**

Eighty varieties. Catalogue Free.

It Tells How to Raise a Big Crop of Berries.

E. J. NULL, Olyphant, Lack's Co., Pa.

Mention American Gardening when you write.

Fruit Trees.

Buy direct from the Nursery and Save Agents and Dealers' profits.

LARGE STOCK—Apple, Pear, Plum, Cherry, Peach, Quince, Grape Vines, Currants, Gooseberries, Shrubs, Roses, etc., at lowest wholesale prices. Order now. Catalogue free. Established 1835.

H. E. HOOKER CO., Rochester, N. Y.

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cereuses, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.

Mention American Gardening when you write.

8 Choice Carnations	\$0 25
8 Choice Chrysanthemums...	25
8 Choice Geraniums	25
10 Colours, assorted	25
10 Assorted House Plants ..	25
5 Collections for \$1.00	

Address, J. T. GOODLIVE, Florist,

Look Box 1135. ROSEVILLE, OHIO.

Mention American Gardening when you write.

GLADIOLUS.

A Superfine Mixture, made up of very best named varieties and choice un-named seedlings. Fine blooming bulbs at \$1.00 per 100.

\$3.00 per 1000; by express, purchaser's expense. J. A. NEED, (Gladiolus Specialist), CANTON, OHIO.

Mention American Gardening when you write.

Seeds! Seeds!

73d Annual Priced Catalogue of

VEGETABLE, FARM AND FLOWER SEEDS

is now ready and mailed Free to all applicants.

BRIDGEMAN'S SEED WAREHOUSE,
37 East 19th Street, - New York City

Mention American Gardening when you write.

GLADIOLUS BULBS.

Very fine mixed, 30c. per doz. Superb Seedlings, mixed, 30c. per doz. White and Light, 30c. per doz.; \$1.50 per 100. Isaac Buchanan, fine yellow, 30c. per doz. Marie Lemoine (recently marked), 30c. per doz.; \$1.25 per 100. Marie Lemoine Bulbette (mostly bloom last year), 15c. per 100; 50c. per 500. 10 named varieties, each different, 15c. 30 named varieties, each different, \$1.00. All post-paid. Price list free. Cash with order.

JOHN FAY KENNEL, (Grower),
Box 405, Rochester, N. Y.
Mention American Gardening when you write.

GREAT VALUES IN SURPLUS STOCKS

I will mail at 10c. oz.; 30c. 1/4 lb.; or 90c. lb., the following first-class seeds: CABBAGE, Wakefield, Winkstadt, Succession, Flat Dutch. CELERY, White Plume, Golden Self Blanching, Giant Pascal, Golden Heart. ONION, Prize Yellow Globe. TOMATO and MELON, all standard sorts, and with every order direct from this advertisement, will include FREE a package of NEW EARLY IDEAL SWEET CORN, worth \$1 a kernel to any gardener. Don't miss it!

ISAAC F. TILLINGHAST, La Plume, Pa.
Mention American Gardening when you write.

SEEDS

We wish to add 100,000 new customers to our list, that is why we make the following remarkable offer, not samples but full size packages: For 10 cts. in silver, or ten one-cent stamps, and the name and address of a friend, 6 Packages of Choice Sweet Peas, all different, or 6 Packages of Choice Flower Seeds, as follows: Astors, Poppy, Pansy, Balsam, Nasturtium, Verbena, or 6 Packages of Choice Vegetables as follows: Cucumber, Beet, Lettuce, Radish, Parsnip, Squash. Or all three collections for 25 cents. Our CATALOGUE FREE with every order. THE PAGE SEED CO. GREENE, Chenango County, NEW YORK.

Mention American Gardening when you write.

trunk of tree too near the ground. Will you kindly say how above trees should be treated? I also have currant and gooseberry bushes set out spring of 1896; made poor growth during past summer. Should I cut them back?—C. W. J.)

—It is impossible to advise you from the foregoing scant details. Are the trees standards? What growth have they made? Again, both agents may be right, as the necessary treatment will be according to the conditions of the trees. If they had been pruned back, and now have short spurs no further cutting is now wanted. You will do well to read the instructions given in the "Fruit Garden" in our issue of Feb. 6. It would be better to mulch and encourage the currants and gooseberries rather than knife them; prune lightly.

PLUMS FOR CONNECTICUT.

(Name three plums suitable for Connecticut and Wells River Valley. How about the Hale plum? Would Lucretia dewberry winter here?—W. M. S., CONN.)

—Satsuma and Wixon plums were well spoken of at the Pomological meeting at Hartford recently, and the Hale plum was especially well spoken of. Some growers went so far as to say it was the best in existence. You would do well to read up carefully our report upon that meeting (page 139); also notes on Japan plums, on page 143. On page 139 are also remarks on Lucretia dewberry.

WHEN TO RE-POT.

(Will you please tell me how to know when flowers require a larger pot than the one they are growing in?—A. M. B.)

—Plants in the spring and early summer need repotting when the existing ball of earth is filled with roots. To know this, turn the pot upside down, give a sharp tap on the edge, holding the plant firm in the hand, and the pot can be removed, the roots examined, and the ball returned to the pot without injury.

GERANIUMS FAILING; BOOK ON HOUSE PLANTS.

(What is the cause of the bottom leaves of geraniums drying up and falling off when the upper part seems to look green and thrifty? What is the best book on the culture of house plants and where can it be had? I would like one written in a condensed form, as I haven't much time to read.—A. N. BYRNES.)

—Probably the geraniums have been allowed to get dry or else they are lacking light and air. The best book on the subject is "Window and Parlor Gardening," by Jonsson Rose; price \$1.25. Our publishers can supply it.

ORANGE LEAVES INJURED.

(To F. A. W., N. J.): The leaves of Otaheite orange which you send have evidently suffered some mechanical injury. There is no fungus or specific disease. A chill either by draught or by water at a very low temperature when the tissues were very soft, or bad root conditions, would each or all be sufficient cause. The plant will not be permanently injured.

SCALE INSECTS.

(Will you give me the name of this scale which I inclose. It seems to be at home, as far as I have noticed, only on the Japanese Magnolia obovata. In early fall, under pressure, it gives forth a thick purplish secretion. Along with these on the same stems are large numbers of small black scales; are they the undeveloped form? Please state the best remedy and also best time to apply.—A. O. B., Sing Sing, N. Y.)

—The scales were so badly crushed and mutilated that specific determination is not possible. If Mr. Brown will kindly send several small twigs with the scales in place perhaps we can tell him what the species is. There is little or no doubt that it belongs to the genus Lecanium. The whale oil soap wash or kerosene emulsion wash would be effective in destroying it. One and a half to two pounds of soap in a gallon of water would suffice. The emulsion should be diluted with about ten parts of water.—W. G. Johnson.

20 of the Leading Varieties of STRAWBERRY PLANTS at \$1.50 per 1000. All pedigreed plants, raised from selection.

Nursery 50 miles east of Chicago.

La Porte Fruit Farm and Nursery,

LA PORTE, IND.

Mention American Gardening when you write.

DAHLIAS

We offer a large collection of the best kinds in all classes.

PLEASE SEND FOR OUR CATALOGUE.

JOHN ENDICOTT & CO., Canton, Mass.

Mention American Gardening when you write.

HENRI BEAULIEU, Seedsman and Florist, Woodhaven, N. Y. Price list free. Mention American Gardening when you write.

**TRY DREER'S GARDEN SEEDS**

Plants, Bulbs and Requisites. They are the best at the lowest prices. Calendar for 1897 mailed free. Address:

HENRY A. DREER,
714 Chestnut St., PHILA.

Mention American Gardening when you write.

PREMIUM AMERICAN PANSY SEEDS

and plants grown by W. Toole, Pansy Specialist, Baraboo, Wis. 35 varieties and mixtures of Pansies. Heerpan Pansy, 35c. per pkt.; trade pkt., 50c. Selected mixed, pkt., 15c.; trade pkt., 30c. Extra choice mixed, pkt., 10c.; trade pkt., 20c. My Pansies have never been equalled at any show where competing. Complete directions "HOW TO GROW PANSIES," sent free to any address with catalogue of Pansies and other seeds and plants by

WILLIAM TOOLE, Pansy Specialist, Baraboo, Wis.
Mention American Gardening when you write.

SEEDS FREE! If you have not received my Catalogue of Seeds and Plants for '97, send four cents in stamps for postage and packing, before April 15th, mentioning "American Gardening," and I will mail it with four packets Choice Seed free, all the following: New Giant Japanese Morning Glories, 25 seeds, (I was the original grower and introducer of these magnificent vines in this country and have the finest strain consisting of hundreds of varieties mixed.) New Giant Hibiscus, 35 seeds; Mist-Flower, 100 seeds; Chrysanthemums, 100 seeds.

L. W. GODDELL, "Seed Grower,"
Pansy Park, Dwight, Mass.

Mention American Gardening when you write.

Mention American Gardening when you write.

Mention American Gardening when you write.

OUR PREMIUMS ARE OFFERED

doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers. Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

THE THREE BEST CANNAS KNOWN.

Austria, Italia and Mrs. Fairman Rogers

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed Madam Crozy type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of Mme. Crozy, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{2} \times 1\frac{1}{2}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.



ITALIA and AUSTRIA.]

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. Austria is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. Italia as flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the *Gladiolus*, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of Austria with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 33 growths, and attained a height of 42 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and Italia were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.

Plants ready for shipment on and after May 15th, but to avoid delay this premium should be earned now, as thousands will want it.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Hustle.
Hotbeds now in order.
Sow radishes under glass.
Plenty of grit for the poultry.
Smith's Improved.—A good gooseberry.
Gardener's reserve force.—The compost heap.
Grape cuttings.—Take them on mild days now, if not cut last fall.
Nurserymen should be among the most honest and square dealing of men.
Warden Grapes sold readily when the others were a drug on the market.
Cherries.—Early Richmond, Ostheim and large Montmorency are largely planted.

Loudon Market Currant.—Order a dozen plants of some reliable nurseryman.

True economy and penuriousness are widely different in gardening operations.

Mixing Manure.—Any method of thoroughly incorporating manure with the soil soon after applied is a good one.

The Idaho pear, which has received so much praise, is proving disappointing to one gentleman who has fruited it this year.

Whatever else happens we will not let the crust form on surface of soil where we set our fruit plants. There is too much loss in it.

Cone setting cannot be rapidly done without a machine for making the cones. Making cones with hand and hoe is too slow a process to be practicable.

Glen St. Mary Strawberry.—Who has tried it? Great claims are made for it. I

should like to hear reports from some of the readers of A. G. who have fruited it this year.

How many readers of A. G. have tried grafting the different varieties of cactus for the window garden? It is easily done, and affords much pleasure to the operator who owns the plants and has the time.

We will try the "cone" setting of heavy-rooted raspberry tips as an experiment. We will have to set the cone over two inches deeper than for strawberry plants. Will report result as compared with other methods.

Free Seeds.—Congressman: "Hello! Farmer! I send you by mail a few packets of seeds. You'll find my name on the package." (Congressman's soliloquy): "I've fixed that farmer's vote all right. I'm glad I voted for the appropriation of \$150,000 for free seeds."
CHARLES NASH.

Offer No. 45.

COLLECTION OF ROSES.

From Maryland. Strong 3-inch pot grown



plants. Delivery on and after April 1, postpaid.

One Crimson Rambler

One Perle
One Safrano
One Mme. Camille
One Marie Guillot
One Iphitos
One Nridesmaid

One Meteor
One Papa Gontier
One Hermosa
One La France
One Bride

Surely the good things of this earth are open to everyone who exhibits a little energy. Realize you can obtain the above set of Twelve Magnificent Roses as a premium for one new subscription to AMERICAN GARDENING, and that it will not take you more than a few minutes' work to accomplish this, then send and get your reward.

Offer No. 41.

GREENVILLE APPLE.

(Downing's Winter Maiden Blush).

For one new subscription we will send by express, receiver to pay charges,

Four 3-Year-Old Plants.



Read the description: This fine apple was produced from seed of the Fall Maiden Blush by Jason Downing, in Darke County, O., in the Spring of 1774. It made a vigorous growth, and at the age of 7 years it bore some excellent fruit, from which time it has produced fruit annually. The originator states that in 1888, at the age of 14 years from seed, it yielded 15 bushels of picked apples. Grower has been noticing the behavior of this apple for the past 10 years, growing it both in nursery and orchard, and from the weight of testimony in its favor, has decided to grow it in quantities to supply the increased demand. Description: Fruit large, irregular, sometimes flattened, and at other times slightly elongated, inclining to conic; generally angular, skin light waxen yellow, with a bright red cheek in the sun; stock short, usually projecting half as high as cavity, though in a few specimens it projects to its surface and beyond, inserted in a deep cavity, often surrounded with russet; calyx small, basin of moderate depth, flesh yellowish, crisp, tender, juicy, with a very pleasant, mild, sub-acid flavor. It has a fragrant odor; quality very good. Season, December to April. Tree a good grower and bearer.

Offer No. 53.

HARDY EVERGREENS.



Your choice of any one of the below offers of Hardy Evergreens for one NEW subscription. This is a great big offer for the money, and invaluable to any one wishing to set out a young plantation. Plants from Illinois.

- A-50 Scotch Pine, 6 inches.
- B-50 White Pine, 4 inches.
- C-50 Norway Spruce, 2 to 4 inches.
- D-50 American Arbor Vitae, 4 inches.
- E-25 Red Cedar, 4 inches.
- F-25 Hemlock Spruce, 4 inches.
- G-15 Blue Spruce, 4 inches.
- H-25 Douglas Spruce, 4 inches.
- J-15 Picea Concolor, 4 inches.

Offer No. 58.

CHRYSANTHEMUMS

This collection comprises a very fine assortment of eleven standard large flowering varieties, from 2 1/2-inch pots, good plants, and will be sent, postpaid, for one new subscription; plants grown in Maryland. Ready for delivery on and after April 15. These plants will do well outdoors in mild climate, whilst in more exposed sections to bring them to full maturity in the fall they should have partial shelter.

- Mdme. F. Bergmann.—The earliest of all large varieties; color white, of great excellence.
- Ivory.—A popular favorite; very dwarf and free flowering.
- Miss Minnie Wanamaker.—Pure white Japanese; one of the standard varieties.
- Golden Wedding.—The most exquisite yellow Japanese extant.
- Eugene Dailedouze.—Monster flowers; yellow Japanese.
- W. H. Lincoln.—The champion late flowering yellow; a grand variety.
- Col. W. B. Smith.—Japanese incurved bronze.
- Mrs. J. G. Whilldin.—Earliest of the Japanese yellows. In flower same time as Mdme. F. Bergmann, Oct. 4 to 7.
- V. H. Hallock.—Color rosy pearl; Japanese.
- Maud Dean.—The most charming pink Japanese ever introduced; a good market variety.
- Cullingfordii.—A reflexed variety of good reputation; color deepest crimson.

Offer No. 61.

COLLECTION OF

VEGETABLE SEEDS.



true to name, and reliable. We feel assured the grower will fill this order to your very complete satisfaction.

- Beet, Eclipse.
- Bean, Bush Refugee.
- Cabbage, Premium Flat Dutch.
- Carrot, Henderson's Intermediate.
- Celery, Henderson's 1/4 Dwarf.
- Corn, Crosby.
- Cucumber, White Spine.
- Lettuce, Tennis Ball.
- Musk Melon, New Hackensack.
- Parasit, Long Smooth.
- Peas, Alaska.
- Radish, White Tipped Turnip.
- Spinach, Thick Leaved.
- Squash, Bush Crook Neck, Yellow.
- Squash, Boston Marrow.
- Tomato, Early Ruby.
- Burpee's Bush Lima.

Offer No. 46.

THE CELEBRATED

GREEN MOUNTAIN GRAPE

One 2 or 3 year vine and one 1 year vine; two vines in all. Sent, postpaid, for one new subscription.



The Celebrated Green Mountain Grape is fast coming to the front and is bound to stay. It is acknowledged to be the earliest good grape on the market. It is the most delicate and delicious grape grown out of doors. It is a strong-growing, healthy vine, an enormous and early bearer, with well shouldered and handsome bunches.

No one grape possesses so many merits as the Green Mountain. The firm making this offer are headquarters for this vine and have over an acre out as a vineyard.

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE

CHRYSANTHEMUMS

NEWEST, EARLIEST, BEST.



- Mrs. Higginbotham. Best of all Ostrich Plumes.
- Gloriana. The pretty twisted petalled yellow.
- Marie Louise. A grand white.
- Pitcher and Manda. A variety of two colors.
- Kate Brown. Earliest and best for the garden.
- Fres. Smith. A robust pink.
- Silver Cloud. Pale salmon.
- G. W. Childs. Finest of the reds.
- Major Bonaffon. The best yellow.
- Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

In Splendid Assortment of Varieties,

Forms, Substance and Color.

OUR PREMIUMS ARE OFFERED

with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

LORD PENZANCE'S

NEW HYBRID SWEET BRIARS.

Quite a New Feature in Roses.

The foliage of every one of them is as sweetly scented as the old-fashioned Sweet Briar that grew in our grandmothers' gardens.

The Sweet Briar or Eglantine, is acknowledged by all to possess one of the sweetest perfumes that nature has provided and its delicious scent is the object for which it is usually cultivated. These new varieties, now for the first time placed in commerce, are vast improvements upon the old sorts. They are hybrids (obtained by the Right Hon. Lord Penzance) between the common Sweet Briar and various old-fashioned garden Roses and are possessed of many advantages.

The flowers are borne in wondrous profusion, and vary in color from white, through several shades of pink, to very dark red or crimson.

The plants are perfectly hardy even in very bleak and exposed positions.

For vigor of growth there is scarcely anything in the rose world to equal them. Plants three years old have now many shoots on them that rise to the height of twelve feet. These, with a slightly outward bend, and clothed with flowers of exquisite tints, produce a gorgeous effect.

The buds are the most graceful, sweet and delicate objects imaginable.

The flowers are single or semi-double, and this adds lightness and elegance to their beauty.

After the flowers are over, they are followed by bright scarlet seed pods or "hips" in great numbers, which, nestling among the deep green, scented foliage, make the plant delightfully ornamental till quite late in the autumn.

No garden will be esteemed complete which does not possess a group of Hybrid Sweet Briars. They are so sweetly scented, so beautiful in color, so hardy and free from disease and the attacks of insects, as to make them eagerly sought after by all the knowing ones.

This
is Our
Offer.

For one NEW subscription to American Gardening at \$1.00, we will forward you, all charges prepaid, your choice of two of the three following varieties:

Meg Merrilies, Red.
Anne of Geierstein, Pink.
Brenda, Blush White.

The above to be well-established plants out of 2½ inch pots.

The collection of Three above Plants for one NEW SUBSCRIPTION to American Gardening at \$1.25.

These plants will be forwarded to our subscribers direct from the growers, eminently responsible people, who guarantee them to be true to name and color.

Plants ready for shipment May 1. Orders booked now, however, owing to the expected enormous demand.

OUR GREATEST 1897 PREMIUM

The Wonderful New Climbing Rose

Yellow Rambler (Aglaia)

A worthy COMPANION to the well-known Crimson Rambler.
The Hardest Yellow Climbing Rose Ever Introduced.

Yellow Rambler bears its flowers in immense clusters, often as many as one hundred and fifty blossoms in a bunch, the trusses being of handsome pyramidal shape.



A CLUSTER OF YELLOW RAMBLER ROSES.

Yellow Rambler holds its blooms from three to four weeks without fading; a large bush in full bloom is one of the most beautiful sights imaginable.

Yellow Rambler is a clear decided yellow, in marked contrast to many roses so described, but which have really only a yellow tinge.

Yellow Rambler is very vigorous; well-established plants often making shoots eight to ten feet in height in a single season.

Yellow Rambler represents the triumph of the century in the hybridizing art, and is the most valuable introduction in recent years.

Yellow Rambler is very sweetly scented.

Yellow Rambler combines the climbing habit and decided yellow color with hardness.

Yellow Rambler will withstand, without protection, a zero temperature; with protection it will thrive where any other rose will.

Yellow Rambler is thus adapted to successful culture in nearly all of the northern parts of the United States.

Yellow Rambler is absolutely NEW on the market and will prove the sensation of 1897!

Yellow Rambler premiums will be shipped direct to our subscribers from the introducers, one of the largest and most reliable firms of nurserymen in the country.

All stock is guaranteed pure and will be shipped in good condition.

DON'T YOU WANT A YELLOW RAMBLER ROSE?

You Can Earn One in Ten Minutes!

READ OUR OFFER.

We will forward, all charges prepaid, one well-established plant of **Yellow Rambler** Rose, from 2½ inch pot, for ONE NEW SUBSCRIPTION to American Gardening at \$1.00, or six plants for five NEW subscriptions at \$1.00 each.

The same plant will not be sold in 1897 for less than 50 cents. Plants will be shipped on and after March 15th. It is expected that the demand for this New Rose will be phenomenal, and we advise those of our readers who want a plant to be early with their order.

Offer No. 56.

GLADIOLUS BULBS.

The following offers on Gladiolus Bulbs are well worth striving for. Your choice of one of the two collections offered for only one new subscription at \$1.00. Sent, postpaid, in neat pasteboard boxes. Order by Offer No and Letter.



A.—6 Bulbs each of May, Bertha, Mabel, and Marie Lemoine.

May.—Large spike, well expanded flowers. White, edge of petals touched pink. A grand variety.

Bertha.—This is the finest variety of its color, which is a brilliant light scarlet. Makes a tall spike, with large side branches.

Mabel.—Dwarf, upright habit. Full spike open at one time. In color it is a blending of carmine, cherry and pink. One of the first to bloom.

Marie Lemoine.—Upper division of flowers of pale creamy color, flushed salmon lilac, the lower petals spotted purplish violet, bordered canary yellow. Peacock blotched.

B.—100 Cushman's High Grade Seedling Gladioli.

All blooming size. Not two alike. Rivaling the filocelle silks in coloring and sheen.

Offer No. 69.

VEGETABLE SEEDS.

The following collection of Seeds is offered by a reliable grower, with a view to introducing his stock. They are of precisely the same grade as is sold to market gardeners and all desiring the best. The entire collection of twenty named varieties will be sent, postpaid, for one new subscription at \$1.00.



One oz. Beet, Eclipse; one pkt. Cabbage, Early Wakefield; one pkt. Cabbage, Early Flat Dutch; one pkt. Cabbage, Savoy Early; one pkt. Cabbage, Savoy Late; one pkt. Cauliflower, Erfurt; one-half oz. Carrot, Half Long Nantes; one pkt. Celery, Paris Yellow; one oz. Sweet Corn, Early Mammoth; one pkt. Cucumber, White Spine; one pkt. Onions, Early Flat, Red or White; one pkt. Parsley, Double Curled; one pkt. Lettuce, Summer Blonde; one pkt. Radish, Early White Tipped; one pkt. Tomato, Acme; one pkt. Spinach, Viroflay; one pkt. Squash, Early Bush; one pkt. Turnip, Red Top; one pkt. Rutabaga, Champion; one pkt. New Victoria Spinach.

Offer No. 57.

CHRYSANTHEMUMS

For one new subscription and \$1.00, we will forward, postpaid,

A Collection of 36 Plants.

All different; prize-winning varieties, comprised in great part of last year's novelties, in all shades of color and types of bloom.

This offer comes from a noted grower, and we hope to receive a great many orders for this collection.

Offer No. 79.

**Loudon Raspberry
Ohmer Blackberry**

Three of each, or six of one variety. Sent, postpaid, for one NEW subscription at \$1.00.

GROWER SAYS:

"Nice plants, well established in pots, like Verbena plants, 5 to 6 inches high, with a mass of roots. They grow off as well as strawberry plants, and really are better for making a plantation than plants a year older. They will thrive, and be larger and better next fall than year-old-plants set along side of them. I have tried this several seasons and know what I am talking about. Although more delicate at first than year-old-plants, with reasonable care they do splendidly."

Loudon Raspberry is one of the very best of all red varieties, of large size, very productive, good color, excellent quality.

Ohmer Blackberry has five excellent points. "Hardy, late, large, productive, and of the finest flavor."

Offer No. 50.

**THE COMPLETE
VEGETABLE GARDEN.**

Plants all ready to set out.



All good plants. Grown in Maryland. Delivery April 15, postpaid. This is an offer we are not able to make our friends every week in the year, and we will be mistaken if this Bargain is not taken advantage of by thousands.

12 Peppers, two kinds.

12 Egg Plants.

12 Cauliflower Snowball.

12 Tomatoes, two kinds, select.

50 Cabbage or Sweet Potato Plants.

50 Lettuce, two kinds.

148 choice vegetable plants and AMERICAN GARDENING one year, to a NEW name, for only \$1.00.

Offer No. 60.

CACTUS.

The following collection will be sent for one new subscription at \$1.00, with 35 cents additional to prepay express charges. The plants offered are worth \$2.00 at retail, and come from a noted collector.



One plant each of

Astrophytum myrtilloides.

Anhalonium Lewinii.

Mammillaria discipiens.

"Hederii.

Echinocactus setispinus.

Berlandieri.

Opuntia Engelmannii.

Senilis.

Offer No. 71.

One plant each of....

**Japanese Mammoth Chestnut,
Japan Walnut and Pecan.**

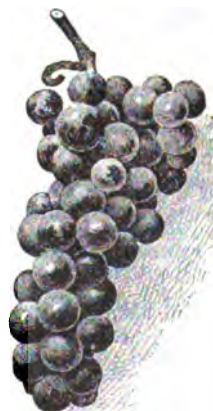
By mail, postpaid, for one new subscription.

The Japan Mammoth Chestnut is quite distinct from the American or European varieties, being hardier, nuts of superior size, flavor and sweetness. Leaf long and narrow, like a peach leaf, and very ornamental; enormously productive and comes into bearing at two to three years of age.

Japan Walnut is as hardy as an oak; leaves of immense size and a charming shade of green. Nuts, which are produced in extreme abundance, grow in clusters of fifteen or twenty; have a shell thicker than the Persian Walnut, but not so thick as the American. The meat is sweet; of the very best quality; flavor like the Butternut, less oily and much superior. Trees grow with great vigor, assuming a very handsome form and need no pruning; mature early; bear young, and are more regular and productive than the Persian Walnut. Having an abundance of fibrous roots it transplants as safely as an apple tree.

Pecan, Paper-Shell—a beautiful symmetrical and rapid growing tree, of luxuriant foliage, which it retains until very late in the Fall; producing valuable timber and heavy crops of sweet, oblong, smooth nuts of very good quality. Makes a handsome lawn tree, hardy wherever the hickory grows.

Offer No. 59.

GRAPES

Every country and suburban home needs a vineyard, and those who avail themselves of the offer which follows will be well satisfied and pleased for years to come with the result. A grower offers:

Agawam,

Lindley,

Brighton,

Worden,

Niagara,

Moore's Early.

Your choice of Ten 1-year vines, all of one variety, or three each of three of the above sorts, for only one new subscription. Forwarded postpaid.

OUR PREMIUMS ARE OFFERED

them to obtain the new subscriber and retain the premium. If the subscriber they procure wants a premium (and he doubtless will,) he, in turn, should interest himself in the same way. New names sent in direct are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

Offer No. 54.

THAT GRAND NEW SINGLE VIOLET PRINCESS of WALES



Away and beyond the best of all the single varieties lately introduced. The Queen of Single Violets. Fragrance equal to Marie Louise. Blooms very large, strong grower and productive. Grower, who is one of our most renowned violet experts, will send, postpaid, for one new subscription,

Eight (8) good rooted plants, with some flowers accompanying same; carefully packed for safe arrival. Plants ready Feb. 15. Grown in New York.

Offer No. 43

DAHLIAS

The recent revival of interest in this most worthy class of plants, coupled with the introduction of many new and interesting varieties, renders it incumbent on every one to see to it that their garden is supplied with the best obtainable.

Any one of the three collections here offered will be found up-to-date and choicest kinds, and as they come from celebrated growers and prize winners, we can assure our friends we are offering them a remarkably good thing and trust they will not be slow to take advantage of one or more of these offers.



A—Four Superb Cactus Dahlias.

One strong root each, Wm. Agnew, Oriental, Nymphaea and Zulu, by mail, postpaid, for one new subscription.

B—Four Show and Fancy Dahlias. (Dwarf)

One strong root each, New Double Tom Thumb, Arabella, Blumenfalter and Lucy Faneott, by mail, postpaid, for one new subscription.

C—Four Pompon or Bouquet Dahlias.

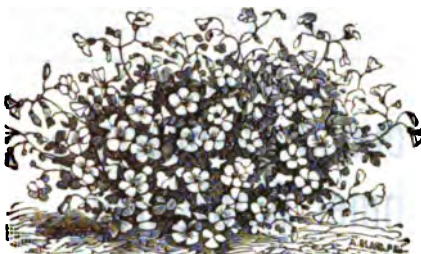
One strong root each, Elegante, Sprig, Ariel and Vivid, by mail, postpaid, for one new subscription.

Any one of these collections is worth over \$1.00 at retail, but will be sent postpaid, carefully packed, and guaranteed to arrive in first-class condition for one NEW subscription to AMERICAN GARDENING at \$1.00. Order by Offer No. and Letter.

Offer No. 49.

Sent, postpaid, for ONE NEW subscription at \$1.

SUMMER BEDDING 150 OXALIS BULBS



These bulbs make beautiful borders for summer flower beds, as well as attractive pot plants. The collection includes 150 Bulbs in equal proportions of the four following varieties, named, and in separate packets:

OXALIS DEPPEI ALBA.—White.
OXALIS DEPPEI ROSEA.—Old rose or salmon.
OXALIS ERYTHILLA PURPUREA.—Purple.
OXALIS LASLANDRA.—Crimson. Tall, fine palmate leaves.

Offer No. 48.



Every Gardener Needs a

....GOOD GOOSEBERRY....

And, we will send two one-year plants, of the best new variety known, for one new subscription; safe delivery guaranteed.

THE PEARL GOOSEBERRY.

Read what the Introducer has to say: "The Pearl is a gooseberry grown from the seed of Houghton, crossed with Ashton seedling, by Prof. Wm. Saunders, and worthy of special notice because (1) of its good quality; (2) its size; (3) its productiveness; (4) its freedom from mildew. As a result of my observation I find the quality good, very much like the Downing in this respect, as well as in color marking; but in size it averages nearly double that berry, and that in spite of the prodigious crop under which the bushes are laden. There was a row of some sixty fine bushes one year planted, and most of them were literally bent to the ground with heaps of fruit. The average was eight berries per inch of wood, and on one bush we estimated that there must have been 2,500 berries. Should this productiveness prove constant the berry will be of great value for the market. With regard to the mildew, all I can say is what I have seen, namely: After seven years of trial I have never found any trace of mildew."

Offer No. 52.

Collection of Flower Seeds



Sent, postpaid, for one new subscription to AMERICAN GARDENING. The following list embraces 16 varieties of choice flower seeds; fresh and true to name, eight of which are of 5 cent packets, six of 10 cent packets, and two of 15 cent packets valued in all at \$1.30. This collection is offered by a reliable grower, in whom we have full confidence.

Alyssum, Sweet	Nasturtium, Dwarf
Asters, mixed	mixed
Cosmos, Large	Poppy, Carnation
Flowered	flowered, mixed
Calendula, Price of	Sweet Peas, Eck-
Orange	ford's mixed
Calliopis, mixed	Heliopsis
Datura, Double,	Larkspur, Dwarf,
mixed	double
Carnation Marguer-	Cobaea Scandens
ite, finest double	Zinnia, Double,
mixed	mixed
Mignonette Machet	Lobelia compacta

Offer No. 42.

For one NEW subscription at \$1.00, receiver to pay express charges, or by mail, postpaid, for \$1.25.

....ONE YEAR OLD.... 25 NIAGARA GRAPE VINES

Comment on this offer is unnecessary, beyond stating the fact never before was such an opportunity offered to start a vineyard at so small an outlay.

Offer No. 40.

THE COMPLETE

Flower Garden



This is a collection which every-body should be sure to obtain. It only requires one NEW subscription to become the possessor of all the plants here mentioned. Ready for delivery May 1st. Postpaid. Grown in Maryland. Save time growing from seed and get this lot all ready to set out.

10 Antirrhinums, choice mixed.	10 Phlox Drummondii, mixed.
10 Asters, mixed.	10 Marigold Eldora.
10 China Pinks, mixed.	10 Scabiosa, mixed.
10 Cosmos, choice mixed.	10 Zinnia, mixed.
10 Petunias, mixed.	10 Scarlet Sage.

100 Choice Flowering Plants and AMERICAN GARDENING, one year, to a NEW name, for only \$1.00.

Our Premium Offers open the way to all who want a fine garden, but lack the means where-with to buy.

Offer No. 35.

SENT postpaid, for ONE NEW subscription at \$1.00

....BEAUTIFUL....

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Naman Cochet
Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Mermet

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

Offer No. 47.

Sent, Postpaid, for one NEW Subscription at \$1.00.

NEW GIANT FANCY COSMOS

(MRS. SHEPHERD'S STRAIN).

Mrs. Shepherd's New Fancy Cosmos was offered for the first time last season, but this is the first time they have been offered, put up in separate colors, as here described:

Of this strain, five packets of which are offered in this collection, the grower, Mrs. T. B. Shepherd, of Ventura, California, says:

"No one else grows it, and it is so distinct as to be readily recognized anywhere by one who has once seen the different varieties in bloom. I have been working with it so long that it has an individuality peculiarly its own."

One packet of the above, in splendid assortment, containing over 35 varieties of beautiful flowers, in all shades of red, pink, mauve, tinted and white... 15c.

Three packets of above, in separate colors, Red, Pink and White, one packet of each, at 15c..... 45c.

"Tints of Dawn," one packet of above, lovely tinted flowers, white ground, delicately tinted or flecked with pink or mauve in lighter or darker shades..... 15c.

Curlled and Crested ZINNIA, splendid mixed, one pkt..... 10c.

These are the gayest, brightest and most esthetic bedding flowers imaginable, all colors and shades, with petals daintily curled and crested, having none of the coarseness of other Zinnias.

IPOMCEA, Heavenly Blue, one pkt..... 10c.

A perfect dream of beauty.

SCABIOSA, New Large Flowering, red and pink varieties, mixed, one pkt..... 10c.

These are very beautiful.

Total Value.....\$1.05

The Choicest Collection of Seeds ever sent out for the money; a poem in flowers and a revelation in nature.

Offer No. 64.

POTATOES

One half pound each of the four following varieties sent, postpaid, for one new subscription:

Early Michigan.
Early Fortune.

Carman's No. 3.
Livingston's Banner.

Two pounds or eight potatoes in all.

Option: One pound Early Michigan, or two pounds of any one of the other three varieties. Grown in Michigan.

Offer No. 63.

FRENCH FILBERT (Improved)

(Corylus Fertilia).

Three Plants, two years old, postpaid, for one new subscription. Will grow in any kind of soil; stands cold and drought well; free from insect pests; yields large nuts of superior taste; each bush will bear about 1 lb. at three years, increasing to an average of about 10 lbs. a year. Raised in California.

Offer No. 55.

One plant each of....

Starr, Parlin Beauty and Bismarck Apples.

By mail, postpaid, for one new subscription.

Starr. Fruit very large, 11 to 12 inches around, showy, pale green, frequently with handsome blush on sunny side; very early; an excellent shipper; superior cooking and very good eating apple.

Parlin. Very hardy; a good grower and productive. Fruit splashed and striped with red; September.

Bismarck. Dwarf and extremely prolific. Most suitable apple for hot climate, yet the hardiest known. A wonderful bearer. Fruit is large, brilliant in color, handsome. Flesh tender, pleasantly sub-acid; of distinct and most delicious flavor, unequalled as a dessert apple and very superior for cooking. Will keep until March.

Offer No. 62.

One plant each of....

Koonce Pear, Rocky Mt Cherry, Trifoliate Orange, and Starr Apple.

By mail, postpaid, for one new subscription.

Koonce Pear. This is an early pear, of striking beauty, fair quality and great value. Claimed to be a better grower than Kieffer. Fruit medium to large, skin yellow and bright red on one side. It does not rot at the core, and it the best early pear. Its strong, vigorous growth, freedom from blight, early bearing, immense productiveness, early ripening, beautiful appearance, large size and quality combine to render it the most valuable early market pear before the public and will be largely planted.

Rocky Mountain Dwarf Cherry. Fruit jet black when ripe, in size larger than the English Morello; season late. As prolific as a currant bush. Height four feet. Free from disease. In addition to its luscious fruit it makes a handsome flowering bush, with its mass of pure white flowers.

The Trifoliate Orange. This is a hardy dwarf tree, of symmetrical growth, with beautiful trifoliate glossy green leaves and an abundance of large, white, sweet-scented blossoms, larger and finer than any other variety, and borne almost continuously. A conspicuous and showy plant, for lawn or pleasure ground.

Offer No. 67.

Two plants each of....

Logan Berry, Rubus sorbifolius and Japanese Mayberry.

By mail, postpaid, for one new subscription.

The Logan Berry (Raspberry-Blackberry) is a decided novelty, and promises to be a valuable addition to our fruits. The plants are described as unlike either the Raspberry or Blackberry, and are of low growing habit with fine soft spines, like those found on Raspberry plants; leaves of deep green color, coarse and thick, more like those of the Raspberry than Blackberry. The fruit is as large as the largest size Blackberry, is of the same shape, with globules similar to that fruit; color, when fully ripe, a dark rich red. It partakes of both the flavors of the Raspberry and Blackberry, being a combination of the two mixed, a very pleasant, mild, vinous flavor, delightful to the taste, not found in any other fruit, but peculiar to this alone. It is excellent for the table, eaten fresh or cooked, and for jelly or jams without an equal. The fruit is firm and carries well, seed small and few. The vines are enormous bearers. Ripening very early—beginning with Strawberries and the bulk or nearly all, ripe and gone before Raspberries become plentiful, rendering it a very valuable fruit for market. Genuine stock very limited. Beware of seedlings offered by some.

Rubus Sorbifolius (Strawberry-Raspberry). While the fruit is regarded with favor by many, we would commend the plant most as an ornament for a corner of the garden or lawn, where a strong rampant growth is required. Its snow-white blossoms are very fragrant, and the plant is covered with beautiful fiery crimson translucent berries from early in July until frost.

Child's (Hurbank's) Mayberry. An improved variety of the Mayberry, the result of a cross with the Cuthbert Raspberry, and described by the introducer as the most remarkable of all fruit novelties ever introduced. It grows in sturdy form six to eight feet high, and ripens its fruits before Strawberries and a month before the earliest Raspberries. The bushes are distinct from other berries, with spreading tree-like tops, large, bell-shaped, pendulous blossoms, which hang along the entire length of the branches in pairs or triplets. These large handsome blossoms are followed by great glossy berries, which are of a golden yellow color, and in quality sweet and luscious beyond description. Its earliness makes it the most important of all fruits.

OUR PREMIUMS ARE OFFERED

with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

Offer No. 1.

STRAWBERRIES

Your choice of 50 plants in any two varieties below mentioned, 25 of each. Sent postpaid for one new subscription. Plants guaranteed to arrive in good condition. Plants grown in New York. Order by Offer No. and Letter.

A Beder Wood (B)	J Jessie (B)
B Bubach (P)	K Haverland (P)
C Crescent (P)	L Michel's Early (B)
D Chas. Downing (B)	M Lovett (H)
E Cumberland (B)	O Sharpless (B)
F Eureka (P)	P Wardfield (P)
G Gandy (B)	R Wilcox (B)

H Greenville (P)

Grower states: "I only grow the varieties I find the best for all purposes; many hundreds offer no improvement on the standard sorts now in use. Two of the finest varieties for family use are Greenville and Beder Wood, or Bubach and Beder Wood."

Offer No. 3.

STRAWBERRIES

Plants raised in Ohio. This was one of our most taking offers in 1896, and we hope to see its success duplicated this year.

No. A—50 Brandywine (B)
No. B—50 Staples (B)
No. C—50 Cyclone (B)
No. D—50 Marshall (B)
No. E—50 Greenville (P)

No. F—12 plants each of Brandywine, Staples, Cyclone, Marshall and Greenville. In all 60 plants.

For one new subscription, your selection of any one of the above offers will be sent postpaid. Order by Offer No. and Letter.

If the plants are ordered by express, receiver to pay charges, the grower will **DOUBLE** the number of plants above offered.

A book on transplanting and caring for all kinds of plants, free with each order.

Offer No. 4.

STRAWBERRIES

Grown in Michigan. Any one of these three collections will be sent postpaid for one new subscription:

Collection A.

12 Clyde (B) 6 Glen Mary (B)
12 Wm Belt (B) 12 Enormous (P)

Collection B.

12 Brandywine (B) 12 Mary (P)
12 Satisfaction 12 Marshall (B)

Collection C.

One hundred (100) plants of the following varieties, not less than 25 plants of one kind: Brandywine, Beder Wood, Bisel, Barton's Eclipse, Cyclone, Crescent, Columbian, Eleanor, Gandy, Greenville, Gov. Hoard, Haverland, Iowa Beauty, Jessie, Lovett, Muskingum, Michel's Early, Parker Earle, Princeton Chief, Princess, Staples, Sherman, Saunders, Smelter's Early, Tennessee Prolific, Van Deman, Warfield, Wilton and Woolverton.

Plants will be large, well rooted, true to name, and guaranteed to reach their destination in good growing condition. Orders filled soon as spring opens up.

Offer No. 6.

STRAWBERRIES

15 Plants Marshall (B) and
15 " Brandywine (B)

By mail, postpaid, for One New subscription. This collection can be implicitly relied upon as being true to name and of the very best grade of stock. Raised in New York.

Offer No. 7.

STRAWBERRIES

12 Ima (P) New.....50c.
(A new seedling of great promise.)
12 Cumberland (B).....25c.
12 Dayton (B).....25c.
12 Gandy (B).....25c.

This entire collection of 48 plants, valued at \$1.25, will be sent, postpaid, for one NEW subscription to AMERICAN GARDENING. Plants raised in Ohio.

Introducer's Description of Ima.—"A seedling of great merit, and a berry which, having carefully watched for the past four years, we are now convinced deserves to be enrolled among the worthy members of the strawberry family. In ripening it is about midway between the early and late varieties. It is a long pointed berry. It will ripen quickly and perfectly all over. In color, a beautiful bright red, and in size equals the Crescent or Warfield. It is a strong grower and as large a producer as any variety we have ever fruited. To sum up its meritorious points, it is perfect in color, shape, and flavor; a good shipping berry of large size and very fruitful. A profitable berry for the fruit grower to raise."



Offer No. 16.

STRAWBERRIES

75 Plants Greenville (P)

Raised in Ohio. Mailed, postpaid, to any address for One New Subscription.

Berries of large size, good quality, medium texture, very productive, season medium to late, color very even and fine, flowers pistillate, plants very vigorous and free from rust. A first-class market berry and good enough for home use.

Offer No. 18.

COLLECTION OF 125 STRAWBERRIES

Good plants and named. Delivery postpaid, on and after April 1. Plants raised in Maryland.

Meek's Early (B.)
Baltimore.
Sharpless (B.)
Levianth.
Kentucky Late.

Grower says: Kentucky Late is a berry that is largely grown here for market and shipping purposes, coming in after the glut of other varieties is over; it is a very late berry, extending the season sometimes two weeks.

Levianth, very large, vigorous grower, suitable for family use where an extra-sized berry is looked for; fruit rather tender.

Offer No. 44.

LOUDON RED RASPBERRY.

Five (5) Plants for one new subscription at \$1.00.

This Red Raspberry is pronounced by Mr. Thayer and other leading horticulturists as the best of all reds for the East and West. It was originated by F. W. Loudon, of Wisconsin, originator of Jessie Strawberry.

Offer No. 8.

STRAWBERRIES

Your choice of fifty (50) plants, in two varieties, 25 of each, or 50 of any one variety. Free by mail for one NEW subscription.

A.—25 Brandywine	H.—25 Tennessee
B.—25 Murray's Extra Early (P)	I.—25 Prolific (B)
C.—25 Michel's Early	J.—25 Cyclone (B)
D.—25 Lovett (H)	K.—25 Bisel (P)
E.—25 Isabella (B)	L.—25 Greenville
F.—25 Rio (B)	M.—25 Sunnyside (P)
G.—25 Lady Thompson (B)	N.—25 Weston (P)
	O.—25 Staples (B)

Order by Offer No. and Letter.

The above collection is a good one, and are all standard sorts, embracing the earliest and latest varieties. All nice plants and true to name. Raised in Virginia.

Rio is a fancy berry for early, and one of the best shippers; planted beside Bisel they make a splendid variety to ship together.

Offer No. 15.

STRAWBERRIES

25 Brandywine (B)
25 Staples (B)

This collection will be sent postpaid to any address in the United States for one new subscription. Guaranteed to reach customers in good condition. Plants are extra rooted, and positively true to name. Will be mailed at any time after April 10. Plants raised in Ohio.

Offer No. 13.

STRAWBERRIES

Below mentioned collection of 36 Fine Plants will be sent, postpaid, for one new subscription. Grown in Maine.

New Seedling No. 4, 12 plants.
12 plants of the celebrated Brandywine,

And your choice of 12 plants of any one of the following most popular standards: Bubach, Haverland, Warfield, Beverly, Parker Earle, Lovett, Princeton Chief.

Of Seedling No. 4, grower says: This is of exceedingly fine quality—the best of anything I have ever tasted, and so say they all who have sampled it. Good form, medium size, very productive, and a most remarkably strong and healthy grower. An A family berry, and a grand one for a nearby fancy market that appreciates quality. It has a pistillate blossom. Those who avail themselves of the present opportunity to procure this grand berry will be among the wise as, in the course of two years' time, it is likely to be introduced under name at \$2 per dozen.



Grower offers 36 plants in all, in three varieties packed in the best manner, for delivery in April or May, and says: These plants of standard varieties must not be confounded with the common commercial article, but comprise carefully selected stock that has been built up by an attentive selection of the best individual plants each year, for five consecutive years, by one of the most noted growers of fancy strawberries in the Eastern States.

Offer No. 21.

STRAWBERRIES

Your choice of twenty-four (24) plants in two varieties, twelve (12) of each, or 25 of any one. Free by mail for one NEW subscription. Raised in Virginia.

12 Mary (P)	12 Aroma (B)
12 Edith (P)	12 Pride of Cumberland (B)
12 Splendid (B)	12 H. W. Beecher (B)
12 Enormous (P)	
12 Wm. Belt (B)	

The above comprise some of the largest berries in cultivation, particularly Edith. These are all nice plants and true to name.

Offer No. 26.

STRAWBERRIES

Raised in Pennsylvania. Subscriber's choice of any one of these varieties sent postpaid for one new subscription. Order by Offer No. and Letter.

A-15 Glen Mary (P)	I-20 Ideal (B)
B-15 Clyde (B)	J-20 Oriole (P)
C-25 Michigan (B)	K-20 Howells No. 2
D-25 Wm. Belt (B)	L-10 Plow City (B)
E-25 Champion of England (B)	M-60 Brandywine
F-25 Equinox	N-60 Enormous (P)
G-25 Sparta (B)	O-60 Bissel (P)
H-25 Murray	P-60 Staples (B)
	Q-35 Gertrude

All plants to be freshly dug and well packed in moss; all inferior plants discarded and only the best sent.

Offer No. 9.

STRAWBERRIES

For One New Subscription at \$1.00. Plants raised in Indiana. Order by Offer No. and Letter.

- A.—Postpaid, six plants Ridgeway.
 B.—Postpaid, three plants Ridgeway, three plants Tennyson, three plants No. 1000, six plants Parker Earle.
 C.—Postpaid, three plants Ridgeway and one dozen plants, one variety. Your selection from this list: Brandywine, Clyde, Annie Laurie, Jersey Queen, Aroma, Moore's Prolific, Mary, Premium, Berlin, Tubbs, Parker Earle, Holland, Gen. Putnam, Dew, Columbian, Tennessee Prolific, Lady Thompson.
 D.—Postpaid, three dozen plants, not less than one dozen of a kind, any variety named in C, the Ridgeway excepted.
 E.—By express, at purchaser's expense, three plants Ridgeway, and 100 plants, not more than two varieties. Your selection from this list: Brandywine, Clyde, Dew, Holland, Gen. Putnam, Jersey Queen, Columbian, Lady Thompson, Tennessee Prolific, Annie Laurie, Staples, Parker Earle, Splendid or Isabella.

This is the first season the Ridgeway will be placed on the market, consequently our readers are given an opportunity to be among the first in the cultivation of the promising berry. Description is as follows:

Ridgeway.—Plant large and stocky, possessing the ability to make a large number of strong, healthy plants. Leaf large, broad, heavy and dark green in color. Blossom perfect, a good pollenizer for pistillate varieties, as it remains in bloom for a long time, an ideal plant.

Berry large to very large, the typical form nearly round, largest specimens broadly ovate, but always smooth. Color, as it grows at Rocky Glen, bright glossy crimson, with golden seeds. Firm for so large a berry, and will stand shipping to distant market, except in a very wet time. Quality as good as the best, an almost ideal berry, one that will command fancy prices on any market or suit the most exacting grower, who wishes the very best for his own use and pleasure.

Orders will be filled as early in the spring as conditions are favorable for shipping.



Offer No. 22.

STRAWBERRIES

50 Plants Fountain Strawberry.

Raised in Michigan. Sent, postpaid, for one new subscription.



One of the later introductions that is receiving much praise. The Fountain is described as large and handsome, of a deep, glossy, red color, flesh red and solid to the center. Firm and productive. Plant large, vigorous, healthy and hardy, with a perfect blossom. The grower who offers this variety states that it is one of the best all around good berries in his collection of over 100 varieties, and one that is likely to be in great demand in the near future as a choice shipping variety.

Offer No. 23.

STRAWBERRIES

Grown in Michigan. The following collections are offered, postpaid, for one new subscription:

Collection A.

12 Beder Wood (P)	12 Greenville (P)
12 Lovette (B)	12 Haverland (P)
12 Woolverton (B)	

This collection will be sent as advertised, or will give subscriber the choice of 75 of any one of the above varieties.

Collection B.

25 plants Gold Standard (B).

Grower says: This is a strong growing variety, large round leaves, free from rust, one plant weighs as much as two common plants. The fruits average from one to one-and-a-half inches, light red in color, and the sweetest berry we ever tasted. Season late. Strongly staminate.

Offer No. 27.

STRAWBERRIES

Your choice of any one of the below mentioned collections, postpaid, for one new subscription. Raised in Ohio.

A-25 Greenville and 15 Lovett.
B-40 Lovett or 40 Dayton Early.
C-30 Bubaeh No. 5 and 20 Jessie.
D-40 Warfield and 20 Cumberland.
E-20 Haverland, 10 Dayton, 10 Parker Earle.

In the above collections when one is a pistillate sort the other is a perfect bloomer, so that they can be planted together perfectly.

Offer No. 28.

STRAWBERRIES

This collection will be sent for one new subscription. Plants raised in Wisconsin.

25 Plants Sparta.
 6 " Thayer's No. 5.

The Sparta is Wisconsin's premium berry (staminate), very large, beautiful in color, and a great favorite with M. A. Thayer, who introduced it. Thayer's No. 5 is a new seedling, originated on the Thayer Fruit Farms, and this year for the first time sent to any one.

Offer No. 29.

STRAWBERRIES

Sent postpaid for one new subscription. Plants raised in Michigan. Strictly first-class plants, mailed same day they are dug, put up in sphagnum moss, wrapped in oiled paper to retain moisture. Your choice of two kinds, 18 of each; or 25 plants, one kind, good count. No orders filled after April 15th. I offer the following varieties:

Brandywine (B)	Splendid (P)
Greenville (P)	Bissel (P)
Bubaeh No. 5 (B)	Lovett (B)
Parker Earle (P)	Jessie (B)
Haverland (B)	

Offer No. 24.

STRAWBERRIES

A-50 Plants Brandywine (B)
B-12 " Bismarck (B)
C-24 " Wm. Belt (B)

Order by Offer No. and Letter. Subscriber's choice of any one of these three varieties for one new subscription. All first-class and new varieties. Grown in Michigan.

Offer No. 25.

STRAWBERRIES

We will send Twelve (12) plants, two each of the following varieties: 2 Carrie; 2 Earliest, the earliest berry yet introduced; 2 Equinox, the latest; 2 Clyde, one of the earliest, will do better where land is not too rich; 2 Belle; 2 Evans. One dozen in all of these choice novelties. Select plants and guaranteed true to name. Raised in Virginia. Sent, postpaid, for one NEW subscription.

Offer No. 30.

STRAWBERRIES

Your choice of any one of the following offers, postpaid, for one new subscription. Order by Offer No. and Letter. Plants raised in Maryland.

A-4 Hall's Favorite (new).	F-30 Tenn. Prolific.
B-25 Brandywine.	G-35 Warfield, No. 3.
C-30 Haverland.	H-30 Tubbs.
D-35 Hoffman's.	J-15 Ideal.
E-35 Lady Thompson.	K-25 Bubaeh, No. 5.

Two plants of Hall's Favorite are included in every offer from B. to K.

Grower describes Hall's Favorite as follows: The coming new strawberry. It defies competition. Better than Bubaeh No. 5.

Offer No. 31.

STRAWBERRIES

Plants raised in Iowa. The below collection will be sent, postpaid, for one new subscription.

One hundred plants of either Haverland, Enhance, Greenville, Beder Wood or Tennessee Prolific, or twenty of each of the above five varieties.

Offer No. 2.

Strawberries and Raspberries.

Your choice of either one of these collections for one new subscription at \$1.00. Sent postpaid. Plants raised in Delaware. Order by Offer No. and Letter.

A-100 Strawberry Plants, two choice varieties.

B-12 Miller Raspberry Plants. The best early Red Raspberry that has been thoroughly tested.

Offer No. 8.

STRAWBERRIES

Your choice of any one of the following collections, prepaid, for one new subscription. Order by Offer No. and Letter.

- A—Four plants Kyle (B).
 B.—Your choice of 12 plants, three each of any four of the following kinds: Bissel, Splendid, Brandywine, Van Deman, Plow City (large, late), Gertrude (early), Kyle, Wm. Belt.
 C.—25 plants Splendid. "Correctly named," says J. L. Hartwell, President No. 111. Hort. Society.
 D.—12 plants Splendid, 12 plants Van Deman (fine early).
 This gives a succession.

Kyle is productive, fair size, rich acid flavor, firm and of a shiny, rich carmine color; quite attractive in appearance. It is a vigorous, healthy grower; makes runners freely, and so far has not developed a single defect. It is smooth and uniform in shape; stands heat and cold well. Its season is medium early. It is self-fertilizing, but not strongly so. A decided acquisition.

Danish Dailhead Cabbage.

IMPORTED RELIABLE SEED.

Prices on application. Catalogue Free.

FRANK H. BATTLES, Seed Grower Rochester, N. Y.
Mention American Gardening when you write..**-Peach Trees-**

The extra early new Peaches, Sneed, Triumph and Greensboro, one year heavy trees, \$1.50 per doz.; June buds, 12 inches and up, \$5.00 per 100.

JAPAN PLUMS and all other fruit and ornamental trees.**D. BAIRD & SON, Manalapan, N. J.**

Mention American Gardening when you write.

We have the largest and finest Collection of **PALMS, ORCHIDS, FERNS and FOLIAGE PLANTS** for Conservatories. Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting. Plants and furnishing stock (free).**SIEBRECHT & SON'S,**

Rose Hill Nurseries, New Rochelle, N. Y.

Mention American Gardening when you write.

New, Rare and Beautiful Plants

A Large Collection of Rare Hothouse and Greenhouse Plants, Hybrid Sweetbriars, Old Garden Roses, etc. New Philadelphia, New Lilacs, etc.

PEONIES.—A large collection of the finest in cultivation. Hardy Perennials, Phloxes, Japanese Iris, Roses, Clematis, etc. New and Standard Fruits, Rare and Beautiful Trees and Shrubs, Evergreens, etc. Catalogues on application.**JOHN SAUL, Washington, D. C.**

Mention American Gardening when you write.

NEW PINK VIOLET**MRS. J. J. ASTOR.**

(Named by permission.)

Similar in form and habit to Marie Louise, but more vigorous, stems longer, flowers larger.

Price, \$2.00 per doz.; \$10.00 per 100.

Orders booked now and filled in rotation after May 1.

G. SALTFOORD, Violet Specialist, RHINEBECK, N. Y.

Mention American Gardening when you write.

SPRING, WONDERFUL 1897. NEW FAIRY ROSES

New race hardy perennial Dwarf ever-blooming sweet-scented roses from seed. Sow seed in March and these little Midgets will bloom in the open ground in May and continue in flower until frost. For beds and borders they are charming. In pots they are covered with clusters of lovely pink roses.

25c THIS "BABY ROSE" COLLECTION. Entire 15 varieties half NOVELTIES, and all HIGH PRICED.

1 Pkt. New Fairy Rose. 20 seeds.

- New Marguerite Centaurea, pure white gigantic sweet-scented Corn Flower; 40 seeds. A great novelty.
- New Lady Gaster, Nasturtium, large, brilliant; 15 seeds.
- Physalis Franchetii; new, ornamental and confection fruit.
- Double Grandiflora Sweet Peas, 7 named kinds; 30 seeds.
- Cupid Sweet Pea, dwarf, now white; 30 seeds.
- Early Large Flowering Cosmos; new; 50 seeds.
- Golden Glory Calliopis; new, very large; rich yellow.
- Japanese Imperial Morning Glory; 10 seeds.
- Japanese and Chinese Chrysanthemum Seed.
- Ostrich Feather Cockscomb; new; 100 seeds.
- Scarlet Pansies; bright red; 100 seeds.
- Aster; new sulphur yellow; 50 seeds.
- Canna, Large Flowering Dwarf French; 15 seeds.
- Philirea or Weeping Palm; 10 seeds. Grand Plant.

With 25 cents for all the above 15 new varieties of seed, 1 seed directions "How to Grow," Catalogue, from blank.

Miss MARY E. MARTIN, Floral Park, N. Y.

Mention American Gardening when you write.

SEED SENSE

AN AXIOM: You must have seeds. Will "any old thing" suit your purpose? NO. To grow or not to grow. Ah! That's the question. Whether 'tis wiser, etc. Enough said.

P. & M. SEEDS ARE FRESH, TRUE, AND RELIABLE.**50 Packets (full size) Choice Flower Seeds,**

50 different varieties, all put up in separate packages, correctly named. Postpaid for 50 cts.

OUR DRUMMERS**America's Favorite Flower, The Sweet Pea.**

50 distinct varieties (in mixture) and a free sample of Cupid (Dwarf) to cts. postpaid.

Beautify your Surroundings.

Wild Flowers, per lb., 50c.; ¼ lb., 30c.; ½ lb., 20c., postpaid.

Climbing Nasturtiums.

One very large packet each of 8 distinct varieties, postpaid for 35c.

Pansy Blossoms.

The finest collection ever offered. 16 varieties. In separate packages. 25c. postpaid.

"A Study in Asters."

Large range of forms and colors. 17 kinds (many novelties), postpaid for \$2.00.

"Horn of Plenty."

The Emblem of Prosperity. (Datura Cornucopia), 5 varieties, postpaid for 50c.

Kitchen Garden Vegetables.

27 different varieties (all standard), postpaid for \$1.00.

PITCHER & MANDA, JOHN N. MAY, Short Hills, N. J.

RECEIVER.

Mention American Gardening when you write.

NOVELTIES MAY MAKE AN EXTRA PROFIT

THE FORCING-BOOK

An Illustration of the Cultivation of Vegetables Under Glass.

By Prof. L. H. BAILEY, IN THE **GARDEN-CRAFT SERIES**

of Cornell University.

It includes not only the results of extensive experimentation at Cornell, but also the experience of the most successful growers everywhere.

How to force Tomatoes, Cucumbers, Lettuce, Asparagus, Melons, Radishes, etc.

How to Build, Heat, Ventilate and Manage Forcing-houses.

How to fight weeds and all kinds of diseases. All this is told in plain language, right up to date. 266 pp., flexible cloth. 16 mo.

MAILED ON RECEIPT OF PRICE, \$1.00, BY THE PUBLISHERS.

THE MACMILLAN COMPANY, 66 Fifth Ave., New York**Beautify your Homes**

FOR ONLY

20 CENTS

BY planting the following variety of selected seed, which will bloom the entire season, and cannot help but give you entire satisfaction.

Aurora Collection of Sweet Peas

A large pkg. weighing about one ounce and containing all the colors and varieties cultivated.

Aster, Elliott Rainbow Mixture,

an acquisition to any garden, and a premium winner. The plants are bushy in form, of a vigorous, robust habit, covered with large globular flowers fully imbricated.

Pansy, Elliott's Blended, produces flowers of a very showy nature and of unusually large size. The seed is selected from the most reliable growers in Germany, England and France, and comprises the finest shades.**Carnation Dwarf Marguerite** (an illustration of which you will find on our catalogue cover) something unusually fine, also our annual, beautifully illustrated; actual value in all 40 cents. Remember, 20 cents buys them all.**Wm. Elliott & Sons., SEEDSMEN, 54 & 56 Dey St, N. Y.**

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 116.
COMBINED SERIES VOL. LI.

NEW YORK, MARCH 20, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Ashes for Lawns..... 207	Greenhouse Manage- ment..... 214	Market Reports: New York and Phila..... 213	Private Gardeners..... 210	Sweet Potatoes, Vine- less..... 207
Brussels Sprouts..... 203	Home Plot, The..... 212	Obituary: McCrowe, Peter..... 211	Private Gardeners' Mission..... 207	Vegetable Garden..... 203
Catalogues Received..... 209	Honeysuckles..... 207	Orchids at Trenton, N. J. 204	Questions Answered..... 214	Window Plants..... 212
Chrysanthemums..... 203	Hot Pit, A..... 204	Peach Pruning..... 203	Roses, Manure for..... 207	
Eastern N. Y. Horticul- turists..... 202, 206	Hyacinths, Not Flower- ing..... 214	Poisoned by Wild Plants 203	Small Fruits, March of Progress in..... 205	Illustrations.
Fertility..... 202	Lawns and Potash..... 207	Poultry Notes..... 212	Society Meetings Re- ported..... 210	Bud, The Two Kinds of. 203
Fruit Garden..... 203	Mignonette..... 214	Primula Stellata..... 201		McCrowe, the late P.... 211
Fruits, Some New..... 202				Primula, Stellata..... 201

A Promising New Primula.

The illustration (fig. 65), which accompanies this note is a faithful representation of a plant and detached inflorescence of a new Primula, of which we are disposed to think very highly. While not having flowers of the same size as the well-known Chinese Primula, the plant now under consideration attracts notice by the manner in which its flowers are borne—successive tiers or whorls at intervals along on otherwise bare stem. In this particular the plant recalls several species of Primula, as *P. japonica* for example, and when in full bloom is most charming.

The flowers are white, and though not very large, are produced in such profusion as to show a wealth of bloom at almost any time, for the plant keeps in flower for a long period. Our illustration, though considerably reduced in size as compared with the plant will afford a fair idea of its appearance; the detached flowering stem is reduced by a trifle more than one-half.

For the opportunity of giving this notice we are indebted to the courtesy of Mrs. John Thatcher, who

writes as follows: "In the garden of Charles Dissel, Esq., Wynnewood, Pa., is a small batch of Sutton's new *Primula stellata*, which is one of the best of recent introductions to the Primula family. The plant is of a compact habit; the foliage is very dark purple; the flowers are pure white, about three-fourths inch in diameter, produced in tiers one above the other, reaching twenty inches in height. The plants have been flowering here since the middle of December and show every appearance of continuing for a long time yet. The seed should be sown in April to get good sized plants, and given a little more sun than is usual for *P. sinensis*. This Primula when better known will, I think, be largely grown by florists and private gardeners."

We would add to the foregoing the suggestion of utility as an amateur's window plant, for which purpose its long flowering qualities specially recommend it.

The *Primula stellata* is not a new "species," but is a developed strain of *P. sinensis*—perhaps here is another instance of that origin of species which it is the fortune of the gardener to see from its inception.



FIG. 65.—PRIMULA STELLATA. Detached inflorescence reduced one half.

Eastern N. Y. Horticulturists Meet.

The newly formed society met at Poughkeepsie on March 12 and 13; the proceedings were full of interest and the future of the organization looks bright. The first session was called to order by the president, the Hon. James Wood, at 10:45 A. M. On taking a roll call of the counties Ulster led the way in attendance, with forty-five, Columbia, Dutchess and Orange counties followed in the order named. Those in attendance were invited to state what was needed most in the interest of their respective counties.

J. Potts said they needed cheaper transportation and less commission to be paid on sales. Mr. Morrell requested that insect pests be looked after by a committee. Mr. Harrison said that express and freight rates needed the care of a special committee. Mr. Taber said what was needed was better fruit and more uniform packages. Mr. Williams, of Highland, said that Ulster was the pioneer county in the fruit business, but he seriously thought that it would have to look to its laurels, and needed to raise not more but better fruit to meet competition.

Mr. Weed said that sometimes a farmer sent corn to the mill in a bag with a hole in it; he attempted to stop the spilling by filling up the hole with a corn cob or a bunch of grass or straw. In spite of this the grain was often lost on the way, but the loss was always laid to the miller. So he thought the fruit grower never blamed himself for oversights or negligence but usually the commission man or express company. He thought there was a hole in the bag in some of the packages used for shipping purposes.

Mr. Husted thought home markets should be cultivated more, transportation rates reduced and better relationship established with the commission man.

Dr. Hexamer advised the growers to get themselves better acquainted with market requirements; he thought there was some schooling needed in that direction, and, after all, the market was where everything centered. Quoting from his own experience, he said the fault was not always with the commission man, but with the condition in which stock reached him. He had started goods from home—and they looked perfect at that time—he had gone to the market and seen them received in wretched condition. Had he not seen for himself he would have hardly been able to believe the possibility.

Mr. Rice agreed with all that had been said as being right and proper, but he would like to discover some way in which growers could be protected from the many rascals which come between him and consumers.

Dr. F. M. Hexamer formally moved the following amendment to the by-laws: That the name be changed from Hudson Valley to Eastern New York Horticultural Society, for with the former name he felt sure that growers in Long Island, Staten Island, Westchester and Putnam counties were feeling that they were excluded. W. F. Taber seconded the amendment, stating that he first thought that the present name would serve all interests, but was now of opinion that in order to get the co-operation of all the counties and the kindred interests of each united the broader name was necessary.

J. B. Rogers, of Newark, N. J., was then introduced to the meeting. He said: "Mr. President, I am delegated to attend this meeting to-day and convey to you and all who shall assemble here the greeting of your sister society. The New Jersey Horticultural Society wishes your society all prosperity and extends the hand of fellowship." (Applause.)

President's Address.

Mr. Wood said the need of such a society is great, since the business we are engaged in is so complex. Ever since history began men have been engaged in agriculture, and the best thought of all the ages has been brought to bear upon the subject, yet its intricacies are but dimly understood, and if this be true of agriculture, it is even more so of horticulture. Many people want to separate these two, but the only difference

is that "agri" means one crop and "horti" many crops. We have developed from one crop to many, or rather our fields have become gardens. With the multiplication of crops an endless list of varieties has come into existence, and the horticulturist needs to keep posted and brushed up from time to time. He must know what is going on around him, must familiarize himself with all that is new. Hybrids and sports are springing up all the time, and the seed list gets bewildering. Then the higher the cultivation the more artificial the life, and therefore, the more liable to disease. At this time we are brought face to face with stern realities; we grow to sell, but the times are not propitious, the markets have been against us. To-day we have 55 experiment stations and 5,000 scientists working for us, and here in our own section another great helper—the horticultural press—working for us day by day. The Country Gentleman, American Gardening, American Agriculturist and the Rural New Yorker are all published in this our own territory. Are we taking advantage of them all? The difficulties that we have recently come through are perhaps nothing to what we may encounter. Years ago the market sought us, now we have to seek a market; we are dismayed at the outlook; 10,000 new shippers have stolen our market and are making their goods more presentable than ours. This is a question of package and freight; how did these distant brethren accomplish all this? Was it individual effort? No. It is the result of organized effort. We must not work alone, but rather organize. There are reasons why we should do so at the present moment. California holds the market with beauty and size, and this must be met with solid, substantial, superior flavor at home. The day is very near when California peaches and pears will not pay for transportation and of commission. How is he alone to remedy it? A grower that goes alone into the fight with the companies will have nothing behind him, and no redress. But it will be different when his district and the whole united society speak for him.

Fertility.

Professor Jordan, director of the New York Experiment Station at Geneva, said we usually measure fertility by what we get out of the land rather than by what is in it. In the soil plants need to be happy, but this cannot be so when their feet are in water, and we forget to supply the same with wholesome food and surroundings, and then fail to care for it afterward. There are fourteen elements that enter into plant life, and that some of these are more needed than ever is proved by the presence of bags at railway depots, in the fields and everywhere in the country marked "nitrate of soda" or "phosphate." Though the farmer has found out the use of these, he must not ignore home resources. In these days of commercial fertilizers the average farmer is a victim of fad, so that he buys himself poor. Commercial fertilizers are too often the adjuncts of lazy farmers. It is easier to buy \$20 worth from the manufacturer than to realize the same amount at home by cultivation and good management. One overlooks the fact that every season there are moved into the cellar several tons of essential elements. Plant food was ever at hand in the air and in the soil, and cultivation made plant food available. There were 1,128 brands and 128 manufacturers registered at the station; no other trade was carried on such extravagant lines; no other trade could stand the expensive mode of selling. Who pays the bill? Why, the farmer; every time the New York farmer paid more than any one else.

New Fruits.

J. H. Hale, Glastonbury, Conn., handled this subject in his usual racy manner. He said that profits usually come from new fruits. He thought that in Japan plums we have now a race that will be profitable. They differ from the European, being hardy in the bud, more so than the peach. The skins are thick and the fruit is handsome. Burbank, Yellow Jacket (or Shabo) and Abundance he placed in order of merit. Nor-

man, a yellow flesh, needs experimenting with. The Wilson, he thought, was all right, but perhaps it bloomed rather early. Chestnuts.

Mr. Hale thought these would claim the attention of fruit growers from now on. Paragon, Ridgeley, Numbo and early Reliance were given as a selection.

Apples.

With present prices it was hardly safe to mention these. Eighteen hundred and ninety-six was the red-letter year for big crops and low prices. The outcome of the abundance had been that new markets had been opened up and towns that had never seen apples before in car loads had done so this last season. Southern towns especially, and that meant a new trade for the future. In new apples he would only mention one and that was perhaps forty years old—Sutton's Beauty—a lustrous, clean tree, profuse bearer, color of fruit good and flesh rich. Wealthy was favorably spoken of. With York Imperial he had had no experience. In reply to a question, had he not overlooked a good plum, the Hale, the speaker said that was a good one or he would not have put his name to it.

Peaches.

The north China strain of these were the most hardy, and everything hinged upon the hardness of buds. Elberta was a very hardy kind, and could be recommended. Sneed, Triumph and Greensboro were recommended; the latter for appearance only.

He did not believe in late peaches, but Fox, Seedling and Salway would fill the bill.

Small Fruit.

The Kansas Black Cap is vigorous and bears enormously. In reds the Loudon was an excellent berry, and better than the Cuthbert, owing to the smaller cup, which enables it to carry well. Maori is a handsome strawberry, bears well, a bright color and catches the eye; Isabel good, and, perhaps, best of all was the Clyde.

Beautiful Flowers.

For "beautiful flowers in many lands" the president took his hearers to Egypt to see the Lotus lily, to Palestine for the Cyclamen, where it covers the hill sides as a carpet; then into Syria to see the Damascus rose, next to Bulgaria and the fields of roses whence the attar of roses is obtained. In succession he journeyed to Greece, where the Banksian rose grows over the tops of houses sixty and more feet in height; Italy, Switzerland and the Alps were next described. In England window and cottage gardening was carried out to a greater perfection than in any part of the wide world. From all his travels he concluded that the homes of the common people of England presented the most handsome appearance.

Thinning Fruit.

Professor Beach spoke at considerable length on this subject, and amply demonstrated that thinning will be imperative with the grower of the future. Quoting from experiments at Geneva and elsewhere, the fruit had been of a better color and of greater size, and the proportion of No. 2 reduced to a minimum, with a greater chance of an annual crop.

Spraying.

A. Wood, Carlton Hill, Orleans County, spoke upon this subject. A full report of his experiences was given by us on page 67 for the year 1895. His experience of 1896 was added. Finding such excellent results from spraying, Mr. Wood now has a steam sprayer to do the work. This last season he sold his crop of apples, 2,700 barrels, to the same buyer who bought them before, and realized more than \$1 a barrel, while in his section 140 carloads of apples had been sold at from 10 cents to 20 cents per barrel.

Shrinkage of Apples.

G. T. Powell said it was hardly understood among apple men how great was the loss from this source, especially to foreign shippers. Mr. Wood had demonstrated that by spraying he had succeeded in producing such perfect fruit that he had no shrinkage whatsoever. His own experience was that when he first began to ship to England he nearly always made a loss through shrinkage and could find no way of stopping it. However, after persistent spraying he had

succeeded in reducing the loss from five barrels in thirty-five down to one-half of one per cent., and this out of a lot of 1,500 barrels.

Marketing.

D. L. Wygant went into the subject in a most exhaustive manner. The discussion which followed was of the most lively description. J. H. Hale championed the cause of the commission men, saying the talk about dishonest commission men is all nonsense. There were as many dishonest fruit growers as commission men. One was dishonest because of ignorance, the other out of pure deviltry. There are good men in the commission business; hunt them out and stick to them. When you make up your mind to try another market, don't run away because you make a loss. The first week he shipped Georgia peaches to Boston he lost every day. They did not want his fruit, but he stuck to it till they did. Then they took ten cars, with 1,000 crates in a car, at \$3.50, when at first they only paid him \$1.

Mr. Wygant's paper will be published in full by American Gardening.

Other Matters.

Samuel Henshaw read a valuable paper on the principles of landscape gardening; Professor Voorhees discussed cultivation; Professor Roberts gave as a motto for the farmer, "Keep the plow hot." Stereopticon lectures were given by Dr. Halstead and Professor Lowe respectively on fungous disease and new insect pests.

Standing committees of five members each were appointed as follows:

Vegetables—C. L. Allen, Floral Park; E. Van Allen, Delmar; James E. Rice, Yorktown; H. L. Beadle, West Cambridge; Nat Foster, Riverhead.

Insects—F. A. Sirtine, Jamaica; L. L. Morrell, Kinderhook; S. B. Huested, Blauvelt; H. C. Tillson, Highland; P. Van Schaack, Coxsack.

Diseases—F. C. Stewart, Jamaica; P. W. King, Athens; F. A. Taber, Poughkeepsie; L. E. Covert, Clintondale; Edwin Barnes, Middlehops.

Legislation—E. A. Briggs, Poughkeepsie; Ira D. Kerr, Catskill; A. W. Williams, Highland; J. R. Cornell, Newburg; Jesse Van Ness, East Greenbush.

Transportation and Commission—H. W. Collingwood, "Rural New Yorker"; G. S. Clark, Milton; J. S. Horsford, Kinderhook; W. H. Hart, Poughkeepsie; representative of Hudson Valley Fruit Farm, Walden.

Fruits—E. G. Fowler, Port Jervis; G. T. Powell, Ghent; J. R. Clark, Milton; Dr. F. M. Hexamer, "American Agriculturist"; W. D. Barnes, Middlehops.

Flowers—J. W. Withers, "American Gardening"; F. Contant, Highland; W. G. Saltford, Poughkeepsie; F. R. Pierson, Tarrytown; G. Smith, East Greenbush.

County Committees are as follows: Richmond—S. Henshaw, West New Brighton; S. I. Albany—J. Hilton, New Scotland; James Houck, Albany. Rensselaer—Jesse Van Ness, East Greenbush; J. D. Carpenter, Albany; A. Cowee, Berlin. Green—P. W. Jones, Coxsack. Washington—J. W. Duskee, Sandy Hill; H. L. Beadle, West Cambridge. Saratoga—W. J. Covert, Charleston; H. H. Tourtellot, Clifton Park. New York—Dr. F. M. Hexamer, New York; D. M. Wygant, corner Duane and Washington streets, New York city; H. D. Collingwood, New York city. Orange—W. D. Barnes, Middlehops; C. W. Clark, Grayward; S. L. Moffat, Washingtonville. Columbia—G. T. Powell, Ghent; Elias Miller, Germantown; W. H. Harrison, New Lebanon. Westchester—J. E. Rice, Yorktown; S. Underhill, Croton-on-Hudson; N. Aclair, Sing Sing. Dutchess—H. W. Hart, Poughkeepsie; Floyd Quick, Fishkill; Henry Lewis, Madeline. Suffolk—Nat Foster, Riverhead. Queens—N. Haddock, Queens; H. Hicks, Westbury. Rockland—S. E. Huested, Blauvelt. Ulster—A. Williams, Highland; S. Haviland, Marlboro; C. A. Harcourt, Clintondale.

Where the three members are not named, it will be the duty of the chairman of that county to select two others to serve with him.

Floral Pictures.—A new serial which is being issued by Frederick Warne & Co., New York, should find a number of readers among garden amateurs and flower lovers generally. The work will be complete in four quarterly volumes, cloth, gilt top, medium 8vo. Each will contain 78 full page colored plates of popular garden favorites. General cultural directions are given by W. Watson of Kew, which will have to be in some degree discounted by readers here.

The Fruit Garden.

Peach Pruning.—This can now be done in some sections where the flower buds are growing and can at a glance be distinguished from the wood buds. In old trees the fruit is produced on short spurs, or rather stubby wood growth, but mainly on the vigorous wood of last summer, from which only first-class fruit can be had. Therefore a yearly healthy growth is necessary, which growth, when pruning is done, must be cut so that a portion will produce more such wood for the following year, and at the same time leave enough flower buds for fruit this year. Before pruning we notice that the lower buds on the young shoots are not so prominent as those toward the top, and instead of being two or three together there is often but one bud. Take out any dead or dry looking wood, then cut off about one-third of the shoot on which you expect fruit, cutting to a wood bud. Do this evenly all over the tree. Next cut back to one of the single wood buds enough shoots to produce wood for fruiting next year. All small and surplus shoots should be cut clean out. These directions apply in the main to old trees in full bearing.

Young peach trees will need severe treatment at first. If you buy one-year-old trees (which are the best to begin with) they will be three to five feet long, with a few side shoots near the top. Plant them carefully and cut them to twelve, or, at most, eighteen inches from the ground.

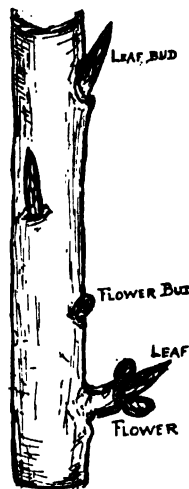


FIG. 66.—THE TWO KINDS OF BUD.

These stumps will produce three to six shoots four to six feet long by autumn, and possibly a few others one and a half to three feet in length. In the spring it will be seen there are no side shoots on the stronger growths for at least two or three feet from the bottom, but many near the top. The amateur would fain shorten these side shoots only, and once more a stout tree is required to cut the main shoot back to the top of the two or three foot portion, leaving no side shoots above. There are generally some small shoots below to shorten back (as in the older trees), which will possibly ripen a few fruits. Keep the center open and aim, by pruning, to be able to gather half the fruit without a step ladder for the next ten years.

Peach Buds.—The difference is very marked in early spring, the flower buds being cold, round and turgid, whilst the wood buds are pointed, thin or flattened, especially when between two flower buds.

Nectarines.—The treatment for these is similar to that for the peach. The growth of the nectarine is generally stronger, however, and is inclined to give more small shoots nearer the base, thus making a more symmetrical tree.

Apricots fruit on the young wood of last year, which should, therefore, be shortened, as in the peach. Fruit is also borne on spurs made on the two-year-old wood. The flower and wood buds are not so readily distinguished as they are in the peach and nectarine until later in the season.

Thorough cultivation is necessary and will go a good way toward saving manure and warding off disease. We hear a

good deal about wood ashes for fruit trees. There can be such a thing as too much of this for peaches and not enough good barn-yard manure.

Grafting.—With few exceptions this can be done from now until the leaves are started (if you have dormant scions).

Raspberries, Blackberries, etc., which are covered should be uncovered as early as the weather will permit, selecting a mild, cloudy day for the job.

Grape vines will need the same attention as advised for raspberries, etc.

J. HOLLOWAY, L. I.

The Vegetable Garden.

Early Peas.—In favorable locations a sowing of Alaska peas may now be made. We always find them satisfactory for first crops.

Broad Beans.—These are as hardy as peas, and if planted in rich soil as early as the ground can be worked, pods can be gathered before the heat of summer, after which time they frequently become infested with black aphids.

Onion Sets.—An early planting of these should be made as soon as possible for early use. Follow up by other plantings about ten days later.

Cos Lettuce.—The Trianon Cos is a deservedly popular lettuce with all those who have given it a fair trial, many epicures preferring it to all others whenever it is possible to procure it. It is not a good hot weather variety and is more satisfactory in early summer and early fall. Seeds should now be sown in the hot bed, the seedlings transplanted into the open ground as soon as large enough, having the ground first thoroughly enriched. This lettuce requires moisture and good cultivation.

Cucumbers and Melons.—These should now be started for early crop. A good plan is to have four or five seeds pressed into small pieces of sod and placed in the hot bed, the whole covered up with half an inch good loam. In this way they transplant readily. Plants may also be similarly grown in four-inch pots.

Brussels Sprouts.—These are always relished in the fall and make an excellent variety for the table. If seeds are not started quite early it will be October before the crop is fit for use. A sowing should now be made as for cabbage, and transplanted as soon as ready, another sowing to be made later in the open border for succession. In this way sprouts may be had from September till Christmas.

W. M. EDWARDS.

Chrysanthemums.

Bench Culture.—It is always better to grow a separate batch of plants to propagate from for this work. Cuttings can, of course, be obtained in due season by pinching plants intended for specimens, but it is better to plant out now a batch of young plants a foot apart in a bed, keeping them airy and cool. These will, after being stopped a few times, furnish an abundance of healthy cuttings by the end of May. The bench system is a simple and economical one, but perhaps the best finished blooms come from pot grown plants. With the roots confined the plants can be fed more heavily, and a deeper, heavier flower will result.

Chrysanthemums from seed is a very interesting experiment, and there is always the bare (almost threadbare though) possibility of raising a bonanza. "Things are not what they seem" is always true of your new seedling. Sow the seed now in a flat in nice light soil and keep warm till it germinates, when the young plants can be pricked out and gradually hardened off.

Plants for Spring Flowering.—A batch of J. H. Troy, an early white variety, struck last November, is showing bud with us, and looks so well as to certainly justify a larger employment of this and other varieties for a similar purpose next season.

General Attention.—Never let your young plants get potbound, and, above all, keep things unpleasant for the black fly.

Madison, N. J.

C. TOTTY.

Orchids at Trenton, N. J.

The showy and popular *Cattleya Trianae* in all its varying forms is enriching our collections with its glowing colored blossoms, and wherever orchids are grown at all it is represented in quantities, being one of the easiest to grow, free to flower and inexpensive. There are few *Cattleyas* that exhibit such a wide range of variation as *C. Trianae*, but the absolutely pure white form remains still a valuable plant, notwithstanding that thousands of the type have been imported.

In Mr. Charles G. Roebling's collection a specimen of *C. T. alba* may be seen, undoubtedly the finest in the country and probably in cultivation; it blooms profusely and is a grand variety, the individual blossom measuring seven inches in diameter, round and of exquisite shape, the petals three inches in width, finely fringed, the broad open lip measuring $2\frac{1}{2}$ inches, with a rich yellow throat.

The most extraordinary *Cattleya* now in flower here is *C. Trianae* var. *Roeblingiana*. This is a white variety, with very broad sepals and fine round petals, the latter measuring $6\frac{1}{2}$ inches in diameter, with a pleasing undulation. The labellum, however, has a coloring of deep violet, which we have never before observed in any *Trianae*, the throat bright golden yellow. The purity of its sepals and petals and the unusual shade on the labellum affords a charming combination, making it a variety much cherished by the fortunate possessor. The plant was divided last season and a portion was recently forwarded in bud to the Royal Horticultural Society in London, but unfortunately the plant suffered in transit. Another charming variety in flower was *C. T. Emily Roebling*, with blooms seven inches across, petals three inches in width, snow white, finely frilled, labellum large and open, with strong magenta veins and a clear white border. A beautiful variety of *C. T. delicata* had a very large flower, and although not so perfect in shape it measured eight inches across. The long petals were pure white, drooping and surrounding the large labellum, the latter being suffused with a clear pink. Among the brighter varieties *C. T. Dodgsonii* was well flowered; its pure white sepals and petals and brilliant crimson labellum were exceptionally fine, the individual flower measuring eight inches across. One of the very largest and brightest colored varieties well worthy of a varietal name, had enormous flowers, surpassing all that had hitherto bloomed here, the sepals measured $1\frac{1}{2}$ inches in width and petals over four inches, the labellum fully two inches across, with a blotch of vivid deep magenta and a superb frill. There are scores of fine varieties here, and when all are flowering they amply repay the visitor for his journey.

A few choice *Cypripediums* were in flower, including a group of very interesting *C. insignis montanum*, each plant selected for its distinct variations. The most striking plant in bloom among the hybrids was *C. Leeannum Clinkaberryannum*, named in honor of the grower in charge, and who well merits the compliment for the excellent condition of so large a collection. This is the largest form of all the *Leeannums*. The dorsal sepal is over 3 inches across, perfectly round, and never recurves with age, of a very stout substance, having a blotch of olive green at the base, thickly studded with light purple spots, which do not spread, leaving a broad snow white margin, the petals are unusually short and broad, of a vivid olive green, with rich brown at the base, the lip is very large, shining brown, with darker venations. There were several distinct hybrids in flower obtained from *C. hirsutissimum*, the finest being *C. media superbum*, obtained from the former, and *C. Spicerianum magnificum*, the result is a flower of pleasing shape, the dorsal sepal suffused with a rosy purple shade and numerous spots, the whole surface is pubescent, the petals are drooping, ciliated, with purple apices, the staminate shiny purple, surrounded with a white margin. The lip is of a reddish brown shade. *C. Alcides superbum* is full of delicate tints obtained from *C. insignis* and *hirsutissimum*, the dorsal sepal having a broad margin of pure white, and base pea green, with a few irregular lines of

purple spots, the petals are finely ciliated, rose at the apices with a few brown spots, the labellum covered with short hairs. This is one of the most desirable of any *hirsutissimum* cross yet raised. *C. Germanyanum superbum* is a cross between *C. villosum* and *C. hirsutissimum*, it is a giant flower, measuring 7 inches across, with shining purple-tipped petals, the basal portion covered with spots, the edges finely undulated, the dorsal sepal deep blackish purple, with light olive green border, the lip is unusually long and covered with numerous hairs. *C. Godseffianum* is a cross between *C. Boxallii* and *C. hirsutissimum*. The result is a very interesting flower full of detail, the dorsal sepal blackish purple surrounded with small spots and an olive green border, petals very brilliant with deep purple apices, studded at the base with blackish purple, pouch fine rosy purple.

There were many other interesting things in flower, which, to enumerate here would be encroaching on your valuable space. The seedling Orchids, which are counted here by the thousands, are alone worth the journey, and it is here that seedling *Vandas* have been successfully raised, it would be interesting to know if any of your readers have been as fortunate. They are represented by several very healthy looking and promising plants. A. DIMMOCK.

Making a Hot Pit.

On page 51 of this volume is described a hotbed, which to me has suggested an improvement. Up here in Minnesota hot bed making in February is not altogether pleasant and not always safe. During the past week we have had as much as 50 degrees of frost, and hotbeds, unless very well protected, are a little bit risky. The illustration on page 51 has suggested an idea, which though I have never tried nor seen in use, seems very practical and affords a lasting and reliable heat, namely, the employment of steam pipes in place of the manure. Where I am situated steam can be had from a central plant, and I was thinking it would be a capital thing to run a section of frames, using steam pipes as the source of heat. By this method the frames could be used all winter; and very little heat would be required, as the pipes would be boxed in perfectly airtight, the heat radiating through the slatted top, on which the soil of the bed rests. Considering the large amount of labor necessary in preparing manure, the value of which lasts only a short time, this method would seem to far surpass the old way. Promising as this scheme appears, it may still have its drawbacks, and I would like to know if any one has ever tried it, and if so, will he tell us if there be any advantages over the manure method.

L., Minnesota.

—We see no reason why steam, or hot water heat, should not be employed. Indeed, such was long ago used in European gardens. Once fitted up, labor is much reduced, but special attention with regard to watering and maintaining a proper atmosphere becomes a necessity. Manure and pipe heats will not combine.—Ed.

Grafting Grapes.—In nursery row we cut the seedling or young tree or vine off at surface of ground and shape top like a wedge, and then make an upward cut in the cion about one-third its length from the lower end, and slip the cion on the wedge-like top of the root or stump. Press moist soil around the joint and cover the graft with loose soil until buds swell, when the soil should be partly removed. Grapes should be grafted about the first of March. The cions can be cut at the same time or any time in winter and buried in moist soil until used. Any kind of trees, vines, or plants can be grafted this way without using any kind of wax or strings.—E. W. KIRKPATRICK, in the Texas Farm and Ranch.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send the price to the Publishers.

Best

Results prove the greatest merit. No other medicine has such a record of cures, no other has power to purify the blood like

Hood's Sarsaparilla

The One True Blood Purifier. Sold by all druggists. \$1; six for \$5.

Hood's Pills are prompt, efficient and easy in effect. 25 cents. Mention American Gardening when you write.

GRAPE VINES

Small Fruit. All old and new varieties. Extra quality. Arranged from lowest rates. Descriptive Catalogue Free. T. S. HUBBARD CO., FREDONIA, N. Y. Mention American Gardening when you write.

MILLER RED RASPBERRY

A SPECIALTY

Choice fruits, new and old. Our catalogue sent free will save you money.

MYER & SON, Bridgeville, Del. Mention American Gardening when you write.

WE grow TREES, PLANTS



and vines; all kinds; 100,000 FRUIT TREES. Millions of fruit and vegetable plants; evergreens, shrubs and shade trees. Stock first-class. Prices low. Our 1897 catalogue free. T. J. DWYER, Orange Co. Nurseries, Cornwall, N. Y.

Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

ROSES

\$3.00 per doz., \$20 per 100.

Large 2-year old, field-grown plants that will bloom this summer. Best sorts, true to name. Write for catalogue.

W. E. WALLACE,

Nurseryman, Hartford, Conn.

Mention American Gardening when you write.

The choicest
**MAGNOLIAS,
JAPANESE MAPLES**
and other **TREES
& SHRUBS**



are accurately described in our New Catalogue. Profusely illustrated, including three lithographs. Contains prices of large and small trees, specimens for immediate effect; and special prices for quantities. A Guide to Tree Planting. The most complete catalogue of its kind ever published. 6 cents in stamps.

THOS. NEENAN & SONS,
Germantown, Philadelphia.

Mention American Gardening when you write.

March of Progress in Small Fruits.

For years the improvement in small fruit varieties has been going on, until we find but little demand for those which were standard some twenty years ago. The object among originators seems not so much to find a variety adapted to meet the demands of the entire country but rather to obtain varieties to meet certain requirements. A raspberry may be adapted to a certain section for canning or evaporating purposes, but not be at all fit to use one thousand miles away for market purposes. The juice makers have found the old Wilson and gypsy strawberries the best for making fruit juices yet introduced. But the grower will not in many instances find either of these profitable, at least in most localities. And so it goes. The fruit grower of to-day will make more money by finding that certain variety adapted to his wants than by taking somebody else's advice and cultivating one that is a general success.

Take the Beeder Wood strawberry. I am told by a grower near New York city that it is one of his best; here it would be utter folly to plant it. A nearby friend has no success with Greenville, but another grower is so well pleased with it that he intends to plant ten acres this spring. For years the Wilson was almost the only variety grown, not only here but in many other localities. I doubt if a plant of it can now be found anywhere in this section, unless it be in some nursery. It will soon be the same with the Crescent, and many people have dropped Haverland, once a most desirable variety.

Fields of from twenty-five to fifty acres of Cuthbert raspberries were once the rule here, but new varieties come on and root it out. One large grower has entirely discarded it for Miller, and others are acting similarly. Turner and Brandywine were popular not many years ago, and the latter was one of the first ever grown hereabouts, but both are back numbers now, as is also Thompson.

The old Wilson blackberry seems to hold its own, but has defects, such as winter killing. Early Harvest is planted and a number of new varieties are being tested.

The Lucretia dewberry has given excellent results and is being largely planted; net returns of from \$90 to \$100 per acre last season have stimulated the demand for plants, and when we consider its size of fruit and productiveness, together with its early ripening, the reason for extensive planting is evident.

The strawberry-raspberry will never prove of any commercial value; but it may be well to keep an eye on the new Logan berry, for it really did produce some wonderful fruit last season, ripening with the earliest raspberries, fine of flavor and large in size.

The Golden mayberries have not fruited here, and an opinion as to their value would be mere guesswork; the plants so far do not seem to be at all hardy. The wineberry has not proven of any value, either.

Our trial grounds have a lot of new varieties of fruits that should show fruit this season. There are also some new kinds of fruits, so that before the fall of '97 we hope to be able to inform your readers in regard to many of the recent introductions.

CHARLES WRIGHT, Delaware.

Of all the nerve-tonics—bromos, celeries or nervines—your doctor will tell you that the Hypophosphites are best understood. So thoroughly related is the nervous system to disease that some physicians prescribe Hypophosphites alone in the early stages of Consumption. Scott's Emulsion is Cod-liver Oil, emulsified, with the Hypophosphites, happily blended. The result of its use is greater strength and activity of the brain, the spinal cord and the nerves.

Let us send you a book all about it. Sent free.
SCOTT & BOWNE, Chemists, New York.

HENRI BEAULIEU, Seedman and Florist, Woodhaven, N. Y. Price list free
Mention American Gardening when you write.

Danish Ballhead Cabbage.

IMPORTED RELIABLE SEED.
Prices on application. Catalogue Free.
FRANK H. BATTLES, Seed Grower Rochester, N. Y.
Mention American Gardening when you write.

GLADIOLUS. A Superfine Mixture, made up of very best named varieties and choice un-named seedlings. Fine blooming bulbs at \$1.00 per 100, \$8.00 per 1000; by express, purchaser's expense.
J. A. REED, (Gladiolus Specialist), CANTON, OHIO.
Mention American Gardening when you write.

Allen's Seeds are carefully selected as to purity, quality, earliness, productiveness and high germinating qualities; thousands use them. Flower or Vegetable. Large catalogue free. The best and earliest Peas, Corn, Beets, Asters, Pansies, Nasturtiums, Sweet Peas.

C. E. ALLEN, Brattleboro, Vt.
Mention American Gardening when you write.

HALF PRICE—CUT IN TWO!

Vegetable and Flower Seed Packets (Large Packets) 2, 4, 5, 7 and 10 etc., instead of 5, 10, 15, 20 and 25 cts., the prices usually charged. Also, for \$2.50 customers can select packets to amount of \$5.00. Catalog free.

L. L. OLDS, Seedsman, Clinton, Rock Co., Wis.
Mention American Gardening when you write.

Seeds! Seeds!

73d Annual Priced Catalogue of
VEGETABLE, FARM AND FLOWER SEEDS
is now ready and mailed Free to all applicants.

BRIDGEMAN'S SEED WAREHOUSE,
37 East 19th Street, - New York City
Mention American Gardening when you write.

BETSCHER'S BULBS AND PLANTS

GROW AND BLOOM.
Gladioli our specialty, over 250 kinds. Undoubtedly the best in America.

Try some of our Bargains.
12 Extra choice Gladioli.....15c.
1 Fine Gold Band Lily, or 1 Caladium.....15c.
3 Very choice French Cannas.....25c.
8 Roses, Carnations or Petunias.....25c.
8 Geraniums or Chrysanthemums.....25c.
8 Fine Tuberoses or 6 new Chrysanthemums.....25c.
Send for our catalogue, free.

BETSCHER BROS., Canal Dover, O.
Mention American Gardening when you write.

DISCOVERED A face wash that will remove that greasy complexion and leave it soft and white in 10 minutes after washing, and in a week remove all pimples, blackheads and tan. Bleaches the skin without irritation. Perfectly harmless; contains no poisons. Costs but five cents to prepare enough to last six months. Recipe and full directions, 20 cts. **Mrs. H. MÜNTER**, 4813 Evans Ave., St. Louis, Mo.
Mention American Gardening when you write.

Potash

is a necessary and important ingredient of complete fertilizers. Crops of all kinds require a properly balanced manure. The best

Fertilizers

contain a high percentage of Potash.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.

FULTON'S STEAMBOAT 1807 I make a business of supplying private growers, who want the best that can be had, with Strawberry, Raspberry, Gooseberry, and all other kinds of small fruit plants. Yes, and at prices just as low as any responsible grower.
Send for my descriptive price list.
W. B. FULTON, - Kirkwood, Ohio.
Mention American Gardening when you write.

Thirteen Lovely Roses

FOR ONLY 50 CENTS

All will Bloom Abundantly this Summer.



For only 50 cents (in silver or stamps) we will send by mail, postpaid, 13 Everblooming and Tea Roses, no two alike, labeled, and strong plants from 2 1/2 inch pots. Collection contains such valuable sorts as Virginia, F. Kruger, Bride, C. Mermet, Empress of China, Snow Flake, Red Pet, Agrippina, Beauty Inconstant, Safrano, Perle des Jardins, etc.

For 50 cents we will mail, postpaid, and labeled, any of the following collections:

- 13 Single Geraniums,
- 13 Double Geraniums,
- 13 Single and Double Geraniums,
- 13 Carnations,
- 25 Giant Pansies,
- 13 Double Violets, 4 Sorts,
- 10 White Everblooming Roses, for Cemetery,
- 10 Dahlias,
- 10 Rex Begonias,
- 10 Flowering Begonias,
- 13 Fuchsias,
- 13 Coleus,
- 13 Chrysanthemums.

Our Illustrated and Descriptive Catalogue of Everything for Garden and Greenhouse, New and Rare Roses, Chrysanthemums, Dahlias, House and Bedding Plants, will be mailed free upon application. Send for it to-day. We guarantee satisfaction.

A. B. DAVIS & SON,

Established, 1866.

Purcellville, Va.

Mention American Gardening when you write.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1894.

PUBLISHED BY

A. T. DE LA MARE PTO. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Eastern N. Y. Horticulturists. THE horticulturists of Eastern New York have every reason to be proud of the well attended and enthusiastic meeting held at Poughkeepsie on Thursday and Friday of last week. The unanimous and expressed opinion of eminent horticulturists present was that never before had such a successful and profitable meeting been held in the eastern portion of the State. Nearly 500 people attended the different sessions, and more than 160 members were enrolled. Considering that from the inception of the Society till now is barely two months, and that this was the first general meeting, 160 members is a very remarkable start and augurs well for the future.

The Society has been exceedingly fortunate in its selection of a president, Hon. James Wood, of Mount Kisco. His cheery presence, skill as a speaker, and tact in leading a gathering, makes him a very desirable chairman.

The eleven speakers who at intervals addressed the meetings were perhaps the strongest combination intellectually that it was possible to get together; and the profound attention given them by the audience showed that their teachings were acceptable. The aptness of the questions which followed at the close of each address proved the need of such a

society, and how the eastern man was tully as keen in his search for knowledge as his hitherto more favored western brother.

The proposal to change the name to Eastern New York was wise, and will raise the dignity of the new society to that of the western society referred to. While the name of the Hudson is dear to the hearts of many, and the sentiment is but natural, nevertheless there are times when local sympathies and pride have to be put in abeyance, and this is one of such occasions. The name Hudson Valley is too local and suggests limits to the usefulness of the society, limits which are not its aim, for it has declared in favor of helping the interests of horticulture in all the adjoining 18 counties, including Staten Island and Long Island. But possibly, owing to the local bearing of the name and the possible preponderating influence of fruit growers, Putnam Co. and Suffolk Co. failed to send a single representative; Richmond Co. only one; Kings Co. none; and Queens Co. only two. Thus the great vegetable growing interest was but poorly represented, and it is to be hoped that the standing committee on vegetables will bestir themselves on behalf of that important branch of horticulture, so that there may be a strong union of all interests, that in case of appeals to transportation companies, and in matters which may come before the Legislature, the whole cause will be strengthened, and a greater assurance of victory obtained. Union is strength!

An Interesting Problem. "WHY is the Rose Mme. Ferdinand Jamain called American Beauty, and why did Geo. Bancroft give it such a name?" queries a correspondent. First of all, why does our querist ask the question in that form? Is it proved beyond question that American Beauty is absolutely identical with Mme. Ferdinand Jamain? If such be the case, then someone willfully misled the public, or else the change was done in ignorance. But, on the other hand, it is claimed that the American Beauty is distinct from the French variety named, and that such has been proved by the importation of stock both ways. There seems no reason why the existing Rose should not be a form or climatic variant of Mme. Ferdinand Jamain. One thing, at all events, is certain, that the men who had to do with the introduction are honorable men, and sent out American Beauty in good faith.

The history of the Rose in Geo. Bancroft's greenhouses is not quite clear; we only get to know anything about it from the greenhouses of Field Bros., who successfully grew, and propagated it. And J. H. Small & Sons, of Washington, D. C., somewhere about 1882, saw merit in the blooms, and began to use them in their choicest decorations. At that time the Rose was condemned by many

growers as useless, and others imported plants of Mme. Ferdinand Jamain, so as to get stock, but failed to produce the same article as the Messrs. Field had. To-day American Beauty heads the list of American Roses, and as such is sold in Europe, being recognized as distinct. American Rose growers wishing to put in several houses of American Beauty do not send to Europe for Mme. Ferdinand Jamain.

The possibility of there being two different seedlings—that is, so far as their origin is concerned—and having different constitutions, yet producing flowers that are to all intents and purposes identical, is not to be questioned; and such an occurrence would explain the point at issue. Or, again, one individual plant of a given variety may so adapt itself to new conditions as to be the starting point in the development of a constitutionally distinct form, which in all other respects will retain the appearances and character of the type. The tendency to variation is present in all plants, and we see no reason why this should not manifest itself in the form of a climatic variant, especially as the best efforts of nature are put forth to aid in the perpetuation of life by progeny, and it is evident in the case before us that the popular American Rose is better adapted to the vicissitudes of the American climate than is its French twin sister.

An analogous case may be pointed in the Bartlett pear, which is our prototype of the, in England, well known Williams.

Then again, as has been lately pointed out in these columns, English and American varieties of potato have decided individualities, not only in their adaptation or otherwise to the other's climate, but in flavor, which is so decided as to call forth remarks from persons who are not concerned in gardening matters, yet both had the same starting point, but the lines of development are divergent owing to adaptation to climate.

Botanists fully recognize "geographical forms" of one and the same species, and name them distinctively, as the features are as marked, and as permanent as any feature in a living body can be, and here may be seen perhaps the initial step in the development of new species, a matter with which the gardener is often brought face to face, though he does not realize it; yes, indeed the botanist could get much from him, and by studying his works in the creating and fixing of a new race or strain of garden plant or vegetable, learn much on a matter of absorbing interest.

Inspection of Nursery Stock.

A bill to provide for the inspection of nursery stock of all kinds so as to ensure freedom from insects and fungous diseases, was lately introduced into Congress by Mr. Swanson, of Virginia. Its provisions are practically those which were adopted by the convention of delegates as reported in our last issue. The bill was referred to the Committee on Agriculture.

Lawns and Potash.

Just a few words in reply to Mr. Gomersall's comments on my remarks in a previous issue of "American Gardening."

Mr. Gomersall says I did not state what quantity of ashes to employ. I considered the mode of operation which I stated, namely, that of distributing, by an ordinary fertilizing machine, or by hand, was accurate enough for general purposes. I have used wood ashes extensively and have tested them in various ways.

In loading the fertilizing machine from the wagons, which are placed at convenient intervals in the field or lawn, it is reasonable to expect that considerable will fall on the grass just at these spots. Sometimes the grass is smothered with the ashes. The heaps thus formed are knocked aside by a shovel, yet I have not seen any ill result; on the contrary, a more dense growth, and perhaps a little more density of white clover.

Three weeks ago I measured off a square of six feet, and on that square I put fifteen pounds of Canada wood ashes (of which I am writing). I have not seen any ill result. I did not spread it evenly, but as a shovel might spread it—irregularly.

I do not advocate putting on ashes when the grass is in a growing state. This season I will use forty tons. It would take a long time to put this quantity on in pepper-box fashion.

I would not have again taken up the subject, but I do not wish Mr. Gomersall to think me discourteous. I agree with T. Harrison when he says: "Why not give a good manuring when at it?" But there is such a thing as too much humus in the soil (that is, for a good lawn); it causes the grass to grow too coarse. It is not rankness of grass we want, but, rather, density and softness. Too much humus puts me in mind of a pig I saw that was fattened principally on milk. One morning it lay in the pen, not able to get up on to its feet—the backbone was not fit to carry the flesh. Had the pig got proper food to make bone it would have been all right, though it might not have fattened so rapidly.

A change of diet is as beneficial to the vegetable as it is to the animal, and coarseness to a certain extent is to be avoided in both. JOHN SHORE.

Manure for Roses.

Mr. Miller, the rose grower at Messrs. Strauss' establishment, Washington, D. C., inaugurated a series of experiments last summer, with the view of determining the best food for roses. Most of the space in two of the houses is devoted to these experiments. Mr. Miller is evidently thoroughly familiar with chemistry, as applied to horticulture. However, he says he wouldn't care if there was no other than cow manure to be had so far as the feeding of roses is concerned. Mr. Miller has kept a careful record of the cut from each batch of roses grown in the different manures and soils. There is also an experiment on a small scale, dealing with the firming of the soil around the bushes when planting. Two lots, side by side, didn't show any difference in the growth, yet one of them was planted according to the orthodox method of firming the soil, the other was planted as loosely as possible.

CAN DO MANY THINGS NOW.

I have been a reader of American Gardening through its various changes since '83, and feel that I could not do without it now. It is to me a mine of useful information, and from it I have learned to grow many things successfully.

S. W. G. P., Massachusetts.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Ashes for Lawns.—In your issue of Feb. 20 Mr. Gomersall recommends use of coal ashes on lawns, in cultivation of potatoes, etc. Please advise whether he means ashes of anthracite or bituminous coal, or both, and in what quantities.—J. D. HARVEY.

—Ashes of both anthracite and bituminous coal are valuable for the purpose mentioned. The ashes I have used have come from hot water boilers, hot air furnaces and stoves. The intense heat of large steam boilers usually converts the ashes into small particles of slag or clinkers, so that ashes from this source would have no value. The ashes are spread on the lawn about a quarter of an inch in thickness or less, according to the quantity of wood ashes they are known to contain. (See also note on page 180.)—W. G. G.

Vineless Sweet Potatoes.—Professor Fisher, president of the college at Hanover in our county, sent some of my vineless sweet potatoes last year to his son in Florida, where they were grown with the best of success and to entire satisfaction, making a crop during the fearful drought and when everything else failed, this being considered something wonderful and as a table variety was unsurpassed. G. CAMERER, Madison, Jefferson Co., Ind.

Honeysuckles.—Referring to Honeysuckles, page 166, no mention is there made of the most profuse blooming, and most generally satisfactory, of the trailing Honeysuckles we have tried, *L. Heckrodti*, a decided improvement over *Belgica*, the "Monthly Fragrant," in the abundance of its blooms, which literally cover the plant from May 1 till late in November. Of the many Honeysuckles we have growing, this is incomparably the most free bloomer all through the season, and certainly deserves a prominent place among hardy vines. Color a little lighter than *Belgica*. We find *L. brachypoda* a troublesome weed, tender and in every way inferior to *L. Halliana*, which it closely resembles.

EDWARD TEAS, Carthage, Mo.

—An old saw says that "a prophet hath no honor in his own country," and in the same way many beautiful plants suffer unaccountable neglect of cultivation because they happen to be indigenous. For example, replying to a querist on page 166 in your issue of March 6, you mention as the best honeysuckles those from far Tartary, distant Europe and Japan, but I see no mention of one that is, well, not far from some of our houses, but is hardly ever seen in the garden. I allude to the scarlet trumpet honeysuckle, *Lonicera sempervirens*, the most brilliant and beautiful of the whole family. True, it has no fragrance, but how it atones for the lack of this charm with its vividness of coloring, beside which all the other honeysuckles appear pale and ineffective. It is wild in the woods of the Eastern States, but bring it out from semi-obscurity and give it a sunny position on wall or trellis and you have one of the brightest and most profuse blooming vines, as it grows and blooms constantly from early summer till late in fall.—A. HERINGTON, Madison, N. J.

—(Our correspondent has mistaken the purport of our previous remarks; they were as a direct answer to a specific question. We are heartily in accord with the idea of bringing the best of our native plants into proper prominence in the garden, and would that there were more done in that direction.—Ed.)

HUGHES VIRGINIA CRAB APPLE.

From what Pennsylvania or New York nursery can I get a few young trees of this? It is a very small, juicy apple and used only for making cider.—A. J. VALENTINE, Pennsylvania.

Private Gardeners' Mission.

BY P. O'MARA.

(Concluded from page 177.)

Mr. William Jamieson of Chestnut Hill, Pa., raised the fine chrysanthemums, *Flora Hill* and *New York*. Mr. Henry Surman of Germantown, Pa., is the raiser of *Mrs. L. C. Madeira*, *Miss Minnie Wanamaker*, *Mrs. E. W. Clark* and *Harry E. Widener*. Mr. Kenneth Finlayson, gardener to Dr. Weld, Brookline, Mass., raised *Mrs. E. B. Freeman*. Jackson Dawson, Jr., raised *Theo*, valuable as a specimen plant.

I am indebted for much of the information relating to chrysanthemums to Messrs. T. D. Hatfield, Robert Craig and Lawrence Cotter.

The Double Abutilon (*Thompsonii plena*) was raised by a gardener in 1883, employed then by John Taylor Johnson, Esq., Plainfield, N. J., but whose name, unhappily, I have been unable to obtain.

We also have professional gardeners engaged in the fascinating pursuit of raising seedling orchids. I regret being unable to give a detailed list of the work done. The late William Robinson of North Easton, Mass., did much in that line, and I will never forget the day he showed me around and modestly pointed out the plants of his own raising. Mr. George Savage of Rochester, N. Y., also succeeded in raising seedling orchids to a flowering state. Mr. Henry T. Clinkaberry of Trenton, N. J., has succeeded in obtaining many interesting crosses, and the results will be eagerly watched by all lovers of orchids.

The foregoing is, I know, far from being a complete list, but it is sufficient to show that the professional gardener has a very honorable representation in horticultural annals in this country as regards the production of new varieties, and yet when we consider the number of sorts in commerce raised by commercial florists and the number of gardeners in the country, the thought becomes conviction that the latter have not as yet done as much as they should. It is true that many of our noted hybridizers are men who were professional gardeners before they became commercial florists, and it shows that the ability was in the ranks but was not employed. It was not altogether from lack of opportunity, because the gardener has it. The talent is in the ranks to-day, and it should not be allowed to lie dormant. There is ample room outside the field of cut flower varieties. We have yet to develop a race of garden roses, garden carnations, garden chrysanthemums, varieties suited to our climate. Why wait to get them from Europe or until the commercial florist should, while looking for cut flower varieties, stumble upon some good garden sorts? The material is at hand to work upon, and the professional gardener is the man who should supply it. His widest field is in the garden, and he has no competition in it to-day. In every line of summer garden flowers there is room for improvement, and if the gardener bends his energies in that direction we will soon have American-raised varieties suited to our American climate. Rest assured that if they are produced they will soon find their way into commerce, and the raiser will profit by it both in honor and pecuniary reward. This is part of the gardener's mission.

But the gardener has a yet higher mission. It is plain that the gardener, before all others, has a mission to broaden the horticultural spirit among the people. The commercial florist does it as a matter of necessity in most cases, but a mercenary motive is too frequently charged where it does not exist. No such motive can be attributed to the gardener. He is, or should be, the executive arm of those upon whom we look as the patrons of horticulture, and if he uses the influence of his position in the proper manner they will really become so. It has been well and truly said that "gardening is the most rational of all recreations. It teaches forethought, industry and economy of time. It exerts the mind, invigorates the frame and constantly reminds us of the great God whose hand is imprinted on every leaf, and who in His bountiful goodness rewards us with the fruits of the earth. To teach the cottager to manage his garden is to lead him to happiness. To induce the higher classes to

love flowers is to find them innocent gratification and provide employment for thousands." It is the mission of the gardener to do both. One gardener I know, Mr. Richard Lewis of Barrytown, N. Y., with the generous aid of his employer, Miss Catherine Cruger, is doing this. At the little village of Annandale, N. Y., is held yearly a rose show, where the humble cottager comes and exhibits often with material supplied originally by the promoter. I remember seeing a little boy on a crutch dragging a little wagon load of plants to the show, which he had grown himself from material supplied to him. What pleasure was thus added to that little desolate life. Mr. W. M. Edwards, whom many of you remember, told me that the village people had free access to the greenhouses of Mr. R. H. Hazard at Peace Dale, R. I., where he is now, and that he, with the authority of his employer, raises young chrysanthemums and other plants for distribution among those who will take care of them and are unable to buy them. Not only that, but they are told how to take care of them.

These men undoubtedly are fulfilling their mission. It should be more general. With a love of horticulture widely distributed in a community, the constable would have less to do. The man who manages his garden is almost invariably a good citizen, and the woman who looks after her window plants and garden is always a good housewife. The New York Gardeners' Society, with the aid of the New York Florists' Club, did a noble deed last summer when they gave a free exhibition to poor children at the Newsboys' Home in New York and distributed plants and flowers among them. Never will I forget the thousands of happy child faces that summer day as they went away with a plant or two and a bunch of flowers. Many a thrill of pleasure was thus sent into joyless homes. There should be something akin to this done by every horticultural society every year. The Moderation Society of New York and the Flower and Fruit Mission do praiseworthy work in this line, and if the gardener helps them with a few flowers and plants when appealed to he will, without question, be fulfilling his mission.

Another part of the professional gardener's mission, and one that is somewhat neglected is to assume his proper place in the current horticultural literature. A glance at the horticultural papers of the present time and those of thirty or more years ago will show that the gardener is not occupying the same plane now as then. Why this should be so is more than I can tell, but the fact is that in a private discussion in any gathering of gardeners you can hear sharp criticism and keen analysis of any current subject. This shows that the ability is not wanting, but that much of it is wasted on the desert air. Do not keep your lights under a bushel. If you see anything in print that seems wrong write a correction of it. You will be adding something to the sum of human knowledge and bringing honor to yourself and your profession. If you try, it is within your power to lift horticulture to a higher plane, and in doing so you elevate yourselves. Too much cannot be said in praise of the gardeners who are or have been educating the people through the horticultural papers. William R. Smith, William McMillan, William Falconer, Jackson Dawson, G. W. Oliver, E. O. Orpet, T. D. Hatfield, H. Clinkaberry, William Turner, A. P. Meredith, W. N. Craig, William Tricker, I. L. Powell, Samuel Henshaw, James McPherson, Peter Duff, Robert M. Grey, A. D. Rose and others. There should be more, and it is a pity that much of the matter never reaches the hands of the profession they represent with so much honor. "American Gardening" devotes space specially to the gardener and invites correspondence on horticultural matters. yet the invitation is not accepted as often as it should be—more's the pity. There are hundreds of men in the profession to-day who if they would could contribute much valuable information on gardening subjects. It is time to set the ball rolling. Even if a man makes a mistake and the proper spirit is abroad, he will find some one to set him right; that brings out discussion, the truth is developed, and there

CAMPBELL'S EARLY GRAPE

Our Marvelous New

Best and most valuable. Highest commendation from highest authorities. Hardy, healthy, vigorous, very productive. Early or late. Largest clusters, finest quality, not foxy. Seeds need not be swallowed. None genuine without our seals. We guarantee safe arrival by mail. Largest stock of Grape Vines in the World. Small Fruits. Introducer of unrivalled Red Jacket Gooseberry and Fay Currant. Catalogue free.

GEO. S. JOSSELYN, Fredonia, New York.

Mention American Gardening when you write

-Peach Trees-

The extra early new Peaches, Sneed, Triumph and Greensboro, one year heavy trees, \$1.50 per doz.; June buds, 12 inches and up, \$5.00 per 100.

JAPAN PLUMS and all other fruit and ornamental trees.

D. BAIRD & SON, Menashaen, N. J.

Mention American Gardening when you write.

NEW PINK VIOLET

MRS. J. J. ASTOR.

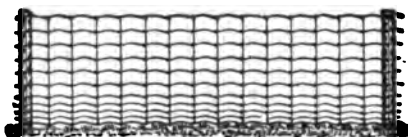
(Named by permission.)

Very fragrant, similar in form and habit to Marie Louise, but more vigorous, stems longer, flowers larger.

Price, \$2.00 per doz., \$10.00 per 100. Orders booked now and filled in rotation after May 1.

Marie Louise, \$1.00 per 100, any quantity. G. SALTFOORD, Violet Specialist, RHINEBECK, N. Y.

Mention American Gardening when you write



JACK AT ALL TRADES.

"A farmer should be able to construct everything needed on the farm" (?) If he wants a wagon, buy a few tools, spokes, hubs, felloes, etc. and make it. His time is nothing—he can't afford to help support big factories." The average farmer will advise you to "tell that to the marines," but many of them listen to just such arguments on the fence question. Are they wise?

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write

POSTPAID 20 GRAPE VINES for \$1.

4 Worden for \$5.; 4 Niagara, \$5.; 4 Moore's Early, \$5.; 4 Brighton, \$5.; or the whole 20 as above for \$1. Also Apple, Pear and other trees cheap. 1,000 Strawberry plants, 25¢ per 1000. Raspberry plants, 15¢ to 25¢ per 100, by freight or express. Everything guaranteed healthy and true to name.

F. L. WRIGHT, Plainfield, Mich.

Mention American Gardening when you write.



We have the largest and finest Collection of **PALMS, GERMES, FERNS and FOLIAGE PLANTS** for Conservatories, Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting Places and furnishing stock (free).

SIEBRECHT & SON'S,

Rose Hill Nurseries, New Rochelle, N. Y.

Mention American Gardening when you write.



Climax Baskets for Peaches, Grapes and Melons.

Mention American Gardening when you write.

GREENVILLE (formerly Downing's) APPLE

GREENVILLE STRAWBERRY or anything else in the nursery line. Send for free particulars.

Address. **E. M. BUECHLY, (Box 991) GREENVILLE, OHIO.**

Mention American Gardening when you write.

ONE HUNDRED DOLLARS AN ACRE

Can only be made from one source—POULTRY. Wheat and corn do not pay by comparison. You may smile, but have you ever tried keeping poultry right. The egg basket is a handy source of revenue these hard times. **THE POULTRY KEEPER, Box 20 PARKESBURG, PA.** sends a year tells how it is done. Sample free. The paper 1 year and four grand Poultry Books, \$1. Write to-day.

Mention American Gardening when you write.

GENERAL EXHIBITION OF ROSES, FLOWERS AND PLANTS,

1897, at Frankfort on-the-Main, from June until November.

The Programs of the permanent, as well as of the special monthly Exhibitions, also of Industrial Machines and Implements, have been published and can be obtained by everybody free of charge on application to the office of the above Exhibition.

Mention American Gardening when you write.

Andorra Nurseries

Specialties: Large specimen ORNAMENTAL TREES, large hardy RHODODENDRONS and AZALEAS.

2500 Norway Maples, 12 to 16 ft.; 2 to 3 in. caliper.
5000 Sugar Maples, 12 to 16 ft.; 1 1/2 to 2 1/2 inches caliper.
800 Swedish Purple-leaved Maple, 12 to 16 ft.; 2 to 3 inches caliper.
800 Sycamore Maple, 10 to 12 ft.; 1 1/2 to 2 1/2 inches caliper.
750 Weirs Cut-leaved Maple, 12 to 16 ft.; 1 1/2 to 3 inches caliper.
500 White flowering Horse Chestnut, 10 to 12 ft.; 1 1/2 to 2 1/2 inches caliper.
150 Purple Birch, 10 to 12 ft.; 1 1/2 to 2 1/2 in. caliper.

200 Golden Catalpa, 12 to 16 ft.; 1 1/2 to 2 1/2 inches caliper.
1200 Western Catalpa, 10 to 14 ft.; 1 1/2 to 2 1/2 inches caliper.
75 Weeping Weech, 8 to 12 ft.; 2 in. caliper.
500 Purple Beech, 8 to 12 ft.; 1 1/2 to 2 in. caliper.
1000 Oriental Plane, 12 to 16 ft.; 1 1/2 to 2 1/2 inches caliper.
50 Bellemea Poplar, 16 to 18 ft.; 2 1/2 to 3 1/2 inches caliper.
1500 European Linden, 10 to 12 ft.; 2 to 3 inches caliper.

WILLIAM WARNER HARPER, Manager, Chestnut Hill, PHILA., PA.

Mention American Gardening when you write.

is a gain all around. It should be needless to say that every gardener should belong to a horticultural society, if there is one near him. If there is none, then he has a mission to form one. Much can be done by co-operation that the individual could not accomplish.

And now, friends, in conclusion, I only desire to say that I hope the result of my talk to you may prove of some benefit to our calling both here and elsewhere. My aim has been largely an attempt to show that the professional gardener has a higher mission than men in any other vocation connected with the soil. It is one, indeed, that cannot, in my opinion, be placed on too high a plane. I am deeply sensible of the fact that the subject I chose could have been better and more ably expounded, but that it would be entered upon more earnestly I may be pardoned for doubting. The harp of horticulture has oft been swept by abler hands, but in the words of the poet, "A theme so high should its own worth supply." There is room for a sincere apprehension that a careful consideration of such matters as I have had the honor of presenting to you this evening is needed at the present time. What I have said is, perhaps, less applicable to this body than any other in the country, because you are doing and have done valuable work on most of the lines I have touched upon. You have your society in a flourishing condition, you give exhibitions, you teach the lessons of horticulture by precept and example. Your employers are liberal patrons of horticulture, largely, I believe, through your influence. It is to be hoped that you will continue, that you will with each succeeding year surpass the efforts of former ones, and hence that you will now and in the years to come receive the thanks of the community in which you live and labor is certain. You will thus set an example for others that will be far-reaching in its influence, because as you make these rugged hillsides to bloom and bear fruit, as you wring from an inhospitable nature the treasures she would keep safe-locked within her bosom, you show the possibilities of our beloved art, and you once again prove that even "He who makes two blades of grass grow where only one grew before is a benefactor to his race." How much more then he who practices and teaches the higher branches of horticulture?

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

THOMPSON'S SONS, Rio Vista, Va.—Wholesale Price List of Strawberries, Grapes, etc. (Illustrated.)

SCHLEGEL & FOTTLER, Boston, Mass.—Illustrated Descriptive Catalogue of Seeds, Plants and Bulbs.

GRALLERT & CO., Colma, Cal.—Wholesale List of Carnations, Chrysanthemums, Pelargoniums, etc.

HENRY F. MICHELL, Philadelphia.—Illustrated Descriptive Catalogue of Highest Quality Seeds.

BARBIER BROS., Orleans, France.—Price List of Yellow-flowered Hairy Chrysanthemums, Leocadie Gentils.

JOHN C. MONINGER CO., Chicago, Ill.—Catalogue of Greenhouse Lumber, Ventilating Machinery, etc.

ELIZABETH NURSERY CO., Elizabeth, N. J.—Illustrated Descriptive Catalogue of Trees, Shrubs and Plants.

THE CLEVELAND SEED CO., Cape Vincent, N. Y.—Wholesale Price List of Peas, Beans, Corn and Vegetable Seeds.

PHOENIX NURSERY CO., Bloomington, Ill.—Price List of Nursery Stock, Roses, Bulbs, Greenhouse and Bedding Stock.

CALIFORNIA NURSERY CO., Niles, Cal.—Descriptive Catalogues of Fruit Trees, Small Fruits, Ornamentals, Plants, etc.

W. N. SCARFF, New Carlisle, O.—Catalogue of Small Fruits, etc.; contains a handsome colored plate of the Eureka raspberry.

E. E. BURWELL, New Haven, Conn.—Price List of Choice, Select Vegetable Seeds; Burwell's X-tra Flat Dutch cabbage a specialty.

R. & J. FARQUHAR & CO., Boston, Mass.—Illustrated Descriptive Catalogue of Reliable Tested Seeds, Plants, Bulbs, Fertilizers, etc.

THOMAS S. WARE, Tottenham, Eng.—Catalogue of Chrysanthemums, Lilies, Begonias, Gladiolus, etc.; also Catalogue of Flower Seeds.

ARMSTRONG & McKELVY
Pittsburgh.
REYMER-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHRENSTOCH
Pittsburgh.
ANCHOR
Cincinnati.
ROCKSTEIN
ATLANTIC
BRADLEY
BROOKLYN
JEWETT
WILSTER
UNION
SOUTHERN
SHIPMAN
COLLIER
MISSOURI
RED SEAL
SOUTHERN
JOHN T. LEWIS & BROOK
Philadelphia.
MOSELEY
Cleveland.
SALKIN
Salem, Mass.
CORNWELL
Buffalo.
KENTUCKY
Louisville.

THERE is a right way to paint and a wrong way. The right way is to have the best paint—Pure White Lead (see list of genuine brands) and Linseed Oil—applied by a practical painter. The wrong way is to get some mixture about which you know nothing and apply it yourself or have some inexperienced, irresponsible person do it.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

Hale's Fruits

Are up to date market and family varieties. 1200 acres fruiting fields enables me to sell more dollars worth of fruit annually than any ten other nurseries. Free book tells whole story. I get my money back selling trees and plants at half agents prices.

J. H. HALE, South Glastonbury, Conn.

Mention American Gardening when you write.

"FLOWER QUERIES" New book on floriculture 10 Chapters, written in questions and answers, discussing 500 floral topics. Price, 25 cts. The COURTESY, Box A, Chatham, N. Y. Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan Ivy, 2 years, \$3.00 per 100.

E. S. PETERSON, Montrose, New York. Montrose Nurseries.

Mention American Gardening when you write.

PRIZE WINNING DAHLIAS

\$1.00 per doz. Catalogue Free.

LOTHROP & HIGGINS, E. Bridgewater, Mass.

Mention American Gardening when you write.

Buy "Direct from Nursery," Best.

TREES AND PLANTS

At WHOLESALE PRICES, Catalogue FREE.

RELIANCE NURSERY CO., Box 300, Geneva, N. Y. Mention American Gardening when you write.

ALL THE LATEST NOVELTIES

AND PLANTS THAT CAN'T BE HAD ELSEWHERE.

Cannas, Italia and Austria, at \$1 each.

New Roses, New Fruit, New Shrubs, New Bulbs.

10 Cents for \$1.—5 for 50 cts. Book on Cacti 115

pages, 100 cts. 10 cts. Catalogues of New and Rare

Plants, Cacti and Bulbs free.

A. BLANC & CO., - Philadelphia.

Mention American Gardening when you write.

HALL'S FAVORITE. THE COMING NEW
See competition; the best introduced for years.
Forty other kinds pedigree plants. Raspberries,
Blackberries, Asparagus roots etc. Hem quarters
for Second Crop Seed Potatoes, double crop and
earlier than other seed.

Descriptive Catalogue Free.

J. W. HALL, - - Marion Station, Md.

Mention American Gardening when you write.

MICHIGAN WILD FLOWERS

Are remarkable for their great beauty, number of species, diversity of habit and use. Trees, shrubs, Vines, Orchids, Ferns, Bog Plants and Aquatics, suitable for all locations and conditions.

Send stamp for fine, illustrated catalogue.

THE MICHIGAN WILD FLOWER COMPANY,
ROCHESTER, MICH.

Mention American Gardening when you write.

READER IF YOU RARE FLOWERS

LOVE choices only, address ELLIS BROS., Keene, N.H. It will astonish and please. **FREE.**

Mention American Gardening when you write.

EXTRA FINE PLANTS.

Superior Quality. Carefully Graded.

Gooseberries, Raspberries, Strawberries, Currants, Blackberries, Grapes, etc.

I offer all standard varieties. Introducer of the PEARL GOOSEBERRY. Largest Grower of Small Fruit Plants in United States. Send for Circular.

ALLEN L. WOOD, Rochester, N. Y.

Mention American Gardening when you write.

TREES AND PLANTS.

FRUIT AND ORNAMENTAL, DECIDUOUS AND EVERGREEN, OLD STANDARD AND BEST NEW VARIETIES.

Large supply of SHADE TREES, 1 1/4 to 4 inch calliper.

KEENE & FOULK, BROOKWOOD NURSERIES, Flushing, N.Y.

Mention American Gardening when you write.

1840 Old Colony Nurseries. 1897

Hardy Shrubs, Trees, Vines, EVERGREENS and PERENNIALS.

A large and fine stock of well-rooted plants grown in a sandy loam. Good plants, best sizes for planting, very cheap. Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.

Mention American Gardening when you write.

EVERGREENS.

FINEST STOCK IN THE COUNTRY FOR NURSERY PLANTING, OR HEDGES AND WINDBREAKS.

MANY THOUSAND COLORADO BLUE SPRUCE.

And all standard sorts. For lowest prices,

Write C. L. WHITNEY, Warren, O.

Mention American Gardening when you write.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.60.

THE OHIO FARMER is a large, 30 page weekly, \$1 per year. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for illustrations, correspondence and Market Reports than any other of its class. It is the Best and Costs no more than others. Send for a SAMPLE COPY to THE OHIO FARMER, Cleveland, O.

THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1898—14 months, if ordered at once. Address all orders to AMERICAN GARDENING, P. O. Box 1697, New York.

WEEBER & DON,

Seed Merchants and Growers.

114 Chambers St., NEW YORK.

Illustrated Catalogue

of Vegetable and Flower Seeds

NOW READY.

EVERY GARDENER SHOULD HAVE ONE.

Free on Application.

Mention American Gardening when you write.

AUCTION SALES.**William Elliott & Sons**

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, March 23, 11 A.M.

A choice assortment of Roses, in bundles of ten, in ten varieties. A large quantity of well budded Ghent Azaleas, also Hardy Rhododendrons. Spring Bulbs of all kinds will also be offered.

Friday, March 26, 11 A.M.

Roses, Nursery Stock, Gladioli, Tuberoses, Caladiums, 500 Lilium Giganteum, 500 Pancratium Caribaeum.

At each sale a choice assortment of house plants, Ferns, Palms, etc., will be offered. Goods on view morning of sales. Catalogues free.

Mention American Gardening when you write.

CLEARY & CO., 60 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will begin their season on

Tuesday, March 23, at 11 A.M., with a complete assortment of Irish Grown Roses, Nursery Stock, Tuberoses, Caladiums, Dahlias, Canna Roots, Gladioli, also Holland grown Roses, Rhododendrons, Azaleas, Viburnum, etc. Sales every Tuesday and Friday hereafter. Catalogue on application.

Mention American Gardening when you write.

R. M. GARDNER & CO.,

199 Fulton Street, NEW YORK.

Will sell every TUESDAY and FRIDAY at their rooms at 11 a.m. H. P. and Standard Roses. A general line of Nursery Stock and Spring Bulbs.

Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the ad., and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSBOSCH BROS., bulbs and plants, Englewood, N. J.**STRAWBERRY PLANTS.** Circular free. Wm. Carson & Son, Rutland, O.**STRAWBERRIES.** Potatoes, Seeds. Catalogue free. Wm. Olds, Okemos, Mich.**O. F. BROWN,** Hamilton, Mass.—Sells plants, Raspberry, Blackberry and Currants.**DAHLIAS**—500 varieties. Flower or Vegetable seeds, \$1.50 per hundred packets. H. F. Burt, Taunton, Mass.**STRAWBERRIES.**—Best plants of the best varieties. 60 cts. per 100 by mail. Wm. Perry, Cool Spring, Del.**LOVELY ARBUTUS** plants, ferns and flowers cheap. Wyomahock Nurseries, Lebanon Springs, N. Y.**FOR SALE,** Farm of 160 acres, 1-2 mile from village of Ovid, Mich. For particulars write N. O. Moyers, Ovid, Mich.**RADISH and LETTUCE** Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedman, Rochester, N. Y.**GLASS** at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.**20 CINNAMON VINE** bulbs 10c. Six beautiful named varieties Gladiolus, 30c. Miss H. A. Heaton, Charlton, Saratoga, Co., N. Y.**MARIE LOUISE** Violets, extra healthy plants, rooted runners ready list of April, Violet clumps, April 30th. Price on application. F. G. Menno, Glen Cove, L. I., N. Y.**STRONG Rooted Strawberry** plants. Bubach Henderson, Haverland, Marshall, Barton's Solipsee, Beverly, Lovett, Brandywine, Greenville, Daley, Gandy. Order early. Prices right. E. I. Church, West Hanover, Mass.**SECOND** crop seed potatoes make early kinds larger and earlier. Be first, sure! New Queen, Thorburn, Burpee's Extra Early, etc. Prices very low. Free Pamphlet. John C. Pearce & Co., 430 W. Main St., Louisville, Ky.**STRAWBERRY PLANTS.** Try the Margaret Fountain, Michigan, Clyde, Glen Mary. Headquarters for Gandy, Brandywine Marshall, Parker Earle and all choice standards. Catalogue free to all. C. N. Flansburgh, Leslie, Mich.**CEDAR OIL INSECTICIDE,** better and cheaper than fir-tree oil, \$9.50 the gallon; \$1.00 the quart. Cedar Oil Soap, pound tins, 60 cents; half pounds 25 cents. Sold by seedsmen and florists. August Rolker & Sons, New York, P. O. Station E.**SUCCESS,** an early market berry, a seedling of the Bubach, fertilized by Michel's Early. Perfect blossom, an improvement on Bubach in size, firmness and quality. Early and productive. Dozen, 40 cts.; 100, \$1; 1,000, \$6.—Address Originator, Geo. N. Hannah, Whitville Conn.**WIXON PLUM TREES.** Very extra stock, many with fruiting buds. Over forty varieties oriental plums now being tested. Can furnish many of fruiting age. The latest size are really the cheapest trees to plant. Our stock is clean, healthy, vigorous, with perfectly formed heads. Address Bridgeport Nursery, Bridgeport, Conn.**COLLECTION J.**—1 vine of the new red grape, "Alice," \$1.00; 1 vine each Worden, Brighton, Niagara and Diamond, 60 cts. Free by mail for \$1.00. Collection K.—One vine each Agawam, Brighton and Delaware (reds); Concord, Moore's Early and Worden (blacks); Diamond, Niagara and Rockington (whites). Free by mail for 75 cts. Address M. H. Ridgeway, Wabash City, Ind.**GOLD-COIN VINELESS.** I am the originator of this improved strain of the vineless Sweet Potato, and I will send free a full history of it and how it was brought to its present state of perfection, and how to grow them successfully, for 10 cts. in stamps I will include a sample potato, and the stamps may be deducted from the first order. Willam T. Simpson, Box 74, Pine Bluff, Ark.**GLADIOLI, CANNAS, CLIVIAS,** Souchet and Lemoine's novelties first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings, Cannas, Italia, Austria, and best standards. New Hybrid Clivias. Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.**1,000,000** Strawberry Plants of 30 well tested varieties, from \$1.50 to \$3.00 per 1,000. 100,000 Michel's Early, \$1.25 per 1,000, \$10 per 10,000. All healthy, young well rooted plants, true to name and securely packed free. A good stock of No. 1 Peach-trees of a few well tested reliable varieties, healthy and free from scale. Get my price list before purchasing. Any information of varieties culture etc., cheerfully given to those who want stock. Address Chas. Black, Hightstown, N. J.**20 ACRES** rich, level farm land, free from rocks and swamps, and especially adapted for truck, fruit, cotton and tobacco raising, for \$300, payable \$10 down and \$1 or more weekly. Convenient to great eastern markets, in thickly settled section of Virginia. Genial climate all year. Splendid water. Schools, churches, stores, mills and desirable neighbors. Good fire and title guaranteed. No malaria, mosquitoes, blizzards or floods. Taxes and freight rates low. For further information write to D. L. Raley, 211 S. 10th St., Philadelphia, Pa.**LARGEST STOCK** of Strawberry, Raspberry, Blackberry, Gooseberry, Currant and Grape to select from in Michigan. Crescent, Warfield, Lovett, and Michel's Early, \$1.50 per 1000. Greenville, Haverland, Jessie, and Beder Wood, \$1.75 per 1000. Bubach, Dayton, Enhance, Gandy, Parker Earle, Timbrell, \$2.00 per 1000. Cuthbert, Hansel, and Turner, \$3.25; Palmer, \$4.00. Kittatinny, Early Harvest, and Wilson, \$4.00. Concord Grapes, \$12.00 and \$16.00 per 1000. True to name. No. 1 stock. Address Wm. C. Babcock, Bridgman, Mich.**WANTED.**

[Rates, etc., same as in "For Sale" column.]

WANTED.—An assistant for general greenhouse work on private place, also a man for vegetable garden, etc. Apply, in first instance to R. Astley, Hastings-on-Hudson, N. Y.**WANTED.**—A married man to manage and work a place in fruit, flowers and vegetables, one mile from city, either on a salary or to take an interest. To a first-class sober man this is a splendid opportunity. Address Evergreen, 272 Second St., Memphis, Tenn.**PRIVATE GARDENERS.**

We solicit for publication under this heading notes on the work being done by private gardeners, changes in appointment, and all matters of interest to horticulturists generally.

Auction Sales.

Tuesday, March 23.—Hardy Roses, Standard Roses, Lilacs, Hydrangeas, Nursery Stock, Spring Bulbs, at Elliott's Room, New York.

Irish Roses, General Nursery Stock, Bulbs, and Spring Plants, at Cleary's Rooms, New York.

Dwarf H. P. and Standard Roses; Azaleas, Paeonies, and Flowering Shrubs, at Gardners' Rooms, New York.

Friday, March 26.—Sales will also be held as indicated above.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

At Plainfield, N. J., on Feb. 23, Michael McCarthy, aged 50, gardener to Mrs. J. H. Ackerman, was found dead at the foot of some cellar-stairs. He had fallen down, and the head was crushed by contact with the cement floor.

At Germantown, Pa., a gardener, Christopher Mooney, 40 years of age, was pruning trees in the grounds of No. 336 Manheim street, on Feb. 27. He went up a tree in order to remove a dead branch, and, falling, was instantly killed.

J. Brydon is leaving Yarmouth Port, Mass., to take charge of the new establishment of Mr. Thayer at South Lancaster, Mass. This move is by request of his former employer there, Miss Simpkins, who now presides at the new place as Mrs. Thayer. Considerable alterations are to be made, and ten new greenhouses to be erected.

Mr. R. H. Warder, Superintendent of Parks at Cincinnati, Ohio, has been badly hurt in a rear end collision on the Baltimore and Ohio road, near Loveland, Ohio, on March 5. He is progressing favorably.

Mr. William R. Wood, gardener to Dr. C. N. Hoagland, Glen Cove, N. Y., has returned from a trip to the old country. During his absence the place was in charge of John Martin, who, while gardener to August Belmont, Esq., Hempstead, N. Y., received favorable notice in American Gardening for his work there. Mr. Martin is now looking for a head gardener's position.

Mr. James Scott, until lately gardener to E. T. Butler, Esq., of Tottenville, S. I., as gardener to H. M. Johnson, Esq., of Bay Shore, L. I. Mr. Scott commenced his duties here on March 1.

Mr. Henry Wild of Brookline, Mass., succeeds Samuel J. Trepons as gardener to Mrs. A. W. Blake, Brookline, Mass.

Mr. G. Draycott, late with D. O. Mills at Mill Brae, Cal., entered upon his duties as gardener to W. H. Parson, Esq., Rye, N. Y., March 15.

Mr. A. Ingram, representing Messrs. Hugh Low & Co., London, England, arrived from Europe on Saturday last, March 13.

Mr. J. J. Comont, representing James Carter & Co., London, has also arrived.

Mr. Thompson, well known to readers of "American Gardening" as a writer on forcing cucumbers, lettuce, radishes and other winter vegetables, has returned from Chicago, Ill., where he had charge of a commercial vegetable growing establishment, and is now in the city looking for a similar place.

Mr. George Bisset, brother to Mr. Peter Bisset, gardener to Gardener Green Hubbard, Esq., of Twin Oaks, Washington, D. C., is now assistant gardener with Wallace Gomersall, Fishkill-on-Hudson, N. Y.

Assistant superintendent, Mr. James McCollom, of West Side Park, Paterson, N. J., has been given temporary charge of the Paterson parks, consequent on the death of superintendent McCrowe.

Madison, N. J.

The members of the Morris County Gardeners' and Florists' Society met in Masonic Hall on March 10, when three new members

were elected. Considerable time was spent in discussing details for the future extension and popularizing of the society, its shows and meetings, and in consequence no essay was prepared for this occasion, but Mr. C. H. Atkins made a few remarks bearing upon science in connection with horticulture. He expressed the idea that gardeners generally might greatly enhance their own knowledge, further perfect their skill and raise the status of their profession generally to a higher plane of respect in the public mind if they only utilized some of their spare moments to delve in the mines of knowledge and acquire some of those precious gems of information buried there. Indolence too often replied, "Life is too short for these things," but think of the time we waste after all, and ponder if it is not possible to acquire a great fund of useful knowledge and yet be young in years. Botany alone may be a subject for a lifetime, but would not some of the rudiments bearing on the laws of growth and the classification of plants be of material assistance to the gardener? In chemistry too we might learn much of profit that would enable us to understand better soils, their formation and how to maintain them in the highest state of fertility. Entomology has large bearings upon the work of our pro-

Other contributors were A. L. Marshall, John Shore, A. Wengerter and E. Reynolds. C. W. Ward, Queens, N. Y., gave an interesting and instructive talk upon carnations, for exhibition, and general purposes.

The horticultural section of the American Institute will hold its next meeting Tuesday, April 13, when "forcing of fruits and vegetables" will be discussed. There will be a large exhibition of the following: grapes, strawberries, tomatoes, radishes, cucumbers, mushrooms, lettuce and other forced articles, such as salads and herbs. Any one wishing to contribute any of the above is most cordially invited by the president, Dr. F. M. Hexamer, No. 52 Lafayette Place, New York city, to communicate with him.

Medals for Novelties.

The Society of American Florists offers its medals for novelties and the following official notice is issued:

"Three medals of gold, silver and bronze, to be awarded to the originators of new hybrids or varieties raised from seed, or the discovery and introduction of new species or varieties that are decided improvements over existing kinds. The awards to be made in accordance with the following rules:

"No award shall be made for any plant that has not been grown at least two years in this country and exhibited at least twice before some regularly recognized horticultural society, where it shall have received a first class indorsement in writing by said society. Further, that it have the indorsement in writing of three members of the Executive Committee before it shall be considered by the full Executive Board, and then only shall such award be made by a two-thirds vote of the committee, such species or variety to be shown in plant form and cut state where practicable. Not more than one medal shall be awarded in each class and not more than three in all in each year.

(Signed) "WM. J. STEWART,"
"Secretary."

Just what the foregoing notice really means can only be guessed at. We are not told by what means the novelty is to be brought before the society. In any case it is pretty certain that no medal will be awarded, since the restrictions are so rigid and exclusive. What is the sense in having the proviso of exhibition "at least twice before some regularly recognized horticultural society?" Is the S. A. F. afraid of its own opinions, that it will only give a second-handed award? What is a "regularly recognized" society? In the preamble it is stated the medals are offered to "the discovery and introduction of new species." Assuming this means "discoverer and introducer," is not this altogether too exclusive? The introducer of a novelty is rarely its discoverer; then what are the "classes" referred to in the last sentence? In short, the entire notice demands revision before it is comprehensible.

Obituary.

Henry McCrowe.

Henry McCrowe, who for the past three years had been Superintendent of Parks at Paterson, N. J., died in that city on Sunday last, March 14. He was fifty years of age. Mr. McCrowe had been in ill health for more than two years, and was incapacitated for work for the past three months.

Deceased was born at Twickenham Ferry, near London, and in his younger days was apprenticed to Velthe. He was afterward gardener to the Marquis of Bath, and worked for some time in Sanders' nurseries at St. Albans. He came to America ten years ago as gardener to J. R. Pitcher, Esq., and then went to Woodstock, Vt., where he gathered an extensive collection of orchids. Subsequently he became gardener to Mr. J. E. Brown, of Bellport, L. I. Later he did some landscape work, among which was the laying out of the grounds of Banker Lanier at Westbury, L. I. He, in partnership with J. S. Parks, commenced in the florist business at Patchogue, L. I., which he relinquished to accept the position he held at the time of his death.

Mr. McCrowe had an intimate knowledge of plants. He was superintendent of the New York Flower Shows for two successive years, a post which he filled with much acceptance. Obliging at all times, he was well liked by all the exhibitors. At the last election of officers of the New York Florists' Club he was the unsuccessful candidate for the presidency.

A Woman Florist.



5
EVERBLOOMING ROSES
Red, White, Pink, Yellow and Blue
FOR 10cts

ALL WILL BLOOM THIS SUMMER.

Send 10 cents for the above Five colors of Roses. I want to show you samples of the Roses I grow, hence this offer.

- 5 of the loveliest fragrant everblooming Roses, 25cts
- 5 Hardy Roses, each one different, fine for garden, 25cts
- 5 Finest Flowering Geraniums double or single, 25cts
- 5 Carnations, the "Divine Flower," all colors, 25cts
- 5 Prize Winning Chrysanthemums, world beaters, 25cts
- 5 Lovely Gladiolas, the prettiest flower grown, 25cts
- 5 Assorted Plants, suitable for pots or the yard, 25cts
- 5 Beautiful Coleus, will make a charming bed, 25cts
- 5 Superb Large Flowered Pansy plants, 25cts
- 5 Sweet Scented Double Tube Roses, 25cts
- 5 Begonias and 2 choice Palms, fine for house, 25cts
- 5 Lovely Fuchsias and 3 fragrant Heliotropes, 25cts
- 5 Packets Flower Seeds, a Choice Assortment, 25cts

SPECIAL OFFER.—Any 5 sets for \$1.00; half of any 5 sets, 50cts; or the entire lot mailed to any address for \$2.50; or half of each lot for \$1.25. I guarantee satisfaction. Once a customer, always one. Catalogue Free. These plants will all grow with proper care. My great monthly "How to Grow Flowers," tells how. Add 5cts. to your order for it one year. Address: MISS ELLA V. BAINES, Box 6 Springfield, Ohio.

Mention American Gardening when you write.

SMITH'S SMALL FRUITS FOR 1897.

100 varieties. The best of the old and new sorts, including the new Egyptian Raspberry, one of the hardest blacks ever produced. Send for list.

B. F. SMITH,
Box 6, LAWRENCE, KANSAS

Mention American Gardening when you write.

ASSIGNEE'S SALE OF Hardy American Plants and Flowers

FINEST COLLECTION IN AMERICA.
40,000 Native Azaleas, five species well budded and with balls.

Entire stock of the well-known Highlands Nursery must be sold this spring. A great opportunity for Parks, Cemeteries and Owners of property contemplating large or small planting.

For lists, prices and information, address ASSIGNEE, Highlands Nursery, Kansas, N. C.

Mention American Gardening when you write.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER. Scotch, married, three children, ages respectively 5, 13, 15; desires position in first-class private place; thoroughly conversant with gardening and greenhouse work in all its branches, good all round grower, sober, honest, industrious, can give exceptional references. W. F., P. O. Box 2541, N. Y. City.

A LADY wishes to recommend her thoroughly experienced head-gardener, as an able, skillful, industrious man, of good character, especially good with flowers, and all greenhouse work, age 34, married, with one little girl. Has the best of references; moderate wages. Address Mrs. W. L. P., 28 Gardner Park, Rochester, N. Y.

HEAD GARDENERS.—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of greenhouses, greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 35 & 37 Cortlandt St., New York.

GARDENERS, farmers, etc.—Employers desiring the services of reliable men to fill positions as above, are invited to correspond with us. Our Register are the names of excellent men whom we have known for a long time. No fee charged to any one.—R. & J. Farquhar & Co. Seedmen, 16 and 19 South Market St., Boston, Mass.

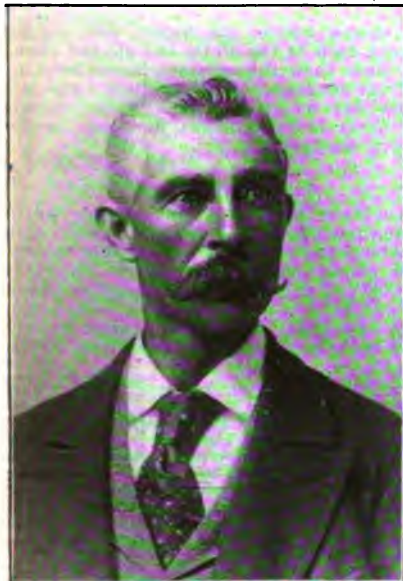


FIG. 67.—THE LATE HENRY MCCROWE.

fession, and should not be ignored, if we would know anything about the insect pests, ever more or less present and ready to discount our best endeavors. In all three of these subjects he had found the microscope a great aid, and advocated its more extended use by gardeners, whilst last, yet far from least, there were those long botanical names that we rolled off with great gusto when asked, but had not the faintest idea of their meaning or derivation. His object in making these remarks was to suggest lines of usefulness along which we, as members of this society, might work and help to advance each other, even to the extent of organizing classes, which could be done at a small incidental expense, well within the means of the members to bear.

New York.

The Gardeners' Society held its regular monthly meeting on March 13. J. A. Manda, South Orange, N. J., was elected an associate member, and as full members, J. Scott, R. Frank, E. C. Fischer, F. Thorber, F. Plumley, F. C. Schlegel. Nominated for membership, O. G. Owen and R. Astley.

The Carnation Exhibits.

C. Besold, Mineola, exhibited Mrs. Francis Joost (certificated) and Nero. J. N. May, Summit, N. J., put up a vase each of Maud Dean and Lily Dean; the latter received the society's certificate. A. Leslie, Westbury Station, contributed Buttercup, McGowan and Scott. Henry Weston, Hempstead, sent a seedling from Orange Blossom. H. Molatch Bay Ridge, put up two seedlings, a white and a scarlet.



— the unhappy and hopeless condition of many a wife and mother in the country home, all because they have not tried a remedy that is within their easy reach. One which has brought more health, happiness and sunshine into life than any remedy ever known. Its name is

Safe Cure

It never fails in

**BRIGHTS DISEASE,
URINARY DISEASES,
FEMALE COMPLAINTS,
GENERAL DEBILITY,
AND MALARIA.**

It is a purely vegetable preparation, and numbers its cures by thousands. Try it and walk in newness of life.

Large sized bottles or new style smaller ones at your nearest store.

Have you read about **THE COMET** \$2.50 to \$5.00. Beats them all. Don't buy till you see them. Send postal card for free data. A harvest for agts, write today. H. B. RUSLER, Johnstown, O. Mention American Gardening when you write.

BEST BOOK

For Market Gardeners

Published by a practical gardener, in closest touch with the markets. Tells what the most salable and best paying varieties are. Half-tone pictures show how they look. **RAWSON'S 1897 SEED BOOK** is mailed free and promptly to any one that writes for it.

W. W. RAWSON & CO.,
Boston, Mass.

Mention American Gardening when you write.

Vegetable Gardening

A New Book for the Farmer and Market Gardener. Profusely Illustrated.

BY PROF. S. B. GREEN.
Horticulturist Minn. State Experiment Station.
Endorsed by leading horticulturists East and West.

Price, postpaid, \$1.25.

Address

Webb Publishing Co., St. Paul, Minn.

Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

FERTILITY OF EGGS.

One of the worst puzzles of the season for the poultry enthusiast is that pertaining to properly fertilized eggs for hatching. If the fowls have free range, with access to the open ground and green stuff, the eggs will be all right if the hens are running with a good cock. But in confinement there are a dozen points to be looked after. Grit, shell, charcoal, etc., are always a necessity to the general health when hens are confined, and thus, of course, always affect the question of fertility. It will not do to be without them. Still less will it do to be without a good supply of green food. There is one supply, however, which many contend is better left out during the breeding season. This is meat. I am not yet prepared to speak authoritatively on the subject, but can say that our eggs hatched remarkably well last season, and meat was fed on every alternate day.

NEW IDEAS ABOUT RED SPIDER.

One of the most difficult insects to deal with hitherto has been the red spider. It has been generally understood that nothing but unlimited quantities of water and moisture in the atmosphere would keep it in check. I have had excellent success in using kerosene emulsion. But unless this is a real, well made emulsion it often injures the plants. A carnation expert has lately affirmed that if there is any one thing which spiders detest above all else it is fresh air; while they also resent abundant sunlight. He finds salt water a most effective spray for ousting red spider. From two to four two inch pots full of salt to three gallons of water may be safely used.

HOW MANY EGGS NOW?

Between the conceded fair average of ten dozen a year and the 200 and more claimed by some is a wide margin for interested inquiry. But just at present even this is discounted by the deeper interest in the inquiry as to how many eggs should be laid in the cooler months. Mr. Hunter, of Farm Poultry, is brave enough to lay down an exact rule as to what should be. He says that a flock of hens ought to produce 40 per cent. of their number in December, 50 per cent. in January, 75 per cent. in the three succeeding months. That is, if one has a flock of 100 hens the average yield should be 40 eggs per day in December. The flocks that actually produce this number are proportionately very few. But it may add discouraged ones to remember that Mr. Hunter is speaking of the ideal flock, composed largely, if not entirely, of early hatched, bright, vigorous pullets, and entirely lacking in "deadheads."

THE DRACAENA.

One woman says that the best plant in her whole general collection during some months past has been *Dracaena terminalis*. To be sure, it has not bloomed; but it has always been handsome, well furnished with leaves to the ground, and needing very little care, while it has always furnished as bright a spot of color as most blooming plants give. In selecting a plant of this class it is good to make a personal visit to the florist's whenever practicable, in order to secure a plant satisfactorily colored.

THE ROSE-COMBED BROWNS.

Every one who owns them takes it for granted that every one else knows that this appellation can mean nothing but the beautiful Rose-comb Brown Leghorns. They are certainly as pretty fowls as can be found; independent enough, if allowed, to forage at will, yet affectionate and dependent on their owners, and showing the utmost confidence. Plump as partridges the fully-feathered pullets closely resemble them after the first six weeks. The low, broad combs, that can give Jack Frost no hold, the round, yet long, muscular bodies bespeaking the laying constitution, the bright eye that lets no chance bug or tid-

Woman's Writes

Believe in Woman's Writes? Of course we do. Who could help it when women write such convincing words as these: "For seven years I suffered with scrofula. I had a good physician. Every means of cure was tried in vain. At last I was told to try Ayer's Sarsaparilla, which entirely cured me after using seven bottles." — MRS. JOHN A. GENTLE, Fort Fairfield, Me., Jan. 26, 1896.

Ayer's Sarsaparilla
..cures..

bit escape notice, the happy, low voiced speech each to the other, and all the time; all these show the constant layer, bred to it from generation to generation. And we know her by these whims, even though we never had a glimpse into the never-empty egg-basket.

MYRA V. NORRY.

ANY farm paper contains matter worth more than a dollar a year, if you could only separate the reliable from the unreliable. *The Rural New-Yorker* saves you this trouble and uncertainty. It is all reliable. We can send it and **AMERICAN GARDENING** both one year for \$1.80 and your money back in three months for *The Rural* if you want it.

Business Cards.

Cards will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, planta. labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. JOA. FORSYTH JOHNSON, P. O. Box 1697, New York City

GRAY HAIR MADE DARK

By a hairless Wash. Also makes the hair grow. Full directions and price for 25 cts. Mrs. A. HUTLEY, 4215 Evans Ave., St. Louis, Mo. Mention American Gardening when you write.

BEAUTIFUL TREES, PLANTS and NATIVE FLOWERS for parks, private grounds and the trade. Write for lowest prices. **W. M. HARRISON & SONS**, Wyomansack Nurseries, Lebanon Springs, N. Y. Mention American Gardening when you write.

TREES At Very Low Prices. Send now for Free Catalogue. Established 1890. 150 ACRES. **THE GEO. A. SWEET NURSERY CO.,** BOX 1591, DANVILLE, N. Y. Mention American Gardening when you write.

1,000 Peach Trees One year, from bud 2 to 3 ft., mostly branched, with freight prepaid to any station east of Miss. River for \$20; or 500 for \$11.50. Sample prepaid, 25c. Other sized trees proportional prices. R. S. JOHNSTON, Box 21, Stockley, Del. Mention American Gardening when you write.

Southern Vermont Nursery

GREEN MOUNTAIN GRAPE VINES, 25 cents each. VERMONT BEAUTY PEAR TREES, 5 to 6 feet, 25 cents each. Send for Catalogue.

C. A. HINSDILL, Prop., Lock Box 459, North Bennington, Vt. Mention American Gardening when you write.

BANANAS AND PAPAYAS

Greatest of all bedding plants, see illustration from life in American Gardening Feb. 27. Our original catalogue tells about the TROPICAL ORCHARD HOUSE, a new horticultural industry of greatest interest. Send for it. ROSE VALLEY NURSERIES, Dongola, Ill.

Mention American Gardening when you write.

WHOLESALE MARKET REPORT

New York.

The cut flower market is suffering from true Lenten guilness. Stock is in light supply, with demand light and prices low. Violets are very plentiful, with 50c. per 100 as the highest quotation. The average being only about 25c.

The vegetable market is cleaning up well day by day, with but little variation in prices. Southern stock has lightened up, and that which is arriving, especially lettuce, is poor quality. We understand that good stock will be ready soon, and will probably make this market about two weeks from this date.

Hot-house strawberries have become very scarce. Florida stock is plentiful, poor and cheap.

Apples remain stationary except for a very few extra fancy, which have realized outside quotations.

Cucumbers are more plentiful; No. 1 make \$1 to \$1.50.

Mushrooms are not doing so well as they did last week.

Hot-house tomatoes, 30c. per lb.

Hot-house lettuces have stiffened up considerably, and when good make a much better figure than for some time past. Good heads are worth 60c. to \$1 per dozen.

New potatoes, \$6 to \$8 per barrel.

Radishes, \$2 to \$3 per 100 bunches.

Fancy celery scarce and very valuable.

Asparagus is now good, and makes from \$2.50 to \$7.50 per dozen bunches, according to grade.

Vegetables.

Asparagus, Ch'n, choice, per doz. bchs 00@ 50

—Ch'n, culls, per doz. bchs..... 3.00@ 3 50

Beets, Florida, new, per bush, crate... 75

Cabbages, per 100..... 2 00@ 3 50

—Florida, per barrel crate..... 75@ 1 25

Celery, Cal., large, per doz. stalks... 80@ 1 00

—Average best, per doz. stalks... 30@ 40

—Small to medium, per doz. stalks... 15@ 25

Egg plants, Fla., per 1/2-bbl. box... 1 50@ 2 00

Kale, Norfolk, Scotch, per bbl... 60

Lettuce, Fla., f'r to gd, per 1/2-b. bask. 1 50@ 2 00

—N. C., per barrel..... 4 00@ 6 00

Onions, Eastern, white, per bbl... 3 50@ 6 00

—Eastern, red, per bbl... 3 25@ 5 50

—Eastern, yellow, per bbl... 3 00@ 3 25

Peas, Florida, per crate or carrier... 1 00@ 4 00

String beans, Fla., gd to fcy, per cra 8 00@ 14 00

Spinach, Norfolk, per bbl... 75@ 1 00

Tomatoes, Fla., p'me/fcy, per car'r... 2 00@ 4 00

Turnips, Canada, Russia, per bbl... 80@ 95

Apples.

N. Spy, fancy, per bbl... 2 00@ 2 50

N. Spy, common to good, per bbl... 1 00@ 1 75

Baldwin, Vt. and northern, prime... 1 37@ 1 50

Greening, Vt. and nor, prime, pr bbl... 1 50@ 1 75

Baldwin and Greening, Vt. good... 1 12@ 1 25

Baldwin, w'n N.Y., gd to fcy, per bbl... 1 25@ 1 37

Greening, up-river, per bbl... 90@ 1 12

Greening, w'n N. Y., prime, per bbl... 1 12@ 1 25

Greening, w'n N. Y., usual lots... 90@ 1 00

Greening, up-river, per bbl... 90@ 1 12

Greening and Baldwin, ord., per bbl... 75@ 90

Strawberries.

Florida, choice, large, bright, per qt... 28@ 30

—Common to fair per quart... 12@ 20

Philadelphia.

Business has been much better in this market this past week, buyers are more plentiful, and all kinds of vegetables are moving well. But there is still a scarcity of choice vegetables. Hot-house stock is still scarce. The growers around this section have evidently become disgusted at the low prices obtained during the past few seasons.

Apples are being held firm, receipts have fallen off, and a much larger quantity of second grade fruit is seen. Present prices are:

Spitzenburg, fancy, per bbl... 2 00@ 2 25

—Fair, per bbl... 1 40@ 1 75

Russets, fancy, per bbl... 1 40@ 1 75

Baldwins, fancy, per bbl... 1 80@ 2 00

—Fair to good, per bbl... 1 35@ 1 60

Greenings, fancy, per bbl... 1 00@ 1 25

Ben Davis, fair to good, per bbl... 1 25@ 1 40

Strawberries, Florida, are more plentiful,

and of much better quality. These have been

selling well at from 25c. to 35c. per qt.

Vegetables have not changed materially in

price or variety. There is a large demand

for new vegetables; anything that looks green

sells rapidly.

Beets, Fla., per 100 bunches... 2 00@ 3 00

Cauliflower, Fla., per 1/4 bbl. basket... 1 00@ 1 75

Cabbages, Fla., per bbl. crate... 1 00@ 1 25

Cucumbers, hot-house, per doz... 1 50@ 1 75

Celery, best grade, per doz. stalks... 50@ 70

—Fair to good... 30@ 40

Lettuce, Fla., 1/4 bbl. basket... 2 00@ 2 50

—Fair to good... 1 25@ 1 50

Mushrooms, per qt... 25@ 40

Onions, Eastern, white, per bbl... 4 00@ 6 00

—Eastern, yellow, per bbl... 2 75@ 3 25

—Eastern, red, per bbl... 3 00@ 3 50

Peas, Fla., per crate... 2 00@ 2 50

String Beans, Fla., per crate... 2 25@ 3 00

Spinach, Norfolk, per bbl... 1 00@ 1 25

Tomatoes, hot-house, per lb... 25@ 30

—Florida, fancy, per carrier... 2 50@ 3 00

—Florida, fair to good... 1 50@ 2 00

BIG BARGAINS in ROSES, PLANTS and SEEDS.

Grand SET of 13 Elegant Ever-blooming ROSES for only 50 cts. by mail, post-paid, safe arrival and satisfaction guaranteed.



La France, light pink, everybody's favorite. The Queen, pure white. Cleopatra, lovely shell pink. Beaute Inconstante, amber rose and yellow. Coquette de Lyon, deep golden yellow. Chas. Legrand, red shading to darkest crimson. Victor Hugo, bright pink and carmine. Augusta Victoria, the best white rose. Maman Cochet, rosy pink and silver, lovely. Md. Scipion Cochet, will produce more roses than any other variety. Henri Rignon, Copper yellow, center lake, red. Princess Marg, richest velvety crimson. Bridecandid, the best of all pink roses.

What You Can Buy for 50 Cents.

- Set 34—13 Ever-blooming Roses all different 50 c.
 " 35—13 Fragrant Carnation Pinks, 12 kinds, 50 c.
 " 36—8 Lovely Flowering Begonias, all sorts, 50 c.
 " 37—13 Geraniums, all colors and kinds, 50 c.
 " 38—13 Choice Prize Chrysanthemums, 50 c.
 " 39—4 Choice Deco ative Palms, try them, 50 c.
 " 40—5 Dwarf French Cannas, 5 kinds, 50 c.
 " 41—13 Sweet Scented Double Tube Roses, 50 c.
- Set 42—20 Large Flowered Pansy Plants, 50 c.
 " 43—15 Coleus, will make a bright bed, 50 c.
 " 44—13 Double and Single Fuchsias, all colors, 50 c.
 " 45—9 Choice Hardy Shrubs, 6 sorts, 50 c.
 " 46—30 Pkts Flower Seeds, no two alike, 50 c.
 " 47—20 Pkts elegant Sweet Peas, all different 50 c.
 " 48—13 Pkts Choice Vegetable Seeds 13 sorts 50 c.

You may select half of any two sets for 50 cents, or 3 complete sets for \$1.25, any 5 sets for \$2.00, the entire 13 sets for \$3.00; or half of each set for \$2.50. Let your neighbor to club with you. Our catalogue free. ORDER TO-DAY. We will hold the plants and ship them any time you may desire. Address, THE GREAT WESTERN PLANT CO., BOX 32, SPRINGFIELD, OHIO.

Mention American Gardening when you write.

WE HAVE IT AT LAST!
 AN
EARLY DWARF
 LARGE FLOWERING
 Cosmos.

Blooms from July till frost.
 Grows only 4 1/2 feet high.
 Color Snowy White, tinted with Rose.

THE FINEST
 NOVELTY of the YEAR.
 PRICE 25 cts. PER PACKET.
 and to each purchaser will be sent
FREE
 DREER'S GARDEN CALENDAR 1897

A handsome book of 168 pages, with beautiful litho-embossed cover showing the new Cosmos in color and containing illustrations and descriptions of all the valuable new and standard seeds, plants & bulbs.

HENRY A. DREER.
 714 CHESTNUT ST.
 PHILADELPHIA.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

Berberry, California Privet and Japan Quince

For Ornamental

HEDGES.

HARDY ROSES ON OWN ROOTS.

Write for Prices to

FAIR OAKS NURSERY, OAK PARK, ILL.

Mention American Gardening when you write.

NURSERY STOCK

Apple, Pear, Plum, Peach, Cherry and other trees, Grape Vines, Currants, Rasp., Straw., Black and Gooseberries sold at lowest living prices.

We furnish large trees and plants by freight or express, and smaller but extra well rooted and thrifty ones by MAIL POSTPAID. Everything guaranteed TRUE TO NAME. NORTHERN GROWN AND HEALTHY. Will send you one yr. trees by mail as follows: Peach 7c., Apple 7c., Pear 25c., Plum 15c., etc. Large trees by freight or express at same price. Our price list is free, or our 84 page catalogue, which gives full descriptions, cultural notes, etc., for 30c., which amount may be deducted from your first order of \$2 or over. We can do you good and save you money. See our adv. of Grapes by Mail in another column. Nursery established in 1877.

F. L. WRIGHT, Plainfield, Mich.

Mention American Gardening when you write.

WINTZER'S NEW AMERICAN PEDIGREE CANNAS

1897 set—12 magnificent varieties, including Duke of Marlboro, Duchess of Marlboro, Maiden's Blush, Gloriosa, Triumph, California, Sunset, Champion, Pillar of Fire, Brilliant, Lorraine, and Golden Pearl—embracing the newest and most distinct colors and the highest types of Cannas yet produced. Descriptive List of New and Rare Cannas, with Catalog of New Rose, Plants, Flower Seeds and Garden Fruits, FREE.

ALFRED F. CONARD, Box C, West Grove, Pa.

Mention American Gardening when you write.

Knight's . . . Catalogue . . .

OF SMALL FRUIT PLANTS

Should be in the hands of every one who intends to purchase plants. Michigan northern grown plants are the best obtainable and my price was never so low. I can save you money. Millions of plants of all leading varieties.

DAVID KNIGHT,

Sawyer, Mich.

Mention American Gardening when you write

Established 44 Years.

ARCHDEACON & CO.

Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

PROFIT IN FRUIT

DEPENDS LARGELY UPON THE EMPLOYMENT OF BETTER METHODS.

SPRAYING Helps Amazingly.

We make everything used for SPRAYING and tell all about it in our Book on Spraying. Formulas for insecticides; when and how to spray—FREE.

THE GOULDS MFG. CO.
 11 Ovid St., SENECA FALLS, N. Y.

Mention American Gardening when you write.

Questions Answered.

This is a Bureau of Information, to which subscribers can apply freely for advice on any and all subjects in the field of horticulture.

In order to lessen labor, and that the Editor and his friends may understand each other, the following rules must be observed:

Rules for Correspondents.

Questions must be concise, plainly written on one side of the paper only, and addressed INQUIRY DEPARTMENT, AMERICAN GARDENING, P. O. Box 1697, New York City.

Letters appertaining to subscriptions, or other business matters, should be directed separately; otherwise delay may follow.

The name and address of the sender is required, in addition to a nom de plume. Use a separate sheet of paper, not a scrap, for each question. Questions will be attended to without delay. If by mistake a query fails to be answered, it should be repeated.

Specimens of plants for identification must be ample; mere scraps will not do, and no notice can be taken of such.

Questions relating to insects or diseased plants should always be accompanied by specimens, packed in a tin box, and forwarded at letter postage. Always send a liberal sample.

Conditions and soils vary so infinitely that we would be pleased to have our correspondents describe theirs.

Correspondents referring to articles which have appeared in AMERICAN GARDENING should mention page and date of issue.

We cannot promise to comply with requests to answer by mail.

**. We cannot undertake to reply by mail.*

Worms on Vines.

(Early last summer I discovered black, woolly caterpillars on my Dutchman's pipe vine. The leaves were being perforated. I applied hellebore in water, but they did not seem to mind it, so I had to catch them by hand. Late in the season they appeared again. What can I apply to vine that will kill caterpillars and not injure the vine?—G. H.)

—Spray with some arsenite, say, paris green.

Greenhouse Management.

(My greenhouse of three-quarter span, 30x17 feet, is ventilated by five windows on the south side, each three feet long by twenty inches wide. If the sun comes out ordinarily I cannot keep the temperature below 80 degrees from 10 until 4 o'clock. The air strikes down when I open them fully. Do you think a temperature of that sort would take the chill off the cold air before it would reach the plants, supposing the temperature outside was at 20 or 25, with the air not very brisk? Would you advise me to get the patent crank? Also give me remedy for a draft from the ventilators.—SUBSCRIBER.)

—You do not say whether all fire heat has been stopped or not when the temperature is so high. If it is only brought on by sun heat but little harm can come of it; the ventilators may be opened during such time providing the wind is not blowing straight in. The extent of opening must always be according to the outside temperature and wind and the tenderness, or class, of stock within. There is no rule which can be laid down. What kind of ventilator is a question of expense and desires, also convenience, and in this last respect the improved machines now on the market are very desirable; also they allow of little or much air according to what may be needed.

Hyacinths Not Flowering.

(I have some hyacinths which will not bloom. I potted them in good soil, mixed with a little manure, and put them in the cellar for about eight weeks. I then brought them upstairs and put them by a window, where the sun shone about five hours daily. The thermometer registered about 70 degrees during the day and about 65 degrees at night. They come up all right until they commence to show their buds, and then the buds rot off. I give them water when they need it. Will you please state the cause for this?—J. D.)

—Lack of root action. Possibly exposed to the strong light and heat before the soil was filled with roots. Very frequently the flower spike is injured while yet hidden away in the bulb; when that is so the fault is with the bulbs and not yourself.

How to Grow Mignonette.

(My mignonette has been a failure for two years. I have planted different kinds in different parts of the garden. It comes up nicely but seems to blight. What is the matter?—GEORGE HOLMES.)

—Try a position not quite so exposed. When we had the same experience it was found that by sowing a little seed at random among other crops, letting it do just as it liked, we got good Mignonette. Possibly you may benefit in the same way.

P. & M'S BULBS ARE BLOOMERS.

"A Flower in Every Bulb."

Plant them—See them start—Daily develop into strong, beautiful plants—And finally burst into their full glory of bloom, a sight at once refreshing and elevating. We prepay express charges. This collection will be delivered at your door promptly upon receipt of price.

20 DISTINCT VARIETIES OF BULBS \$2.00.

1 Single Begonia,
1 Double Begonia,
1 Single Dahlia,
1 Double Dahlia,
2 Gladiolus, scarlet,
1 " " white,
1 " " striped,
1 " " pink,
1 " " yellow,

1 Tiger Lily,
1 Golden Banded Lily of Japan,
1 Pure White Japan Lance Lily,
1 Dark Red Japan Lance Lily,
1 Amaryllis Vallota Purpurea.

1 Caladium esc., or Elephant's Ear,
3 Gloriosa,
1 Giant Summer Hyacinth,
1 Cinnamon Vine,
6 Excelsior Pearl Tuberoses,
1 Madeira Vine.

By express prepaid for \$2.00.

PITCHER & MANDA, JOHN N. MAY, Short Hills, N. J. RECEIVER.

Mention American Gardening when you write.

STRAW
RASP
BLACK
GOOSE
DEW

ASK WM. C. BABCOCK, BRIDGMAN, MICH.,

For prices of strong STRAWBERRY PLANTS, dug out in solid blocks, not from between the rows, true to name. Competition Defied. QUALITY considered. Complete Stock of CURRANTS AND GRAPES. (Mention this paper.)

BERRY
PLANTS

Mention American Gardening when you write.

BOWKER'S FERTILIZERS

for HOUSE PLANTS,
LAWNS, GARDENS,
FARM CROPS.

A book on "Window Gardening," and enough odorless fertilizer for thirty plants three months, sent by mail for 25c.

Catalogue free. State for what purpose fertilizer is wanted when writing. BOWKER FERTILIZER CO., Boston.

Mention American Gardening when you write.

BUY DIRECT and pay but one profit. Our assortment is one of the best and most complete in

Fruit and Ornamental Trees, Shrubs, Plants, Roses, Vines, Bulbs, Seeds.

Rarest new, choicest old. Send for our catalogue today; it tells it all; an elegant book, 168 pages, magazine size, profusely illustrated, free.

Seeds, Plants, Bulbs, Small Trees, etc., by mail postpaid, safe arrival and satisfaction guaranteed, larger by express or freight. 43d Year. 32 Greenhouses. 1,000 Acres.

THE STORRS & HARRISON CO., Box 123, Painesville, O.

Mention American Gardening when you write.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL FOR 1897

Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." 42c Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

THE WM. H. MOON CO.

Glenwood Nurseries, Morrisville, Pa.

Offer, for the SPRING OF 1897, a Complete Assortment of

EVERGREEN AND DECIDUOUS TREES.

Flowering Shrubs, Grasses, Dahlias, Climbers and Climbing Roses.

Special attention is called to the following.

Chestnuts, large varieties Numbo and Paragon.
Asparagus Roots, strong 2-year olds, Palmetto,
Barr's Mammoth and Conover's.
Strawberry-Raspberry, a Japanese Novelty.
Burbank's Golden Mayberry.
Industry Gooseberries and Fay's Prolific Currants.
Purple-leaved Beech, 4 to 6 feet.
Elms, American and English.
Horse-chestnuts, Lindens and Magnolias.
Maples, Norway, Sugar, Sycamore, Ash-leaved and Silver-leaved. By the thousand, from 6 to 12 or 14 ft.
Oaks, English, Pin, Mossy Cup, Red, Scarlet and Turkey.
Peppers, Carolina and Balsam.

Willows and Weeping Trees, in variety.
Hedge Plants. Evergreen and Deciduous varieties, including 200,000 California Privet, from 1 to 5 feet.
Evergreens, Arbor Vitae, dwarf and tall growing sorts.
Nordmann's Fir, from 1 to 3 feet.
Balsam and European Silver Fir.
Hemlock, Colorado Blue, Norway and White Spruce.
Retineoperns, in variety of all sizes.
Pines, White, Scotch, Austrian and Dwarf.
Evergreen Shrubs, including Mahonia, Hollies and Rhododendrons.
Deciduous Flowering Shrubs. General assortment of various sizes.

DESCRIPTIVE ILLUSTRATED CATALOGUE of 48 pages, containing prices, etc., to be had on application. Correspondence solicited.

Mention American Gardening when you write.

READ IN MARCH 13TH ISSUE OUR UNEXCELLED

PREMIUM OFFERS

....OF....

Plants, Trees, Seeds, Bulbs, etc., for New Subscriptions.

Our premiums are offered with a view to interesting present subscribers to obtain us New Subscriptions, and for so doing we expect them to obtain the new subscriber and retain the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. New names sent in direct are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

The Premiums offered are all of exceptional value; there is nothing bordering on the sensational in the various announcements, and great pains have been taken to secure offers from reliable growers and specialists. As we have previously stated, the publishers of AMERICAN GARDENING neither buy, sell, nor in any way do they trade in the stocks offered, except to mail the orders as received to the growers or dealers making the offers.

If you can place a few of our Premium Lists where they will do most good, we will be very pleased indeed to forward same on application.

ONE YEAR FOR 10 CENTS

We send our monthly 16-page, 48 col. paper devoted to Stories, Home Decorations, Problems, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents, if you send the names and addresses of six lady friends. **WOMAN'S FARM JOURNAL**, 4215 Evans Ave., Saint Louis, Mo. Mention American Gardening when you write.

INCUBATORS \$25, \$15, \$12 each. Brooders, 8 styles, \$6. Fowls, eggs, ill. dir., No. J. A. Chelton, Fairmont, Md. Mention American Gardening when you write.

GAMES FREE & useful articles for only 5-cmo. subs. to Poultry Keeper at 25c. Every poultry raiser wants this leading poultry paper. Sample free. Address **POULTRY KEEPER CO.**, Box 99, Parkersburg, Pa. Mention American Gardening when you write.

MONITOR INCUBATOR Illustrated Catalogue for stamp. Medal and Diploma Awarded at the World's Fair. A. F. WILLIAMS, 76 Race St. Bristol, Ct. Mention American Gardening when you write.

POULTRY BOOKS. ABC Poultry Culture 25 cts.; 500 Questions and Answers, 25 cts.; Poultry House Plans, 25 cts.; Pigeon Queries, 25 cts.; *Fancier's Review* 1 year, 50 cts. All \$1.00. Any 3 books, 40 cts.; 5 for 50 cts. J. DARROW, CHATHAM, NEW YORK. Mention American Gardening when you write.

CALIFORNIA LANDS ARE RICH

and only \$25 to \$45 per acre AT ESCROWING. Grow oranges, lemons, olives, prunes, apples, hay, grain, etc. Best summer and winter climates in U.S. Send stamp for illus. pamphlet to Escrow-lands Land & Town Co. at Escrowing, Los Angeles or San Diego, Cal. Mention American Gardening when you write.

BERKSHIRE, Chester White, Jersey Red and Poland China Pigs. Jersey, Guernsey and Holstein Cattle. Thoroughbred Sheep, Fancy Poultry, Hunting and House Dogs. Catalogue. S. W. SMITH, Chester Co., Penna. Mention American Gardening when you write.

HATCH Chickens by STEAM with the **EXCELSIOR** Incubator. Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced. Write for Catalogue. **W. C. ALL**, 114 to 122 S. 3rd St., Quincy, Ill. Mention American Gardening when you write.

HIVES and all supplies for the apianist. Send for (34 page) illustrated catalogue of "Cook's complete Hive," and pure Italian Bees. It tells how to make a start in beekeeping. It gives valuable hints. Address **J. N. M. COOK**, 62 Cortlandt St., N. Y. City. Mention American Gardening when you write.

FROM TOP TO ROOT

Every tree of every sort that Collins sells, is the best and most vigorous of its particular variety that can be grown. Choicest varieties only, carefully selected.

Illustrated catalog shows nearly 150 sorts of fruits, all kinds of nuts, finest berries, vines and nursery specialties. It's free—write for it.

ARTHUR J. COLLINS, MOORESTOWN, N. J.

Mention American Gardening when you write.

The Savannah Line

Ocean Steam-ship Co. of Savannah & New England & Savannah S. S. Co.

1400 Miles at Sea and a Week's Board, \$36.

For a short time the Savannah Line will sell First Cabin Tickets calling for transportation 700 miles each way, unexcelled meals and accommodations aboard steamer, transfers in Savannah, and two days' stop at choice of three first-class hotels at Savannah; in all, nearly a week's board in addition to transportation, etc., for THIRTY-SIX DOLLARS.

Through Tickets to JACKSONVILLE, ATLANTA, and all Points South. Steamers sail Tuesdays, Thursdays and Saturdays, from New York, and every four and five days respectively from Boston and Philadelphia, (see sailing cards.) Electric Lights, kept up all night so that passengers can turn them on or off at pleasure.

UNSURPASSED CABIN ACCOMMODATIONS, SEA SPRAY BATHS AND ALL CONVENIENCES.

Send three two-cent stamps for Savannah Line News, and beautifully illustrated book, something new, the **RICHARDSON & BARNARD**, Agents, 20 Atlantic Ave., Boston, Mass.; **M. C. HAMMOND**, Agent, Pier 18 S. W. Foot Spruce St., Philadelphia, Pa., or

G. M. SORREL, Manager, New Pier 35, N.R., New York

Mention American Gardening when you write.

WE OFFER AMONG MANY NEW THINGS

The Bismarck Apple—Bears splendid fruit on 2-year grafts. A remarkable new fruit.
Hedysarum Muplingum—A new Mongolian Shrub of great beauty.
Lord Penzance's Hybrid Sweetbriars—Worthy a place in every garden.
Viburnum Tomentosum—We consider this the finest shrub grown. Very rare.
Picea Cancezor—An improvement on the Blue Spruce.
The Weeping Spruce.
Clematis Paniculata—Without an equal as a hardy climber, 80 cts.
Magnolias, Japan Maples.
The best stock of **Herbaceous Perennials** in the country.
Rhododendrons and Azaleas at lowest prices quoted.

For all these, and full advice and plans for planting grounds and gardens, write us.

New Catalogue mailed for 10 cts.

THE SHADY HILL NURSERY CO., 102 State St., Boston, Mass.

Mention American Gardening when you write.

TREES-SHRUBS-ROSES

The largest and most complete collections of **GENERAL NURSERY STOCK** in America, including all desirable novelties. Beautiful Catalogue (168 pages—1896 edition) free to customers; to others 10 cents. Every intending buyer should have it.
ELLWANGER & BARRY, Mount Hope Nurseries, Rochester, N. Y.

Mention American Gardening when you write.

Whatever the Crop

or the conditions under which
it is raised, we can furnish

The Best Fertilizer

for it. In buying our products you gain all the benefit of our own exhaustive experiments in practical agriculture, covering more than the third of a century and checked by the experience of hundreds of thousands of farmers who have used

"BRADLEY'S"

Fertilizers with unvarying satisfaction upon millions of acres of land, upon all kinds of crops, and under all the varying conditions of soil and climate.

We manufacture fertilizers of ALL GRADES and FOR ALL CROPS, and being the LARGEST MANUFACTURERS OF CHEMICAL FERTILIZERS IN THE WORLD, as well as the LARGEST IMPORTERS OF CHEMICALS, our facilities are absolutely unequalled for furnishing all kinds of mixed or unmix'd, Agricultural Chemicals, Wood Ashes, etc. We positively producing value of everything we sell.

It will save you money to see our local agent before you purchase Mixed Fertilizers, or Raw Materials.

Bradley Fertilizer Company, Boston.

Rochester, N. Y.

Augusta, Ga.

Cleveland, Ohio.

ROSES

ALL ON THEIR
OWN ROOTS.

STRONG YOUNG PLANTS.

Your selection from our entire list, labeled, by mail.....	5 cents each, 20 for \$1.00
Our selection from our entire list, all different, labeled, by mail.....	25 " 1.00
Our selection from our entire list, all different, not labeled, by mail.....	30 " 1.00

LARGE SIZE PLANTS.

Your selection from our entire list, labeled, by mail.....	10 cents each, 10 for \$1.00
Our selection from our entire list, labeled, by mail.....	12 " 1.00
Your selection from our entire list, labeled, by express.....	12 " 1.00
Our selection from our entire list, labeled, by express.....	15 " 1.00
Our selection from our entire list, not labeled, by express.....	20 " 1.00

GERANIUMS.

STRONG YOUNG PLANTS.

Your selection from our entire list, labeled, by mail.....	5 cents each, 20 for \$1.00
Our selection from our entire list, all different, labeled, by mail.....	25 " 1.00
Your selection from our entire list, labeled, by express.....	25 " 1.00
Our selection from our entire list, all different, labeled, by express.....	30 " 1.00

CHRYSANTHEMUMS, BEGONIAS, FUCHSIAS, Etc.,

AT SAME PRICE. These prices are from our Catalogue.
Send for it by all means.

THE NATIONAL PLANT CO.,

DAYTON, OHIO.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 117.
COMBINED SERIES VOL. LI.

NEW YORK, MARCH 27, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Apple Scab..... 220	Morning Glories..... 230	Private Gardeners..... 226	Society Reports..... 227	Turnips..... 218
Bougainvillea..... 230	Novelties of the Season..... 221	Private Gardener and Employer..... 227	Soil for Roses..... 231	Vegetable Garden..... 218
Fruit Garden..... 220	Packing and Marketing..... 219	Questions Answered..... 231	Spinach..... 218	Vegetables, Diseases of..... 218
Greenhouse Making..... 231	Peas, Dwarf..... 231	Raspberry King..... 221	Strawberry, Carrie..... 221	
Hedge Quickly Made..... 218	Peach Borers..... 220	Rhododendrons Not Flowering..... 231	Strawberry, Hall's Favorite..... 221	
Home Plot, The..... 218	Phaenopsis Growing..... 228	Roll of Honor, The..... 226	Sweet Peas, Prizes for..... 227	
Horse Radish..... 230	Poisoned by Wild Plants..... 218	Roses, in Garden..... 231	Tariff, The..... 222, 223	
Insects and Legislation..... 222	Potatoes, English, in America..... 223	Seed, Life in the..... 217	Tree Planting..... 220	
Intensive Cultivation..... 231	Poultry Notes..... 230			
Market Reports..... 232				

The Life in the Seed.

"Strike while the iron is hot" is an old adage, and a sound one; but such advice carries with it the inference that the hammer is all ready for use and that the eye of the operative is keen for the work to be done.

In the garden, too, there is a lesson to be taken from this text. It behooves the gardener to be ready for work at the right moment, and undue haste, too, is to be avoided as much as is delay. It must not be forgotten that to put seed into the ground when the latter is cold and wet, just after the winter is past, is death to the seed; but as the time moves quickly when once the ground is ready, every one ought to be prepared with the necessary supply ready for use, so as to be able to "strike while the iron is hot."

Upon our first work in the garden will depend to a large extent the ultimate success or failure of the season. But, perhaps, the one point to insist on now is the necessity of securing the supply of seeds—an important duty that is too often neglected, and not only are purchases delayed, but selection is sadly overlooked.

The value of a garden is proportionate to its yield, both as regards quantity and quality, the latter matter being the prime consideration. Good vegetables and choice flowers can only be obtained by planting the best of seeds, and these can only

be obtained from the most reliable sources. True, poor results may be had from the most carefully selected seeds, much depending upon climatic conditions or upon causes over which the gardener has no control, but under no circumstances can he get good results from poor seeds.

There is a marked difference between seeds that are grown with the greatest care, united with a thorough knowledge of the principle of selection, studied with a view to securing certain esculent property in the vegetable, or form and color in the flower, and seeds which are grown simply to sell. There is a difference in their cost—in some instances a great difference—because of the difference in the cost of production. Good seeds cannot be sold at a low price, and at the same time no gardener can afford to plant other than the very best.

In the purchase of seeds a wise system to adopt is to buy of most classes sufficient for a two or three years' supply, and if, on the maturing of the vegetable, it be found just what was wanted, the next year is secure,

and, what is of still greater importance, it is known in advance just what can be expected from the seeds planted. The next year, lay in a one year's supply and plant a few seeds of each variety sufficient for a test, and the seedsman's non-warranty clause will cause little worry.

All vine seeds, if kept cool, dark and dry, are good for at least five years and will improve rather than deterior-



FIG. 68.—KING RED RASPBERRY. (See page 221.)

ate by age. All of the brassica family, particularly turnips and cabbage, will retain their vitality equally as long. Seed of rutabaga that was twelve years old has been planted with the best possible results. Beets and carrots lose their vitality somewhat sooner, but they are absolutely good for three years. Beans are good for three years, but an advance supply of them is not as necessary, as they can be judged by appearances. The main thing here is to know the best variety, while types are of more importance with other forms. By all means have a two years' supply of cauliflower seed on hand; there is a wide difference in varieties of the cauliflower. Egg plant seed is good for three or four years, and seed three years old is even preferable to fresh seed. Lettuce is more fickle, but it is always well to keep a year's stock on hand.

Onion seed loses its vitality much sooner than do most other seeds; as a rule it is good for two years, but it is safer to rely for this seed on the seedsman. Okra is good for three years, and for this esculent as well as ornamental plant it is not a bad plan for every gardener to save his own seed when he gets a variety that just suits him. Of other seeds there is nothing to be gained by the gardener saving his own; it is easier and better to rely on the work of the regular seed grower.

Peas will not lose vitality in three years, and our experience is we get more peas and less vines from seeds two years old. Pepper seed is good for three years, but its place in the garden is a small one. Radish, more than most other garden crops, should be kept in stock after a thorough test is made of varieties. The radish is a peculiar plant; while all kinds usually grow well, some grow better than others, or, rather, some will do much better in one soil than another; after securing the best, hold on to it. Spinach always does well, and, so far as flavor goes, there is practically no difference in the varieties.

The tomato is another vegetable for seed of which the gardener can rely upon his own efforts, but before attempting to save any he should be sure he has the best for his own place. As the cost is but a trifle for a year's supply and as the seed retains its vitality for a long time, a three years' stock is not too much to have on hand at all times.

Poisoned by Wild Plants is a too frequent cause of death to children, and, commenting on recent instances the Philadelphia "Press" asks very particularly why our rural schools do not educate the children along such lines as would inform them of the poisonous nature of certain roots. It is within the power of all schools to explain by diagram and actual example the differences between the harmless and noxious, so that the children would be less liable to make these distressing mistakes. Such a variation from the study of natural history abstractions ought to commend itself. Apparently, however, although familiar with the evil, the school authorities have never given it serious consideration.

EGG YIELDS.

A close scanning of reported egg yields from every available source during the winter of '95-6, showed one somewhat common experience. The largest reported yields were often made upon a combination consisting mainly of wheat, corn, and meat. Clover was seldom mentioned, but most of the reporters forgot to say whether the hens had access to hay, clover, chaff, etc. This point would largely influence the value of the reports.

Diseases of Forcing House Vegetables.

Bulletin 73 of the Ohio Agricultural Experiment Station is devoted to studies of some of the more common plant diseases of the forcing house and garden, especially those encountered in the culture of vegetables under glass, an industry which is assuming very considerable importance in Ohio and other Northern States. The bulletin is illustrated with several plates.

Complaints are frequently received at the Station of lettuce rot, a disease which affects the head varieties especially, when grown under glass. The Grand Rapids variety seems to suffer least. Too high temperature, especially at night, is conducive to the rot. Thorough ventilation and care in watering are the remedies suggested. Other diseases of lettuce are leaf blight, leaf perforation and downy mildew. Experience at the station and elsewhere has demonstrated that when lettuce is watered by sub-irrigation it is much less liable to these diseases than when surface watered.

Another class of diseases, affecting more especially roses, tomatoes, begonias, cucumbers and some other plants is caused by small eel-worms or nematodes, microscopic in size, which work in the roots of the plants, causing minute enlargements or galls. The symptoms of attack are stunted growth, yellowing and dropping of leaves, especially dying of the leaves at the point or lateral margins, with a scalded aspect. In roses, which are the most liable of all plants to nematode attack, the disease is often called "the yellows." Thorough

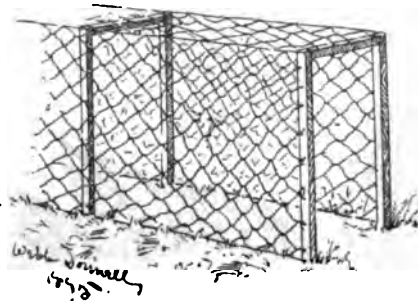


FIG. 69. TO MAKE A HEDGE QUICKLY.

steaming of the soil before planting is the most promising remedy yet discovered at the Station.

The powdery mildew of composite plants has been successfully combated upon cinerarias, when taken in time, by spraying with weak solution of potassium sulphide or copper sulphate. Probably the downy mildew of the cucumber would yield to the same treatment.

The sudden wilting of outdoor cucumbers is due to a bacterial disease, which may be carried from plant to plant by the cucumber beetle. No effectual prevention is known, but the burning of diseased plants and the destruction of the beetles are indicated.

A spot upon the leaf and fruit of cucumbers is found in the East and is likely to cause trouble to pickle growers in Ohio. Spraying with Bordeaux mixture is indicated for this disease, as well as for a new leaf-blight of the muskmelon, causing many rather large, dried spots in the leaves, followed by dying and curling under from the tips to the margins.

Tomato leaf-mold is the most common fungus disease of tomatoes grown under glass. This caused serious loss in the Station greenhouses in 1891, where it was introduced in an old plant carried over, from which it spread throughout the houses. The disease first appears as rusty brown patches on the under side of the leaves; as these patches enlarge the leaf becomes yellow, wilts and finally dies. In cases of severe attack the whole plant may perish, and in any case its growth will be seriously checked.

With leaf-mold, as with lettuce rot, thorough ventilation is required, and spraying with diluted Bordeaux mixture is indicated. Greenhouse tomatoes are subject to other forms of leaf blight and spot, some of them affecting fruit as well as foliage. All dis-

eased plants should be at once removed and burnt.

The bulletin is a report of progress in the study of plant diseases, many of them but little known, and in case of serious outbreaks of such diseases gardeners are requested to aid the Station in further study by sending samples of diseased plants to the Experiment Station at Wooster, with full description of soil, treatment, etc.

A Handsome and Quickly Made Hedge.

Making a hedge with ordinary hedge plants requires a good many years of waiting before the full realization of one's anticipations. Many are deterred from starting hedges because of this long period of waiting. The accompanying illustration shows a "short cut" to a remarkably handsome hedge. A "form" is made of wire netting, the sides and top also being covered. Along the base on either side of this quickly growing vines are planted, which soon cover the wire with a mass of green that becomes more and more dense and beautiful each succeeding year if the proper sort of vines are used. The "proper sort," in the writer's estimation, would include our common woodbine. It is a quick grower and its foliage is remarkably handsome, both in the green state and when touched by autumn frosts. There are many other vines, however, that would answer admirably for this purpose, so that all tastes can be suited. Such a hedge needs only such annual clipping as will suffice to keep the vines growing evenly all over the wire—as thickly in one place as in another. Cedar stakes should be used and carefully set in making such a hedge, since once made and covered with a thick growth of vines, it will be inconvenient to make interior repairs, though stakes can, of course, be driven down through the netting if necessary.

WEBB DONNELL.

The Vegetable Garden.

Radish.—Seed may be sown in hot beds for earliest crops and also for succession in rich soil.

Spinach.—Sow for succession either in hot beds or warm border outside. The thick leaved is the best variety for general early use. The New Zealand variety is a valuable variety for the hot months. Seeds of these should be started in heat; germination is aided by soaking the seeds in hot water for several hours previous to sowing. Seed may also be sown outside, when the ground is dry and warm, and the crop will come in for late summer and fall use.

Carrots.—A sowing of Early French Forcing may be made on the earliest border as soon as the soil is dry and workable.

Beets.—To insure constant supply in best condition a few rows should be sown every alternate week until July 20. The last sowing should be large enough to give roots for the winter supply.

Turnips.—An early sowing of the Early Strap Leaf or Early Milan Turnip should now be made on ground that has been thoroughly enriched with organic manure; an application of nitrate of soda is also an advantage. As soon as germination takes place, apply dressings of soot, slacked lime or land plaster as a protection against the turnip fly.

Horae Radish.—This is a general favorite as a relish. An out-of-the-way corner should be selected for planting. Cuttings should be made six inches in length, from small rootlets of $\frac{1}{4}$ to $\frac{1}{2}$ inch in diameter. They should be cut off square at the top and sloping at the bottom, that we may be sure to plant it the right way up. It grows best in moist, rich soil. Plant three inches apart in rows eighteen inches apart. The larger roots are kept for use.

W. M. EDWARDS.

Packing and Marketing.*

The two questions assigned to me, that of packages and marketing of fruit, are, to my mind, vital questions, and the longer I am in the market the more their importance is impressed upon my mind, and often, indeed, am I amazed at the quantities of good stock which are spoiled in the package, packing and shipping.

It is a matter of surprise to notice how many good growers there are who do not seem to realize the first thing about the proper way of getting their goods to market or to the consumer. It is puzzling to reconcile the one fact that a man will lend his energies and his will to master the details of cultivation, with the other fact that after giving it all this attention, he will then practically sacrifice the whole of the results through want of even elementary knowledge in regard to packing, and shipping, and market requirements. Yet such is the case with far too many growers.

basket to contain exactly the same number of plums. Every piece of fruit is paper-wrapped, which is necessary from the fact that the fruit is so long in an ice car. I only speak of this to show how sharp the competition is for the consumptive trade. I fear we have been too careless in this particular, not considering the relation the consumer bears to us, and while we have been careless, our progressive Western competitors are getting our business and taking the market that belongs to us.

As to berries, and any fruit that is shipped in quarts, I would recommend the regular quart crate, that the baskets fill the crate, and not such as we sometimes see, crates in which the baskets do not come within two inches of the top and one inch of the sides and ends, with the extra space stuffed with leaves, giving the crates an ugly appearance and allowing them to upset the berries, to get bruised and soft, and oftentimes are sold for less than half of the amount saved in the difference.

greased for the occasion," which I think has been demonstrated in the grape business. I will try to convince you that our line of action has been directly opposed to the rule of success. While we have naturally largely increased the supply, we also have increased the supply about one hundred per cent. artificially by cutting down the size of the package to half the regular size and then making it twice as expensive to market. I have taken the trouble to show the loss this year alone on packages, a loss which in itself is a nice profit! There was shipped from the five counties of New York State—Dutchess, Columbia, Greene, Ulster and Orange—500,000 twenty pound crates that cost 13 cents each. Now, had they been in forty pound crates that cost the same price there would have been a saving of 250,000 crates at 13 cents each or \$32,500; cartage at 4 cents each, \$10,000; packing at 2 cents each, \$5,000, making a saving of \$47,500 alone in packages. Now, I hear some one say the small crate brings just as much as the large one. Do you believe it? Is it common sense or according to any rule of trade that a less quantity will bring as much as a greater quantity? You say "But they do." They do, because the large majority of the crates in market are small ones and they supply the trade and bring the few large ones down to their level.

You say, "Why do buyers take the small ones at such a little difference in price?" They have to do so in order to compete with their neighbor. They must have them as cheap as their neighbor or lose the trade, the producer standing all the extra expense and the middleman getting all the profits, for if he can retail a basket which cost him seven cents and make as much profit as one that cost him twice as much, he has less invested, and why should he not encourage it? It has not cost him any more, but has cost you twice as much. Now again if we had two hundred and fifty thousand crates less, with eight baskets to the crate we would require just two million less customers to consume the crop. I don't believe there is a grower or a commission merchant, or a dealer within the hearing of my voice that can say he ever sold one more crate or basket of grapes in consequence of the basket or crate being smaller, and I think you cannot help but say that the decrease in the number of crates and baskets to one half alone would make some difference in the price. Should the difference in the price be twenty cents per crate, and I have no doubt but that it would be more, it would make fifty thousand dollars, which, with the profit already spoken of in saving of crates would be about one hundred thousand dollars in all.

Every family, boarding house or hotel has a rule for meals. For lunch or dessert at dinner, it will one day be pears, another peaches and another grapes. Now to-day it is grapes. They will put on their order one basket of grapes and the dealer will send the smallest possible basket and charge all he possibly can for it, and if there is not enough grapes the family will cut them up and make them do. They would have taken a basket of five pounds just as quickly and paid the difference, and would have been better satisfied and bought another basket just as quickly for the next lunch or dinner. So it is with a man who is going to the train. He will take a basket of five pounds just as readily as one with two and a half pounds, and pay the difference in price. I cannot see any advantage of the small basket to increase the consumption of grapes, as you well know the average consumer will eat ripe Concord grapes as long as they are in sight, and with the quantity that is now grown it behooves us to keep them in front of him all the time. Is it not a fact that ever since this plan of cutting down and cutting under in the size of packages, making them as deceptive as possible, and to hold as little as possible, that our market has been drooping as compared to the time when we had the fifty pound package of six baskets sold by the pound? Is it not against all rules of business to keep increasing the supply, and, as it were, decreasing the consumption, by cutting the size of the package until now we have the price so small and the expenses so large that the grower gets



FIG. 70—STRAWBERRY CARRIE.
(See page 221.)

Hence, I feel it is almost impossible to do them justice in the short time to consider them. I have taken the most important part of them, first, as to packages, a subject that demands immediate attention to secure a package that is most economical and will at the same time give the best results.

It seems strange that we have to look to the youngest fruit-growing State in the Union, that of California, for example in packing and methods of packing. Every package for each kind of fruit of uniform size, so that the buyer knows just the quantity each package contains and every package honestly packed. I have handled thousands of packages, and have yet to see the first one that is not honestly packed as per sample, so that I can sit in my office in New York City and order a car by wire from California, and know just what I will get. I have, indeed, often counted a crate of four baskets of plums and found each

For pears the regular half barrel is the most desirable and profitable package, as there is a large Southern shipping trade and a refrigerator trade that demands that style of packing, and the market does not lumber up as it does with baskets and all sized berry crates that are hawked around the streets by cheap vendors, which action has a tendency to affect the price of all in the market.

As to grapes, packages for these today is the greatest problem of all. A business that only a few years ago was the most profitable of all the fruit trade is now a losing one, a condition which most men to-day will say is caused by overproduction. I claim not. While over production may have caused some of it, the package has been the greatest cause of the present condition. You growers have dug the pit yourselves and, as it were, fallen into it, and the only way I can see out of it is by a long pull, a strong pull, and a pull all together; as in the violation of any rule of justice and equity between man and man in business, as Josh Billings once said, "You go down the plank as if it was

*Paper by D. M. Wygant, commission dealer, New York, before the Eastern New York Fruit Growers meeting.

nothing and the basket itself so small that the consumer gets nothing for his money? The only ones that get any benefit are the crate maker and the retailer. Is it not a fact that the reasons I have named may be, rather than the increase of the supply, some of the causes of the present condition of our market? Some will say, "How can the reform on such a question as this be brought about?" I would say the same as Abraham Lincoln as to how he would suppress the Rebellion. Once during the darkest hours of '62, one of the Cabinet officers being very much depressed went to Mr. Lincoln, asked how he expected to suppress the rebellion. Mr. Lincoln's prompt reply was: "We have a just cause and I expect to conquer by pegging away." And so with your cause; in the line of justice and right, if you keep pegging away you are bound to succeed.

Only a few years ago it was almost impossible in large cities to get a quart of pure milk. Millions of gallons of water were sold with the milk by the unscrupulous dealer. To-day I get as pure milk in my home in the city of Brooklyn as you get direct from the cow. It has all been brought about by proper legislation and the enforcing of the law. One basket dealer told me only a few days ago that he had sold in the City of New York alone last year one million skin quarts. We all know there are no berries grown in these skin quarts, and the grow has received the blame for all. When a customer complained he was told, as in the case of the milk, "It's the farmer. The pump is the most profitable cow he has." Thus the shrewd dealer saddles all the blame on the producer and gets all the profit. I see no reason why a reputable dealer should be allowed to sell a short quart of berries more than he should a short quart of molasses; or twelve ounces for a pound of grapes, more than twelve ounces for a pound of sugar. The producer commenced by putting down the first rail and now the dealer has put down the whole bars. The standard of justice in trade of our forefathers, 16 ounces to the pound and 32 quarts to the bushel, stands to-day in everything we buy or sell, except fruit. I could hold up a basket of grapes before you to-day and there is not a man in this audience that could guess within eight ounces of what it contained. Do you, then, tell me, the crop of millions of pounds can be distributed with any degree of justice between buyer, seller and consumer by being weighed only with the hand—and then as lightly as possible by the producer and as heavy as possible by the dealer? You well know two different packers side by side from the same truck of fruit will put more or less into similarly sized baskets. Give us back the olden rule that of justice to all, a pound for a pound, and a bushel for a bushel, and go to the Legislature and make laws that will compel every producer and dealer to give a pound for a pound, whether it be sugar or fruit; and thirty-two quarts for a bushel, whether it be grain or fruit; and make the fine so heavy and enforce the law so promptly that no one will dare to offer fruit in any market by any other standard. And I would also make a law that would prohibit the manufacturer of crates or baskets from making or selling a crate or basket other than of the standard sizes.

Marketing.

As to the method of marketing. It is one of the most perplexing questions we have to contend with to-day, and in order that we might better understand the situation, I have ascertained the number of customers with whom we are directly in touch, within a radius of one hundred miles from this platform, counting the towns of one thousand or more inhabitants. There are four million, twenty-two thousand, nine hundred and seventy-seven people. More than three times as many as there are in any other part of the United States in the same number of square miles.

How to best serve this vast number of our neighbors? There is this large and progressive country as well as some foreign countries competing for this trade. We have an advantage in the race over all by location, and all other things being equal, we should get the most of it.

In the first place there must be a better feeling between the producer and commis-

sion merchant. This method of the grower doing everything he can to hinder the commission merchant from reaching the best results is a mistaken one. Their interests are inseparable. What is the commission man's success to the extent of one dollar is the grower's to the extent of ten dollars. I would impress upon your minds that it is not the increasing of commission merchants that increases the consumption of goods, that only increases the competition for the consumptive demand for your goods, and the more you divide the greater is the competition and the less profit you get. Do not give part of your goods to one man and another to his competitor in the same market one day, to-morrow giving them to still some one else in the same market expecting to get more; the natural result will be that you get less from the fact that the goods have not been in one place long enough to get a reputation so as to be sold on their merits. How often have I had certain goods returned to me because they had also been bought with the same mark of some one else at a lower price.

And when the young man who has no experience whatever in the market comes along and tells you the man who has sold your goods for the last twenty years is an old fogey, whom the business has outgrown, and is not progressive, and that he (the newcomer) can take your small crates and slack measures and sell them for just as much as others get for the full-sized ones, say to him that you do not want any of the progressive business, but the old-fashioned, honest business—that of justice to all.

(To be continued.)

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues except here. They are sent free to our readers except when otherwise stated.]

A. B. DAVIS & SON, Purcellville, Va.—Catalogue of General Decorative Plants, freely illustrated. Roses a specialty.

LOVETT CO., Little Silver, N. J.—Book of 112 pages, well printed extensive list of fruit trees, small fruits, nuts and general garden plants.

FORT ROUGE GREENHOUSES, Winnipeg, Man.—Catalogue of Bulbs and Flowering Plants, also Annuals, Perennials, Ferns, and General Stock.

CHAS. WRIGHT, Seaford, Del.—Catalogue of Fruit Trees and Small Fruit Plants; also Grapes and Nuts. Contains many of the novelties in Fruits.

ALFRED F. CONARD, West Grove, Pa.—Catalogue of Flowers, Roses, Seeds and Plants. An exhaustive list with special offer of the Hybrid Sweetbriars and other Roses.

MARTIN BENSON, Dongola, Ill.—Exotic and Tropical Fruits for Pot Culture and the Orchard House. This catalogue contains a number of plants not frequently met with.

D. HILL, Dundee, Ill.—Catalogue of Evergreens for Transplanting Fruit Trees, Shrubs, etc., with Hints as to the proper care of each Tree and how best to use it in Gardens.

D. M. ANDREWS, Boulder, Col.—One hundred highly perennial plants in the Rocky Mountains. Some beautiful natives which should be seen more frequently in our gardens are here listed.

GLEN ST. MARY'S NURSERIES, Glen St. Mary, Fla.—Very Complete List of Fruits, Nuts, Citrus Fruits and Roses. The photograph illustrations of the Japanese forms render this a very interesting list.

VILMORIN-ANDRIEU & CO., Paris, France. General Catalogue of Seeds, Strawberries and Flowering Bulbs. An exhaustive list, making a valuable reference book. Contains colored plate of Phlox Drummondii varieties.

MONITOR INCUBATOR CO., Bristol, Conn.—Pamphlet of 78 pages, containing full detailed descriptions of the various incubators of the Company, illustrated, and directions for the management of poultry by incubators.

WM. RENNIE, Toronto, Can.—General Horticultural and Agricultural Seed List, with chromo-litho cover. Among the novelties offered are Field Pea, Odd Fellow, Danish Improved Sugar Beet, and some Potatoes. Fruit trees also included.

R. M. KELLOGG, Three Rivers, Mich.—Catalogue of Small Fruits, with exhaustive cultural guide in all sections. The valuable advice given by Mr. Kellogg and the freedom with which the text is illustrated renders this book an invaluable guide to the small fruit grower.

The Fruit Garden.

Peach Borers.—Examine the trees for borers. Their presence is often shown on the trunk, generally at the ground line, or just below it, by exudations of gum mixed sometimes with castings from the insect. Cut off the gum, and with a pliable wire find and trace the run until you reach the insect at the end of the tunnel. Even if a narrow strip of bark must be removed for the purpose, do it. I find that it pays to remove the old tar paper and replace with new twice a year (spring and autumn). Use light paper, cut eight inches wide, and long enough to bind tightly twice around the trunk so that it is about four inches above the surface, filling in between the paper and the trunk with wood ashes.

Tree Planting.—This should be among the first of all spring work. The bulk of it can be done before the ground is fit for other operations in the garden by making use of the many mild days after frosty nights. When moving the trees note the amount of roots, and cut the top back more than you think at the time is really necessary.

Large trees don't die in May, but will show in August what the treatment has been, so help them by a heavy mulch now and a thorough soaking of water in June, or before, if there should be a long dry spell.

Grapes.—Prune and till, and finish at once any work on hand.

Strawberries.—Look them over, and press back any plants that have "heaved out." There is no danger of this if the covering has been sufficient. Some growers, when the covering is removed in spring, work in short manure to give the plants a start, but if in single lines and treated as advised in American Gardening for Dec. 26 last nothing is required other than is mentioned in the number for March 13.

Apple Scab.—This is very well known to many, and by very many allowed to thrive, and the result is spoken of as a "poor apple crop." Give the trees a drenching early in April with a solution of two pounds of copper sulphate dissolved in fifty gallons of water. Keep thoroughly stirred while applying. I believe this pest can be fought to better advantage before the buds burst. We do not know where or in what stage the fungus winters, but we do know that it can be almost, if not entirely, controlled when on the foliage by spraying thoroughly with Bordeaux mixture. There are a number of good inexpensive force pumps with which all the spraying in the average garden can be done. (See advertising columns.)

Currants.—Put in a few cuttings, so as to always have a stock of young bushes on hand. It is an easy matter to get them out of the way if you don't need them later.

Clean up and make sure that all prunings reach the rubbish heap, or, speaking more practically, burning pile, for it is no use to cart the prunings and diseased parts unless they are burned very soon.

J. HOLLOWAY, L. I.

Home Grounds—How to Lay Out.

This supplement contains a half-tone drawing (6½x10½ ins.) of an estate of about six acres; this plan, together with the accompanying explanatory text, presents in a nutshell all the salient points of landscape gardening.

With the aid of this plan, and by careful study of its suggestions one can lay out an estate of one acre or fifty acres, for we give the cardinal principles which govern the art so clearly that all can understand.

Printed on heavy paper and forwarded, securely packed in a cartoon, on receipt of price, 25 cents, or given as a premium for one new subscription.

Novelties.—The public is rapidly drifting to the good old habit of seed planting of fruits, such being hastened by the unsatisfactory behavior of novelties and the behavior of much-handled and reshipped nursery stock delivered during the drought years. This is a wholesome sign and will be followed with a more personal and intelligent interest, and with local amateur personal work and effort.—Prairie Farmer.

Novelties of the Season.

(SIXTH SERIES.)

The descriptions given are those of the introducers.

CARRIED STRAWBERRY.
(Fig. 70.)

It was originated by M. T. Thompson's Sons, of Rio Vista, Va., from seed of the Haverland. It has been thoroughly tried from Canada to Texas. Its season of ripening is from medium to early, and from all that have tried it is claimed to be superior to the parent. Professor Green, of the Ohio experimental, says it bears some resemblance to the Haverland in habit of growth and shape of berries, but the berries are larger, better colored, more glossy and firmer. It is scarlet color, with a nice green calyx, making it very showy when in crates.

KING RED RASPBERRY.
(Fig. 68.)

King raspberry originated with M. T. Thompson's Sons in Lakewood, Ohio, in 1889. Professor H. E. Van Deman describes it as follows: Round, medium size; light crimson color; droops largely; few with suture very plainly marked; moderately firm; of excellent quality. Professor W. S. Green, of the Ohio Experimental Station, July 24, 1896, says King Raspberry is fine indeed; large, firm, beautiful color, and prolific, and at the station is far ahead of Loudon or Miller. J. T. Lovett says he believes it the most valuable red raspberry that has yet appeared, and it is exceptionally firm, making a good shipper. It is probably the brightest red in the market.

STRAWBERRY HALL'S FAVORITE.
(Fig. 71.)

The accompanying illustration is reproduced from a photograph of this promising new strawberry, which originated with J. W. Hall, Marion Station, Md., but of which the parentage is unknown, it having been a chance seedling, selected on account of its vigor and the high color of its fruit. The plant makes a great growth, standing twelve or eighteen inches high on ordinary ground. Commission agents in New York report an easy sale for this berry at advanced prices. It has a perfect flower, and is a good pollinizer. berry firm, and a good shipper.

Photographs

Of notable fruits, vegetables, views in gardens, or in conservatories, etc., or of other subjects of interest to lovers of gardens, are solicited for the purpose of reproduction in our pages.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

Protection for the Farmers.

The farmer who buys Bradley's fertilizers purchases and receives with every pound of every brand, something the value of which cannot be reckoned in dollars and cents, viz., the direct application in the manufacture of the Bradley Brands of all the best knowledge possessed by mankind on the subject of practical fertilization. The Bradley Fertilizer Company's chemists are constantly in touch with the most advanced agricultural thought of the world. Their experimental farms are used as a safeguard for their customers. Their superintendents continually study and devise the most skillful and economical methods and machinery. Their experienced executive department plans so that the farmer has the benefit of the skill and knowledge of each subordinate and employee. No wonder, then, that "Bradley Quality" is unmatched.

Spring Hood's Sarsaparilla

Medicine is a necessity with almost everyone, because the blood needs purifying and enriching to prevent humors, eruptions and debility.

Is the best—in fact the One True Blood Purifier. All druggists. \$1; six for \$5.

Hood's Pills are prompt, efficient and easy in effect. 25 cents.

ONE YEAR FOR 10 CENTS

We send our monthly 16-page, 48 col. paper devoted to Stories, Home Decorations, Fashions, Household, Orchard, Garden, Ptericulture, Poultry, etc., one year for 10 cents, if you send the names and addresses of six lady friends. **WOMAN'S FARM JOURNAL**, 4812 Evans Ave., Saint Louis, Mo. Mention American Gardening when you write.

INCUBATORS \$25, \$15, \$12 each. Brooders, 3 styles, \$6. Fowls, eggs, Ill. etc., 30. J. A. Chilton, Fairmont, Md. Mention American Gardening when you write.

POULTRY BOOKS. ABC Poultry Culture 25 cts.; 500 Questions and Answers, 25 cts.; Poultry House Plans, 25 cts.; Pigeon Queries, 25 cts.; *Fanciers' Review* 1 year, 50 cts. All \$1.00. Any 2 books, 40 cts.; 3 for 50 cts. J. DARROW, CHATHAM, NEW YORK. Mention American Gardening when you write.

HATCH Chickens BY STEAM
With the MODEL EXCELSIOR Incubator
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made.
GEORGE H. STAHL
Send for Illus. Catalogue. 114 to 122 S. 6th St. Quincy, Ill.

Mention American Gardening when you write.

HIVES
and all supplies for the apary. Send for (34 page) illustrated catalogue of "Cook's complete Hives," and pure Italian Bees.
It tells how to make a start in beekeeping. It gives valuable hints. Address
J. H. M. COOK, 62 Cortlandt St., N. Y. City.
Mention American Gardening when you write.

Vegetable Gardening

A New Book for the Farmer and Market Gardener. Profusely Illustrated.

BY PROF. S. B. GREEN.
Horticulturist Minn. State Experiment Station.
Endorsed by leading horticulturists East and West.

Price, postpaid, \$1.25.
Address

Webb Publishing Co., St. Paul, Minn.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Marray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.
Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

STRAWBERRIES, Potatoes, Seeds. Catalogue free. Wm. Olds, Okemos, Mich.

RASPBERRY PLANTS, 50,000 Cuthbert, \$3 per 1000. J. M. Zion, Clarks Hill, Ind.

O. F. BROWN, Hamilton, Mass.—Sells plants, Raspberry, Blackberry and Currants.

STRAWBERRIES—Best plants of the best varieties. 80 cts. per 100 by mail. Wm. Perry, Cool Spring, Del.

DAHLIAS—500 varieties. Flower or Vegetable seeds, \$1.50 per hundred packets. H. F. Burt, Taunton, Mass.

LOVELY ARBUTUS plants, ferns and flowers cheap. Wyomanock Nurseries, Lebanon Springs, N. Y.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedsman, Rochester, N. Y.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

SCHAFER COLOSSAL Raspberry tips, \$2.50 per 1000. Strawberry plants, \$2 and up per 1000, true to name. Carson & Son, Rutland, O.

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

SEND for Catalogue of Small Fruit. Best Eastern grown stock. Choice new varieties given as premiums for every order. E. W. Wooster, S. Hancock, Maine.

MARIE LOUISE Violets, extra healthy plants, rooted runners ready 1st of April, Violet clumps, April 20th. Price on application. F. G. Menre, Glen Cove, L. I., N. Y.

RASPBERRY PLANTS. Lowest wholesale price to nurserymen and dealers. Ohio tips from healthy 1 yr. set plants, \$3.50 per 1000. Turner, \$2.75 per 1000. Charles Nash, Three Rivers, Mich.

SECOND crop seed potatoes make early kinds larger and earlier. Be first, sure! New Queen, Thorburn, Burpee's Extra Early, etc. Prices very low. Free Pamphlet. John C. Pearce & Co., 480 W. Main St., Louisville, Ky.

NEW PINK VIOLET Mrs. J. J. Astor (named by permission), very fragrant, \$2.00 per dozen, \$19 per 100. Also Marie Louise, \$1 per 100, any quantity. Orders filled in rotation. G. Saltford, Violet Specialist, Rhinebeck, N. Y.

STRAWBERRY PLANTS. Try the Margaret Fountain, Michigan, Clyde; Glen Mary. Headquarters for Ganey, Brandywine Marshall, Parker Earle and all choice standards. Catalogue free to all. C. N. Flansburgh, Leslie, Mich.

CEDAR OIL INSECTICIDE, better and cheaper than fir-tree oil, \$3.50 the gallon; \$1.00 the quart tin. Cedar Oil Soap, pound tins, 50 cents; half pounds 25 cents. Sold by seedsmen and florists. August Rolker & Sons, New York, P. O. Station E.

SUCCESS, an early market berry, a seedling of the Bubach, fertilized by Michel's Early. Perfect blossom, an improvement on Bubach in size, firmness and quality. Early and productive. Dose, 40 cts. 100, \$1.100, \$6.—Address Originator, Geo. N. Hannah, Whigville Conn.

GLADIOLI, CANNAS, CLIVIAS, Souchet and Lemoine's novelties, first offered in America. Special tested selections at European prices. Extra mixtures: Ingleside Hybrids, Dr. Van Fleet's choice collection, Burbank's California Select, Mt. Vernon Hybrids, Groff's Hybridized Seed and Seedlings. Cannas, Italia, Austria, and best standards. New Hybrid Clivias. Canna Seed. H. H. Groff, Simcoe, Ontario, Canada.

1,000,000 Strawberry Plants of 30 well tested varieties, from \$1.50 to \$2.00 per 1,000. 100,000 Michel's Early, \$1.25 per 1,000, \$10 per 10,000. All healthy, young well rooted plants, true to name, and securely packed free. A good stock of No. 1 Peach-trees, of a few well tested reliable varieties, healthy and free from scale. Get my price list before purchasing. Any information of varieties culture etc., cheerfully given to those who want stock. Address Chas. Black, Hightstown, N. J.

20 ACRES rich, level farm land, free from rocks and swamps, and especially adapted for truck, fruit, cotton and tobacco raising, for \$300, payable \$10 down and \$1 or more weekly. Convenient to great eastern markets, in thickly settled section of Virginia. Genial climate all year. Splendid water. Schools, churches, stores, mills and desirable neighbors. Deed free and title guaranteed. No malaria, mosquitoes, blizzards or floods. Taxes and freight rates low. For further information write to D. L. Risley, 211 S. 10th St., Philadelphia, Pa.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 12, 1894.

PUBLISHED BY
A. T. DELAMARE PTO. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 3154 Cortlandt. P. O. Box 1697.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per agate line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Legislation Against Insect Pests. THE one great practical question before the horticulturist to-day is that suggested in the title of this article. When it is remembered that the greater proportion of our most noxious insects are of foreign origin, the necessities of the case cannot be gainsaid, and it is the plain duty of all persons interested in trading of nursery stock to assist in securing such quarantine measures as may be necessary to protect the best interests of the community at large.

That certain responsible men are very much in earnest in this matter is to be seen from a perusal of the report of the National Convention, as published on page 172 of our issue for March 13. It is a fact, however, that a large section of the horticultural public is apathetic and slow to move, and for that reason we seek now to draw more attention to the results of the Washington Convention, and to urge that all send their one dollar membership subscription to the secretary, Wesley Webb, Dover, Del.

The bill to be introduced into Congress is as follows:

Section 1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled.

That the Secretary of Agriculture be and he is hereby authorized at the expense of the owner or owners to place and retain in quarantine all trees, plants, buds, cuttings, grafts, scions, nursery stock and fruit, imported into the United States at such ports as he may

designate for such purposes, and under such conditions as he may, by regulation prescribe, and that he may appoint inspectors for the purpose of examining such trees, plants, buds, cuttings, grafts, scions, nursery stock and fruit for the purpose of ascertaining whether they are affected by any dangerously injurious insect or disease, the importation of which will be prejudicial to the horticultural interests of the United States, and provide for the treatment of such when found necessary.

Sec. 2. That when such trees, plants, buds, cuttings, grafts, scions, nursery stock and fruit shall be determined to be infested with any dangerously injurious insect or disease, they shall be treated at the expense of the owner or owners in accordance with the regulations of the Secretary of Agriculture, or they shall be destroyed in case their condition is such as to warrant such destruction, but an appeal may be taken from the decision of the inspector to the Secretary of Agriculture if such appeal be taken within three days after such inspection, and the decision of the Secretary of Agriculture shall be final.

Sec. 3. That when such inspection shall show that such trees, plants, buds, cuttings, grafts, scions, nursery stock and fruit are apparently free from dangerously injurious insects or disease, a certificate to this effect made in accordance with the regulations of the Secretary of Agriculture shall be issued to the owner or owners thereof by the said inspector, and this certificate shall operate to release all the objects above specified, when duly stamped or labeled with the same, from further quarantine or restriction either at the said port of entry or in interstate commerce. Any person who shall forge, counterfeit or knowingly alter, deface or destroy any of the marks, stamps or certificates provided for in the regulations of the Secretary of Agriculture, on any such trees, plants, buds, cuttings, grafts, scions, nursery stock or fruit, or who shall forge counterfeit or knowingly and wrongfully alter, deface or destroy any certificate provided for in said regulations, shall be deemed guilty of a misdemeanor, and on conviction thereof shall be punished by a fine not to exceed \$500 or imprisonment not to exceed one year, or both, at the discretion of the court.

Sec. 4. That whenever it shall appear to the Secretary of Agriculture that any foreign country shall have provided proper and competent inspection and treatment in accordance with the provisions of this act for the objects above specified as being subject to inspection and treatment, he may, by proclamation or otherwise, accept such inspection and treatment in lieu of inspection performed by officers appointed by himself, which acceptance or proclamation by the Secretary of Agriculture shall relieve all such articles specified in the foregoing sections of this act, when properly stamped or labeled, from further quarantine or restrictions.

Sec. 5. That the Secretary of Agriculture shall cause to be inspected and properly treated, at the expense of the owner or owners, prior to their shipment, all trees, plants, buds, cuttings, grafts, scions and nursery stock, which are subjects of interstate commerce, and which are about to be transported from one State or Territory or the District of Columbia into another State or Territory or the District of Columbia.

Sec. 6. That the said examination shall be made in the manner provided for by the rules and regulations prescribed by the Secretary of Agriculture, and that after such an examination the trees, plants, buds, cuttings, grafts, scions or nursery stock found to be apparently free from dangerously injurious insects or diseases, shall be marked, stamped or labeled for identification, as may be provided for by said rules and regulations of the Secretary of Agriculture, and when so stamped or labeled they shall not be subjected to further quarantine or restriction in interstate commerce. Any person who shall forge, counterfeit or knowingly alter, deface or destroy any of the marks, stamps or said devices, provided for in the regulations of the Secretary of Agriculture on any such trees, plants, buds, cuttings, grafts, scions and nursery stock, or who shall forge, counterfeit or knowingly and wrongfully alter, deface or destroy any certificate provided for in said regulations shall be deemed guilty of a misdemeanor and on conviction thereof shall be punished by a fine not exceeding \$500 or imprisonment not exceeding one year or both such punishments at the discretion of the court.

Sec. 7. That it shall be unlawful for any person, persons or corporation to transport from one State or territory or the District of Columbia into any other State or territory or the District of Columbia, or for any person, persons or corporation to deliver to any person, persons or corporation for transportation from one State or territory or the District of Columbia into any other State or territory or the District of Columbia, any trees, plants, buds, cuttings, grafts, scions or nursery stock, which have not been examined in accordance with the provisions in sections 5 and 6 of this act, or which on said examination have been declared by the inspectors to be dangerously infested with any injurious insects or diseases. Any person, persons, or corporation violating the provisions of this section shall be guilty of a misdemeanor, and upon conviction thereof shall be punished

for such offense as provided in section 6 of this act.

Sec. 8. That whenever it shall appear to the Secretary of Agriculture that any State, territory, corporation, firm or person shall have provided proper and competent inspection and treatment in accordance with the provisions of this act for the objects specified, as being subject to inspection and treatment, he may by proclamation or otherwise accept such inspection and treatment in lieu of inspection performed by officers appointed by himself, which acceptance or proclamation by the said Secretary of Agriculture shall relieve all such articles specified in sections 5, 6 and 7 of this act, when properly stamped or labeled from further quarantine or restriction in interstate commerce.

The Tariff. WE give in this issue a summary of the provisions of the new tariff bill, in so far as the special interests of our readers are concerned. If protection can put money into the agriculturist's pocket, the passage of this bill should make him content. Although it is a fact that he will have to buy protected vegetable seeds which cannot be grown here, he has the satisfaction of free fertilizers and a heavy duty on imported produce and nursery stock.

But the farmer who looks to tariff legislation as a means of bettering his condition, will not win the race. As in the past, so in the present and for all time: the successful farmer is he who raises the best, markets honestly, and conducts his operations on sound business principles of honor and justice to all.

English Potatoes in America.

You are doing good service to the gardening and farming community in calling attention to the fact that imported potatoes will not grow in America; for every year farmers, usually of the poorer class, and who can ill afford such failures, in looking around for what appears to be cheap but good seed potatoes, buy imported potatoes in the markets of New York—but one lesson is enough for them.

We can indorse all that has been said in "American Gardening" regarding the unsuitability of the English potato for the American climate, having tested nearly all the well-known English varieties. For a number of years past our potato tests have included several new varieties sent us from England for trial, but they have without exception been dismal and disappointing failures. As Mr. Herrington, in your issue of the 13th (page 179), remarks, there is room for a first-class early potato in the United States. We fully appreciated this fact, and for a number of years past have been on the outlook for such, and we think we have in the "Bovee," which we are offering this year for the first time, a variety that will fill the breach. From the time our attention was first called to it in 1894 we have carefully tested this variety and have compared notes with a number of expert growers, and we believe that the "Bovee" has every desirable feature to be found in the Ashleaf Kidney potato so popular in England. The "Bovee," too, by reason of its extreme earliness and good quality, is going to become popular in England as well. We sent to experts there a few tubers for trial, and their reports coincide with the high praise it has received from all parts of America. Mr. John Crawford, of Coddington Hall, Newark-on-Trent, England, a well-known

gardener and potato specialist, writes: "I can speak in the highest terms of your new potato which you sent me for trial. I planted it by the side of the Early Puritan, Sutton's Ringleader and another new sort, and it out-distanced them all. I consider it as early as any white variety and earlier than any colored sort. It is of perfect shape, and will make a great exhibition potato, and last but not least, the quality when cooked is unsurpassed. Some fell quite asunder by reason of their mealiness when placed on the dish. I feel certain it will prove quite an acquisition here."

Messrs. Sutton & Sons in their catalogue describe the Ringleader as follows:

"Maintains its position as the earliest

Jumbo, which came from England, but which at best was coarse, and no doubt it was its coarse and rugged nature that enabled it to stand the more trying climate of America. Mr. Herrington mentions Snowdrop as one of the imported varieties in his trial, and we may add that, knowing the value of this potato in England, we imported some and grew it for nine years in the hope that it would eventually become acclimatized, but were forced to the conclusion that it was a hopeless task. We grew it not only in a small way but in fairly large quantities as a field crop, and annually selected the best tubers for seed purposes.

PETER HENDERSON & CO.,
New York.



FIG. 71—STRAWBERRY HULL'S FAVORITE. (See page 221.)

Kidney potato in cultivation. It possesses the great advantage of being white in the flesh, and is perfectly distinct from all other early Kidney varieties, having foliage quite unlike that of the Ashleaf class. Haulm moderate in height, and robust for an early potato. Flavor and quality excellent as soon as the tubers are large enough to lift, and the crop can be raised so early that there is no probability of its being stricken by disease."

The value of such a comparative test will be apparent to all. Others in England to whom we sent some for trial speak equally highly of it. This shows that at least some varieties of American potatoes succeed in England, but so far as we know the only exception in the case of an English variety succeeding in America is the

Spring Flowers.—In Jersey City, N. J., the signs of spring were seen on March 23, in the garden of E. S. Brown; this was a grand display of crocus bloom, perfect sheets of white and purple. In our own garden *Galanthus Elwesii* (the giant snow-drop) was the first flower of the year; it opened on March 21.

Will Stay for Good.

Your paper is a valuable help to me in raising plants and flowers, and I intend to keep it for good.—M. S., DAVENPORT, IA.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send the price to the Publishers.

Our publishers will supply any book wanted.

The Tariff.

For the benefit of our readers the following details are extracted from the Dingley Tariff bill, now before Congress:

Beans, berries, buds, bulbs, bulbous roots, herbs, leaves, nuts, roots, stems, vegetable seeds (aromatic, not garden), used for dyeing and which are advanced in value by refining, grinding or other process, 10 per cent. ad valorem.

Leaf tobacco, suitable for cigar wrappers, not stemmed, \$2 per lb.; if stemmed, \$2.75 per lb.

All other tobacco in leaf, not stemmed, 65c. per lb.; if stemmed, 80c. per lb.

Buckwheat, 15c. per bushel of 48 lbs.

Corn (maize), 15c. per bushel of 56 lbs.

Rice, cleaned, 2c. per lb.

Sulphate of Copper, 1c. per lb.

FARM AND FIELD PRODUCTS.

Beans, 50c. per bushel of 60 lbs.

Beans, peas and mushrooms, prepared or preserved, 2½c. per lb., 15 per cent. ad valorem. All vegetables prepared or preserved, including pickles, 40 per cent. ad valorem.

Cabbages, 3c. each.

Cider, 5c. per gal.

Hay, \$4 per ton.

Hops, 15c. per lb.

Onions, 40c. per bushel; garlic, 1c. per lb.

Peas, green, in bulk, 40c. per bushel of 60 lbs.; in small packages, 1c. per lb.

Plants, trees, shrubs, vines, bulbs and roots of all kinds, for growth in the open air or otherwise, not specially provided for in this act, 30 per cent. ad valorem.

Potatoes, 25c. per bushels of sixty pounds. Seeds * * * of all kinds not specially provided for in this act, 40 per centum ad valorem. (This includes all vegetable seeds.)

Vegetables in their natural state not specially provided for in this act 25 per cent. ad valorem.

FRUITS AND NUTS.

Apples, green or ripe, 25c. per bushel; apples, peaches and other edible fruits, including berries when dried, desiccated, evaporated or prepared, 2c. per lb.; berries, edible, in their natural condition, 1c. per quart.

Fruits preserved in sugar or molasses, or in their own juices, 35 per cent. ad valorem.

Figs, Plums, prunes, raisins and other dried grapes, 2½c. per lb. Dates and currants, 1½c. per lb. Olives, green or prepared, 25c. per gallon and 15c. per gallon according to package.

Grapes and peaches, 1c. per lb.

Oranges, lemons, limes, grape fruit, shadocks or pomelos, ¼c. per lb., and 30 per cent. ad valorem upon boxes, etc.

Pineapples, 2c. per lb.

Almonds, not shelled, 5c. per lb.; shelled, 7c. per lb.

Filberts and walnuts of all kinds, not shelled, 3c. per lb.; shelled, 6c. per lb.

Peanuts or ground beans, unshelled, 1c. per lb.; shelled, 1½c. per lb.

Nuts of all kinds not specially provided for, 1½c. per lb.

Mustard, ground or prepared, 10c. per lb.; capsicum or red pepper, 2½c. per lb.; sage, 1c. per lb.

Vinegar of standard strength, 7½c. per gallon.

Cherry juice, prune juice, prune wine and other fruit juices not specially provided for, containing no alcohol or not more than 18 per cent. alcohol, 60c. per gallon.

Peat moss, \$1 per ton.

FREE LIST.

Ashes, wood, blood, dried bones, crude or not burned, calcined, ground, steamed or otherwise manufactured, and bone dust and ash fit only for fertilizing purposes.

Beans, berries, balsams, buds, bulbs, fruits, flowers, herbs, nuts, aromatic seeds, etc., used for dyeing, not edible and not advanced in value by grinding or other process.

Fruits—Green, ripe or dried, not provided for in the act.

Guano, kainit, manures, and all substances expressly used for manure.

Hop roots for cultivation.

Moss, seaweeds and crude vegetable substances not otherwise provided for.

Nuts—Brazil nuts, cream nuts, palm nuts, cocoanuts in the shell.

Oil cake.

Phosphates, crude or native.

Plants, trees, shrubs, roots, seed cane and seeds imported by the Department of Ag-

riculture or the United States Botanic Garden.

Plaster Rock or gypsum crude.
Potash, sulphate, or muriate.

Seeds—Anise, caraway, cardamon, cotton, cummin, fennel, fenugreek, hemp, horehound, mustard, rape, St. John's bread or bene, sugar beet, mangel wurzel, sorghum, or sugar cane, for seed, and all flower and grass seeds; all the foregoing not specially provided for in this act.

Soda nitrate.

Sulphuric acid for use in manufacturing artificial manures for agricultural purposes. If from a country charging duty on United States exported sulphuric acid, 74c. per lb.

Tobacco stems.

Mushrooms:

Structure and Classification.*

The greater number of the toadstools common in fields and woods belong to a group of which the common mushroom of our pastures and markets may be taken as the type. This consists of a stem, cap and gills. The gills are radiating plates extending from the stem to the edge of the cap. On them are borne in countless numbers the spores, extremely minute bodies which are roughly analogous to the seeds of flowering plants. The mushroom, in fact, is simply a contrivance for the production and dissemination of the spores.

The vegetative portion of a mushroom consists of a network or web of delicate threads, generally colorless, which envelop or permeate the animal or vegetable substance, living or dead, from which the fungus draws its food supply. For fungi do not elaborate their food from raw materials, as do the plants that have green coloring matter, but are dependent upon other organisms; i. e., they are either parasitic upon living animals or plants, or are saprophytic upon dead organic matter. The minute vegetative threads, collectively called the mycelium, result from the germination of the spores. The actual process is far beyond the reach of the naked eye.

In the case of the common mushroom, what is known by mushroom growers as the "spawn" consists of a dried compressed portion of a mushroom bed, generally mixed soil and horse droppings, which is permeated by the mycelium. In this condition, in the form of flakes or bricks, it may be transported, and will keep its vitality for months, active growth being for the time arrested. As a rule, then, when mushroom beds are started, the mycelium, in the form of "spawn," is planted, not the spores. When the proper conditions of warmth and moisture are supplied, growth is resumed, and the threads, lengthening, branching, and anastomosing, soon spread throughout the bed.

It is plain, then, that the mushroom plant, for most of its life, is out of sight, and consequently not familiarly known. To this fact are due many erroneous notions about the origin of mushrooms themselves. When the time has come for the plant to produce its fruit, there form at various points in the mycelium small masses of densely branching interwoven threads, which in time enlarge to an appreciable size. Each of these masses is the beginning of a "button," or nascent mushroom. An examination of buttons in various stages of growth, by means of thin sections under a microscope, shows pretty clearly the part played by the mycelial threads in building up the mushroom proper, the substance of which is made up of the compacted and closely interwoven threads and their branches. Along certain radiating lines is formed the framework of the gills, which in the developed mushroom is called the trama. Just below the gills an air-space appears, the outer wall of which becomes the so-called veil. Lastly, upon the surface of the gills develops a layer of cells standing side by side, like the single threads in the pile of velvet or in the surface of an Oriental rug. With these cells we have a special concern. Taken together they form the hymenium,

There doesn't seem to be very much the matter with your child. He doesn't actually lose weight, but there is no gain. He belongs to that large class of children that don't seem to prosper. You look at him a little more thoughtfully than you do at the rest and say "He is not doing well." Failure to gain in weight in a child is a danger signal. Scott's Emulsion should be taken at once. It puts on fat where health demands it, strengthening the digestion.

SCOTT & BOWNE, Chemists, New York.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.
Mention American Gardening when you write.

New, Rare and Beautiful Plants

A Large Collection of Rare Hothouse and Greenhouse Plants. Hybrid Sweetbriars, Old Garden Roses, etc. New Philadelphia, New Jersey, etc.

PEONIES.—A large collection of the finest in cultivation. Hardy Perennials. Phloxes, Japanese Iris, Roses, Clematis, etc. New and Standard Fruits, Rare and Beautiful Trees and Shrubs, Evergreens, etc. Catalogue on application.

JOHN SAU, Washington, D. C.

Mention American Gardening when you write.



FLORA of JAPAN & CALIFORNIA

Chinese Narcissus, over 100 varieties of Lily Bulbs, Camellias, Palms, etc. HARDY PLANTS, Japan Maples, Iris K., Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan.

Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above.

M. H. SHERMAN & CO., San Francisco, Cal.
(ESTABLISHED 1878).

Mention American Gardening when you write.

WINTZER'S NEW AMERICAN PEDIGREE CANNAS

1897 set—12 magnificent varieties, including Duke of Marlboro, Duchess of Marlboro, Maiden's Blush, Gloriosa, Triumph, California, Sunset, Champion, Pillar of Fire, Brilliant, Lorraine, and Golden Pearl—embracing the newest and most distinct colors and the highest types of Cannas yet produced. Descriptive List of New and Rare Cannas, with Catalog of New Roses, Plants, Flower Seeds and Garden Fruits, FREE.

ALFRED F. CONARD, Box C, West Grove, Pa.
Mention American Gardening when you write.

ASSIGNEE'S SALE OF

Hardy American Plants and Flowers

FINEST COLLECTION IN AMERICA.

40,000 Native Azaleas, five species well budded and with balls.

Entire stock of the well-known Highlands Nursery must be sold this Spring. A great opportunity for Parks, Cemeteries and Owners of property contemplating large or small plantings.

For lists, prices and information, address ASSIGNEE, Highlands Nursery, Kewanee, N. C.

Mention American Gardening when you write.

BEAUTIFUL TREES, PLANTS and NATIVE FLOWERS for parks, private grounds and shrubbery. Write for lowest prices. W. M. HARRIS, 184 N. & 9th St., Wyomissing, Pa. Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan Ivy, 2 years, \$8.00 per 100.

E. S. PETERSON, Montrose, New York.
Montrose Nurseries.

Mention American Gardening when you write.

TREES At Very Low Prices.

Send now for Free Catalogue. Established 1869. 150 ACRES. THE GEO. A. SWEET NURSERY CO., BOX 1591, DANVILLE, N. Y.

Mention American Gardening when you write.

1,000 Peach Trees

One year from bud 2 to 3 ft., mostly branched, with freight prepaid to any station east of Miss. River for \$20; or 500 for \$11.50. Sample prepaid, 25c. Other sized trees proportional prices. R. S. JOHNSTON, Box 31, Stockley, Del.

Mention American Gardening when you write.

Southern Vermont Nursery

GREEN MOUNTAIN GRAPE VINES, 25 cents each. VERMONT BEAUTY PEACH TREES, 5 to 6 feet, 25 cents each. Send for Catalogue.

C. A. HINSBILL, Prop.,

Lock Box 459, North Bennington, Vt.

Mention American Gardening when you write.

BANANAS AND PAPAYAS

Greatest of all bedding plants, see illustration from life in American Gardening, Feb. 27. Our original catalogue tells about the TROPICAL ORCHARD HOUSE, a new horticultural industry of greatest interest. Send for it. ROSE VALLEY NURSERIES, Dongola, Ill.

Mention American Gardening when you write.

Buy "Direct from Nursery" Best.

TREES AND PLANTS

At WHOLESALE PRICES, Catalogue FREE. RELIANCE NURSERY CO., Box 300, Geneva, N. Y.

Mention American Gardening when you write.

HALL'S FAVORITE. THE COMING NEW

des competition; the best introduced for years. Forty other kinds pedigree plants. Raspberries, Blackberries, Asparagus roots, etc. Here's a price for Second Crop Seed of Potatoes, double crop and earlier than other seed.

Descriptive Catalogue Free.

J. W. HALL, - - Marion Station, Md.

Mention American Gardening when you write.

POSTPAID 20 Strong GRAPE VINES for \$1.

4 Worden for 25c.; 4 Niagara, 25c.; 4 Moore's Early, 25c.; 4 Brighton, 25c.; or the whole 20 as above for \$1. Also Apple, Pear and other trees cheap. 1,000 Strawberry plants, \$5 per 1000. Raspberries and plants, \$5 to \$8 per 100, by freight or express. Everything guaranteed healthy and true to name.

F. L. WRIGHT, Plainfield, Mich.

Mention American Gardening when you write.

FULTON'S STEAMBOAT 1897

I make a business of supplying private growers, who want the best that can be had, with Strawberry, Raspberry, Gooseberry, and all other kinds of small fruit plants. Yes, and at prices just as low as any responsible grower.

Send for my descriptive price list.

W. B. FULTON, - - Kirkwood, Ohio.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

-Peach Trees-

The extra early new Peaches, Sneed, Triumph and Greenboro, one year heavy trees, \$1.50 per doz.; June buds, 12 inches and up, \$5.00 per 100.

JAPAN PLUMS and all other fruit and ornamental trees.

D. BAIRD & SON, Manalapan, N. J.

Mention American Gardening when you write.

*Delivered before the Massachusetts Horticultural Society by Secretary Hollis Webster of the Mycological Club.

the spore-producing tissue, which, folded like a fan, is applied to both sides of the gill-plates. A section through a gill shows us this layer. Each one of the spore-bearing cells composing it is called a basidium. Each basidium bears four spores on minute stalks.

Other groups of fungi, besides those which have gills, have a similar exposed hymenium. In one the hymenium covers the surface of spines; in another it lines the interior minute tubes or spores; in a third it covers the end of branches. All these groups are united under the name of Hymenomycetes. In the puffballs, on the other hand, and allied forms, the hymenium is enclosed, lining the surface of small chambers in the interior of the body of the fungus. These are the Gastromycetes. Inasmuch, however, as both the Hymenomycetes and the Gastromycetes, together with others not necessary to mention here, all have the same form of fructification, viz.: basidia-bearing stalked spores; all these fungi are included under the name Basidiomycetes.

A parallel case of fungi is represented by the Morel. In this mushroom and a great number of other fungi the place of the basidium is taken by what is called an ascus, which is a minute sack in which the spores are developed. Each ascus usually produces eight spores in its interior, which escape at maturity through an opening in the end. To the many groups of fungi having this kind of fructification is given the name Ascomycetes.

Most of the mushrooms gathered and studied by the increasing number of fungus-hunters belong to that group of the Basidiomycetes which is called Hymenomycetes. Among these Boletus and Polyporus are easily recognized by their pores; Hydnum by its spines or papillae; Clavaria by its coral-like or filiform appearance; and Tremella by its gelatinous nature. The puzzles in identification come among the Agaricini or gill-bearing mushrooms, which are built for the most part on the same general plan and can often be separated from one another only by the most careful scrutiny of a long-practised eye. For the classification of these mushrooms, not only must attention be paid to the shape, surface, and color of the cap; the shape and attachment of the gills; the nature of the stem, inside and out; but the color and sometimes even the shape and size of the spores must be noted, and even the most minute and apparently incidental peculiarities must be taken into account.

The Agarics proper are divided into five groups of differences of spore color; these groups are still further divided into genera by differences in gross and minute structure. For example, in the white-spored group, Amanita is known by its volva; Lepiota by its ringed stem and free gills; Armillaria by its ring and adnate gills; Clitocybe by decurrent gills; Collybia by a cartilaginous stem; Tricholoma by notched gills, and so on through the list. With the pink-spored Agarics we run through a similar category of structural differences, and so with the brown spored, the purple spored, and the black spored, although in the last three groups by no means all types of structure are represented. Other genera not included in the old genus Agaricus are by late systems, such as that used by Saccardo, included with the genera already mentioned under four groups divided according to spore color. Among these are Cortinarius, distinguished by its arachnoid veil; Coprinus, which dissolves to ink; Cantharellus, with gills like swollen veins; Lactarius, with milky juice; Lentinus, with tough substance and serrate gills, and others.

In conclusion Mr. Webster spoke of the great services to mycology of Elias Fries, the revered Swedish botanist who systematized the classification of mushrooms. The lecture was illustrated throughout by lantern slides.

Catalogues are pouring in upon us, and the selection of plants and seeds is in order. Be careful not to take too much stock in glowing pictures. Novelties are not always to be relied upon. But if you have the space by all means try a few of them.

FAY'S CURRANT LARGE STOCK, EXTRA STRONG.
Two years old, 20 bushes for \$1. or \$3.50 per 100.
One year old, 25 bushes for \$1. or \$3.50 per 100.
FRED. H. BURDETT, Clifton, N. Y.

Mention American Gardening when you write.

Danish Ballhead Cabbage.
IMPORTED RELIABLE SEED.

Prices on application. Catalogue Free.
FRANK H. BATTLES, Seed Grower Rochester, N. Y.
Mention American Gardening when you write.

Seeds! Seeds!
73d Annual Priced Catalogue of
VEGETABLE, FARM AND FLOWER SEEDS
is now ready and mailed Free to all applicants.
BRIDGEMAN'S SEED WAREHOUSE,
37 East 19th Street, - New York City
Mention American Gardening when you write.

MAULE'S SEEDS
are necessary if you wish an
Up-to-date Garden
My New Seed and Plant Book for 1897, pronounced by all who have seen it the best of the year, mailed free to all gardeners who mention this paper. It contains everything worth growing, old or new. You need it if you want 10 cents worth or \$10 worth of Seeds or Plants. Address
WM. HENRY MAULE,
1711 Filbert Street, Philadelphia, Pa.
Mention American Gardening when you write.

OLDS' NEW VIGOROSA Emphatically
POTATO VIGOROUS
Early, Handsome, of Best Quality, A VERY STRONG GROWER. We are headquarters for Seed Potatoes, 60 Varieties, An Immense Stock, At Low Prices. Also Garden Seeds and Field Seeds. Illustrated Catalogue FREE.
L. L. OLDS, CLINTON, Rock Co., Wis.

Mention American Gardening when you write.

WE HAVE IT AT LAST!
AN EARLY DWARF LARGE FLOWERING
COSMOS
Blooms from July till frost.
Grows only 4 1/2 feet high.
Color Snowy White, tinted with Rose.
THE FINEST NOVELTY of the YEAR
PRICE 25 CTS. PER PACKET.
and to each purchaser will be sent
FREE
DREER'S GARDEN CALENDAR 1897
A handsome book of 168 pages, with beautiful litho-embossed cover showing the new Cosmos in color and containing illustrations and descriptions of all the valuable new and standard seeds, plants & bulbs.
HENRY A. DREER,
714 CHESTNUT ST.
PHILADELPHIA.
Mention American Gardening when you write.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897 FOR
Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." 47 Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

Fruit, Vegetables, Melons, Berries, Etc., grow nearly

TWICE their usual **SIZE.**

A Wonderful Plant Food,

Address,

Send 2-cent stamp for particulars.

Reputable references.

W. H. GARRETT,

Box 247, Mobile, Ala.

Mention American Gardening when you write.

Andorra Nurseries

**Specialties: Large specimen ORNAMENTAL TREES,
large hardy RHODODENDRONS and AZALEAS.**

2500 Norway Maples, 12 to 16 ft.; 2 to 3 in. caliper.
5000 Sugar Maples, 12 to 16 ft.; 1 1/2 to 2 1/2 inches caliper.
800 Schwedler Purple-leaved Maple, 12 to 16 ft.; 2 to 3 inches caliper.
800 Sycamore Maple, 10 to 12 ft.; 1 1/2 to 2 1/2 inches caliper.
750 Wells Cat-leaved Maple, 12 to 16 ft.; 1 1/2 to 2 inches caliper.
500 White Flowering Horse Chestnut, 10 to 12 ft.; 1 1/2 to 2 1/2 inches caliper.
150 Purple Birch, 10 to 12 ft.; 1 1/2 to 2 1/2 in. caliper.
200 Golden Catalpa, 12 to 16 ft.; 1 1/2 to 2 1/2 inches caliper.
1200 Western Catalpa, 10 to 14 ft.; 1 1/2 to 2 1/2 inches caliper.
75 Weeping Beech, 8 to 12 ft.; 2 in. caliper.
500 Purple Beech, 8 to 12 ft.; 1 1/2 to 2 in. caliper.
1000 Oriental Plane, 12 to 16 ft.; 1 1/2 to 2 1/2 inches caliper.
50 Bollenna Poplar, 16 to 18 ft.; 2 1/2 to 3 1/2 inches caliper.
1500 European Linden, 10 to 12 ft.; 2 to 3 inches caliper.

WILLIAM WARNER HARPER, Manager,

Chestnut Hill, PHILA., PA.

Mention American Gardening when you write.

WEEBER & DON,

Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Illustrated Catalogue
of Vegetable and Flower Seeds
NOW READY.

EVERY GARDENER SHOULD HAVE ONE.
Free on Application.

Mention American Gardening when you write.

AUCTION SALES.**William Elliott & Sons**

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, March 30, 11 A.M.
A choice assortment of Roses, in bundles of ten, in ten varieties. A large quantity of well budded Ghent Azaleas, also Hardy Rhododendrons. Spring Bulbs of all kinds will also be offered.

Friday, April 2, 11 A.M.
Roses, Nursery Stock, Gladioli, Tuberoses, Caladiums, 500 Lilium Giganteum, 500 Pancratium Caribaeum.

At each sale will be offered a choice assortment of house plants, Ficus, Palms, etc., also quantities of plants in flower suitable for Easter.

Goods on view morning of sales. Catalogues free.

Mention American Gardening when you write.

GLEARY & CO., 68 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on

Tuesday, March 30, at 11 A.M., with a complete assortment of Irish Grown Roses, Nursery Stock, Tuberoses, Caladiums, Dahlias, Canna Roots, Gladioli, also Holland grown Roses, Rhododendrons, Azaleas, Viburnum, etc. Sales every Tuesday and Friday hereafter. Catalogue on application.

Mention American Gardening when you write.

R. M. GARDNER & CO.,

199 Fulton Street, NEW YORK.

Will sell every **TUESDAY** and **FRIDAY** at their rooms at 11 a.m. H. P. and Standard Roses. A general line of Nursery Stock and Spring Bulbs.

Mention American Gardening when you write.

EXHIBITION.

AT THE ROOMS OF THE
AMERICAN INSTITUTE,
111 to 115 W. 35th Street,

TUESDAY, APRIL 13,
A GRAND EXHIBITION OF
Forced Fruits and Vegetables.

INCLUDING
Grapes, Strawberries, Lettuce,
Cucumbers, Mushrooms,
Seakale, Asparagus, Radishes
and Tomatoes.

Exhibits to be in place by 1 P. M. Meeting 2 P. M.

President, Dr. F. M. HEXAMER,
53 Lafayette Place.

Application for space, and notification of intending exhibits to be made to

JAMES W. WITHERS,
Superintendent of Exhibition.
Box 1697, New York City.

Mention American Gardening when you write.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

PRIVATE GARDENERS.

We solicit for publication under this heading notes on the work being done by private gardeners, changes in appointment, and all matters of interest to horticulturalists generally.

Auction Sales.

Tuesday, March 30—Hardy Roses, Standard Roses, Lilacs, Hydrangeas. Nursery Stock, Spring Bulbs, at Elliott's Rooms, New York.

Irish Roses, General Nursery Stock, Bulbs, Rhododendrons, Azaleas, etc., at Cleary's Rooms, New York.

Dwarf H. P. and Standard Roses; Azaleas, Paeonies, and Flowering Shrubs, at Gardners' Rooms, New York.

Friday, April 3.—Sales will also be held as indicated above.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

W. E. Chappell has been selected as superintendent of the exhibition to be held next August on the occasion of the Society of American Florists' Convention at Providence, R. I.

C. V. Whitten, of Dorchester, Mass., is dead. His range of greenhouses was in charge of Lawrence Cotter.

Justin Sackett, landscape gardener, died at Springfield, Mass., on March 3, aged eighty-three years. He laid out the Forest Park grounds in that city, and did much cemetery work in Vermont and Massachusetts.

W. R. Smith, superintendent of the Botanical Gardens, Washington, D. C., has been sick for over two weeks.

Mr. James Cummings has succeeded Mr. W. M. Edwards as gardener to R. Hazard, Peace Dale, R. I.

Mr. James Delaney, formerly gardener to the late Robert P. Belknap, Seabright, N. J., has secured the position of head gardener to Mr. F. V. Burton, Newburg, N. Y.

William Rennie, who was for some time employed by Mr. George H. Lewis, Buffalo, N. Y., has secured the position of head gardener to Mr. William P. Gill, Brooklyn, N. Y.

Mr. William Fitzwilliam, lately with William Barr, Esq., Llewellyn Park, Orange, N. J., has secured the position of head gardener to George H. Lewis, Esq., Buffalo, N. Y. Mr. Fitzwilliam is well and favorably known to readers of American Gardening, also to many of the craft around New York, and he takes with him best wishes for his future prosperity.

Mr. Wilhelm Corders, formerly of Litchfield, Conn., has gone to Danby, Vt., to take charge of the greenhouses and grounds of S. L. Griffith, Esq.

Mr. John Hutchinson, lately with Mr. W. R. H. Martin, Greenwich, Conn., has succeeded Mr. Sanger as gardener to Dr. Wiley.

Mr. Angus MacDonald, lately gardener at the Executive Mansion, Albany, N. Y., is in town looking for a head gardener's place. James Marke as gardener to W. A. Parke, Greenwich, Conn., in place of A. Kruger, resigned.

A. Kruger as gardener to Hon. J. G. Cannon, Scarsdale, N. Y., in place of Walter Ernest, resigned. Mr. Cannon has one of the finest places in Scarsdale.

Samuel J. Trepass, for the past seven years gardener to Mrs. A. W. Blake, Brookline, Mass., will resign his position on April 1, to enter into business with his old friend, H. M. Sanders, florist, Spokane, Wn.

Mr. Robert Petfield, formerly under gardener at Mrs. Ames' place at North Easton, Mass., is one of the men in the city at the present time looking for a head place.

Mr. William Blacklock, who was recently one of the assistants at the Dinsmore place, Staatsburg, N. Y., has gone to work with the Lovett Company, Little Silver, N. J.

Mr. Alexander Geddes, recently assistant at J. D. Wing's place, Milbrook, N. Y., is now gardener at Sanford Hall, Flushing, L. I.

The Roll of Honor.

Since the publication of my paper on "The Professional Gardener's Mission in Horticulture," read before the Lenox Horticultural Society, I have received some additions to the "Roll of Honor" and beg leave to send the same herewith for publication in "American Gardening." I take this occasion to say that gardeners in all sections of the country, some of whom are now in the commercial ranks, have written to me in flattering terms regarding that paper, and it seems as though my effort will result in some good, as was earnestly hoped.

Mr. Richard Lewis, gardener to Miss Catherine Cruger, Barrytown, N. Y., raised a new fern, *Pteris Crugeriana*, which has not as yet been introduced into commerce. He reports discovering it in a batch of seedlings of *Pteris tremula* and *P. longifolia*, and is, properly speaking, a spontaneous hybrid.

Mr. A. P. Meredeth, gardener to Nathaniel Thayer, of South Lancaster, Mass., has written informing me that while he was gardener to Colonel Cutting, Pittsfield, Mass., he raised a new Anthurium, which has been introduced into commerce as *A. Cuttingianum*. He is the proud possessor of a certificate of merit for it from the Lenox Horticultural Society.

Mr. Alex. L. Marshall, gardener to J. B. Dutcher, of Pawling, N. Y., raised a new Coleus, a sport from "Bizarre," which was introduced in 1891. He is now experimenting with Cannas and expects to have some worthy of introduction before long.

George B. Winslade, gardener to Mrs. Osborn, raised the chrysanthemum *C. J. Osborn*, which was introduced about five years ago.

The following communication was received from Alex. MacLellan, Newport, R. I.:

Mr. Patrick O'Mara:

My Dear Sir—I have already read in the garden papers that excellent paper of yours on "The Professional Gardener's Mission in Horticulture" when I received the pamphlet you kindly sent. I note your request for information regarding new plants which had been raised by gardeners, and as secretary of our local Horticultural Society I write to inform you what new plants have been awarded the society certificates or medals since our organization in 1890, that is, as regards such plants as have been raised by private gardeners.

November, 1891—Chrysanthemum Stone-acre Gem (anemone), bronze medal; raised by Alexander MacLellan (sent out by Spaulding). To a white unnamed chrysanthemum raised by Mr. Richard Gardner, a bronze medal. Seedling Orchid Calanthe, raised by Mr. Richard Gardner, a silver medal (not disseminated).

November, 1892—To Chrysanthemum San Salvador, raised by Alexander MacLellan, a silver medal (Spaulding).

November, 1893—To Chrysanthemum Roger Williams, raised by Alexander MacLellan, a silver medal (sent out by Spaulding).

November, 1894—Canna Mrs. Fairman Rogers, raised by Mr. James S. Cowles and introduced by him in 1895, a silver medal.

November, 1895—Fern Lomaria gibba blechnoides, raised by Alexander MacLellan, a silver medal (not disseminated).

There were other plants that obtained notice, such as special mention, etc.

At the New Bedford Gardeners' and Florists' Club exhibition last fall I was awarded first, second and third for seedling Chrysanthemums, none of which are yet named.

I was pleased with the stand you took in regard to our title.

(Signed) ALEXANDER MACLELLAN,
Gardener.

Secretary Newport Hort'l Society.

Mr. Alexander Kennedy, of New Brunswick, N. J., writes to me, and the following is taken from his letter: "The double Abutilon (Thompsonii plena) originated with me when employed as gardener to John T. Johnson, at Plainfield, N. J., in the year 1882. The original plant I brought there from my own place near New Brunswick, N. J. It was used as a decorative pot plant and grew to be a large plant about seven feet high, well furnished from the bottom up. In the winter of 1882 I noticed some of the flowers on a shoot near the top that

looked different from the others. I watched them closely and came to the conclusion after a while that I had found a double Abutilon; all the other shoots on the plant bore single flowers. I sent specimens of the flowers to the late Peter Henderson and asked if he had ever seen or heard of a double Abutilon. His reply was that he had never seen one but had heard of some being in England. After some negotiations he bought all the stock I had propagated, and now I suppose it is to be found all over the world. Although a "sport" pure and simple, it has never reverted to the original type.

"In regard to *Aschyranthus Gilonii*, would say that the raiser of it was Alexander Gilon, a colored man and well worthy to bear the title of gardener. I was a neighbor of his and knew him well. It was about the year 1873 that he raised the *Aschyranthus*. He was then the gardener for Mme. Livingstone, and afterward for her successor, Mrs. Barton, on what was called "the Montgomery place," once the country residence of General Montgomery, from which it took its name. It is located in the town of Red Hook, Dutchess County, N. Y."

The following is an extract from a letter sent to me by Mr. Frank B. Lown, one of the leading lawyers in Dutchess County, N. Y., and an ardent horticulturist: "I am particularly interested in one name mentioned in your 'Roll of Honor,' and that is the *Aschyranthus Gilonii*, which you say was raised by a colored gardener. When I was a child I lived in Barrytown, in this county, and I well remember Alexander Gilon, who was then the gardener on what was known as the 'Barton place,' a couple of miles north of where we lived. He was a colored man, but he very justly earned and received the cordial liking and respect of the entire community. He was an accomplished gardener, and died but a few years ago, and I am rejoiced to know that now the name of old 'Alexander'—and no one knew him by aught else—has been perpetuated by the plant referred to in your speech."

To the foregoing I can add that the late Mr. Peter Henderson held Alexander Gilon in high esteem, and all this goes to show that true merit, no matter how unobtrusive, is always recognized by those whose recognition is worth having.

PATRICK O'MARA.

Mr. Max Klockow is now head gardener for Mr. Kalbfleisch, Babylon, L. I.

Mr. Michael Cunningham, who was at one time an assistant at W. K. Vanderbilt's place, Islip, L. I., is now gardener at St. Joseph's Convent, Flushing, L. I.

The Monmouth County, N. J., Horticultural Society.

The regular semi-monthly meeting of the Monmouth County Horticultural Society was held at Oceanic, N. J., on Friday, the 19th inst. As proof of the members' devotion to their society, a great many of them traveled a distance of four miles and more in order to attend, notwithstanding the remarkably bad weather. The schedule of prizes to be offered at the fall exhibition will be printed and distributed within the next three weeks. From facts already in the possession of the society, the success of the exhibition is assured. The next meeting will be held in Firemen's Hall, Oceanic, on April 2, at 7.30 P. M.—G. A. STEBLE, Secretary.

Lenox Horticultural Society.

The society held its regular meeting on March 20, Mr. G. H. Thompson in the chair. There were about thirty-five members present, which was a good attendance considering the condition of the roads at the time. Mr. J. N. May was the essayist of the evening, his subject being "Horticulture."

In the discussion which followed Mr. May had to be constantly upon his feet answering questions. As to grafted or budded roses versus those upon their own roots, Mr. May was of opinion that "own roots" were best, especially in the ordinary bench. If any one doubted this he advised him to plant some of each and to keep an accurate account of the returns.

Mr. May exhibited fine examples of President Carnot rose, Maud Dean and Lilly Dean carnations and a new hybrid tea rose, Clara Watson. All of these were much admired.

A rising vote of thanks was accorded Mr. May for his excellent essay and for the part he took in the discussion.—E. J.

Prizes for Sweet Peas.

The Hampden County Horticultural Society (Springfield, Mass.) announces several premiums for its Sweet Pea Show, to be held in July. W. Atlee Burpee & Co. offer \$10 for Cupid, the money to be divided into three prizes; also \$5 each for Burpee's Aurora, Brilliant, Burpee's New Countess, and Blanche Burpee; also for the best general display, a collection of twenty-one books on horticultural topics. Peter Henderson & Co. offer \$10 for novelties exhibited. The Sunset Seed and Plant Company, \$15 for Red Riding Hood, \$5 for Golden Gleam, and several cash prizes for literary work, such as briefest, clearest and most practicable cultural directions for sweet peas; for the best system of color classification, and for the best criticism of their Sweet Pea Review, and \$5 for best ten sprays of sweet peas in each color class, as named in the Sweet Pea Review. Henry Eckford, of Wem, England, offers a challenge cup, value not less than \$25, for the best display of Eckford's novelties for the current year. This is a grand offer, and will draw out a spirited competition. There are also offers by Rev. Mr. Hutchins, O. H. Dickinson, the B. L. Bragg Company and others, making a grand list, and this, with the society's regular schedule, forms a very attractive premium list.

American Dahlia Society.

The annual spring meeting of the American Dahlia Society was held at Hotel Hanover, Twelfth and Arch streets, Philadelphia, Wednesday evening, March 17, President Kift presiding. Treasurer F. C. Bruton reported the society to be in a prosperous condition, with a large balance in the treasury. Mr. Robert Craig, of Philadelphia, was made an honorary member on motion of Mr. Bruton.

The nomination of officers was then held. There being no opposition, the Secretary cast a ballot for those nominated, as follows: Robert Craig, president; Henry F. Michell, vice-president; E. Clifton Taylor, secretary; Frank C. Bruton, treasurer, and A. Blanc, chairman of executive committee. President Kift appointed committees on Nomenclature, Schedule and Finance.

Henry Eicke, of New York city; C. W. Ward, Queens, New York, and Samuel C. Moon, Morristown, Pa., were elected to membership.

The motion to appoint a committee on Constitution and By-Laws was carried, and Robert Kift, David Rust and E. Clifton Taylor were named. C. W. Ward was appointed on the Executive Committee in place of J. D. Eisele, resigned.

On motion of Mr. Michell, the Schedule Committee was instructed to have schedule printed not later than April 15.

The annual fall exhibition is to be held Tuesday and Wednesday, September 21 and 22, at a hall to be decided upon later.

E. CLIFTON TAYLOR, Secretary.

The Private Gardener and His Employer.

On page 181 "An Orange County Friend" has kindly taken the professional (?) gardener into consideration. It gives me great pleasure to think that the "waters are being troubled," and I hope that the professional gardener will receive strength to take a dip, but unfortunately he is one of those fellows who are perfectly satisfied when there is corn in their own manglers, and for certain reasons is very reluctant to trouble the waters for the benefit of his fellow craftsmen. The last sentence in the article on page 185 is the result of my feelings being troubled in behalf of the craft after reading Mr. Farquhar's paper, published some months ago, in "American Gardening." He advocates having all gardeners undergo an examination to see if they were worthy and properly qualified for the duties. But to page 181, and we will put through the sieve "which is often

owing to the ambition and want of practical knowledge in the gardener." The employer who would engage a man without credentials as to his ability, and make alterations, build rose and orchid houses, and a graper, at his suggestion, is, to say the least, very injudicious. The professional gardener, as a rule, is a very progressive animal; if he were not, he might find himself carrying his dinner pail into the same garden, as where he cleaned out stoke holes when in his teens. To quote again: "If he were in trade, he would manage to be more economical." No doubt, because he would not have the wherewithal. The qualified professional gardener is very economical; the very nature of his calling teaches him economy, of both time and space; he allows himself a certain time to go through his houses in the morning before his daily men come to their work, and apportion their tasks before he breakfasts; he has to see that all is properly done—no raking when there should be digging. As to economy of space, just look inside of his seed closet door. There ought to be found the kitchen garden plan for the year, and a key to the same, proof of how industrious the gardener has been during the winter evenings, dividing up the land for the different crops and successions, in order to keep his employer's table supplied 365 days in the year. Concerning the gardener's family: if the wife either makes or mars her husband's career, how is it that Mrs. Smith did not make her husband better than what he was? And again, if the man was no good, how came he to be filling a place where a professional gardener ought to be?

Where are you, professional gardener? Why not come out to protect the craft?

TIMBER TOPPER.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

FIRST-CLASS carpenter in large commercial place, where steady man is wanted. Ch. Hubner, 776 Third Ave., Brooklyn, N. Y.

FIRST-CLASS florist and landscape gardener; Scandinavian, 32, single, 16 year's experience. Europe and U. S., wants position. Address Florist 32, Post Office, Greenwich, Conn.

BY women, each with an infant or young child, situations in the country (general housework, plain cooking, etc.) in New York and adjacent States. Small wages expected. Railroad fare paid by Association. Apply State Charities Aid Association, 105 East Twenty-second St., New York City.

GARDENERS, farmers, etc.—Employers desiring the services of reliable men to fill positions as above are invited to correspond with us. On our Register are the names of excellent men whom we have known for a long time. No fee charged to any one.—R. & J. Farquhar & Co., Seedsmen, 16 and 19 South Market St., Boston, Mass.

HEAD GARDENERS.—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of graperies, greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 35 & 37 Cortlandt St., New York.

WANTED situation by thorough practical English gardener, with twelve years' experience in America in all branches, including palms, orchids, roses, chrysanthemums, forcing vegetables and fruit, decorating, and the building of greenhouses. first-class references. age 34, married, one girl; would not refuse second position on good place. Address Palmer 28, Gardner Park, Rochester, N. Y.

WANTED.

[Rates, etc., same as in "For Sale" column.]

WANTED to exchange, Ohio and Turner Rasp, berry plants for field-grown roses and ornamental shrub cuttings. C. C. Nash, Three Rivers-Mich.

WANTED situation by boy, English, age 17, on gentlemen's place under a gardener, or local place where all branches of bedding can be learned, two years' experience. Address J. R., 489 Bramhall Ave., Jersey City, N. J.

PRACTICAL gardener and florist, thoroughly experienced with gardening and greenhouse work, would like situation with a gentleman's private place, 32 years married, no family, personal and written references. Address Connecticut, Box 52, Wethersfield, Conn.

SITUATION wanted.—Gardener, single, age 40, well up in all greenhouse work, including hot-house grapes, mushrooms, etc., and competent in general management of private place, having English training with American experience. Address F. A., Box 2504, Sta. P., Phila., Pa.

PAPERS, MAGAZINES, ETC.—We will make you liberal concessions when you order other periodicals for the year, whether in connection with your own subscription or not. Send us your list for estimate American Gardening, P.O. Box 1697, New York.



MONITOR INCUBATOR

Illustrated Catalogue for stamp.
Medal and Diploma Awarded at the World's Fair
A. F. WILLIAMS, 76 Race St. Bristol, Ct.

Mention American Gardening when you write.

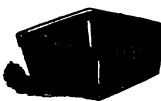
"FLOWER QUEBIES" New book on floriculture 10 Chapters, written in questions and answers, discussing 500 floral topics. Price, 25 cts. The COURIER, Box A, Chatham, N. Y. Mention American Gardening when you write.

CALIFORNIA LANDS ARE RICH and only \$25 to \$50 per acre AT ESCROW. Grows fine oranges, lemons, olives, prunes, apples, hay, grains, etc. Best summer and winter climate in U. S. Send stamp for illus. pamphlet to Escrowable Land & Town Co. at Escrowable, Los Angeles or San Diego, Cal. Mention American Gardening when you write.



SNIPS Then Hold. The best for florists, gardeners, etc., is **Kelley's Florists' Shears** and Flower Gatherer. Circular free. **FLORISTS' SHEAR CO.**, Fremont, Ohio.

Mention American Gardening when you write.



BERRY BASKETS AND CRATES

of all kinds. Also material in the Flat. Write for Catalogue and Price List.

WEBSTER BASKET COMPANY.

WEBSTER, Lock Box 43, Monroe Co., N. Y. Mention American Gardening when you write.

Cedar Oil Soap is the best all-around insecticide for house and greenhouse use. Kills scale, thrip, spider, mealy bug, fly, etc. The best preventive if used often. Wash I keeps foliage bright and clean. Kills fleas on dogs, cats, fowls, etc.; cures mange. Put up in pound tins, 50 cts.; half pounds, 25 cts. each. Sold by Seedsmen and Florists. Half pound trial tin mailed on receipt of 25 cts., enough for ten gallons solution. Address the Manufacturers

AUGUST RÜLKE & SONS,
P. O. Station E. 126 W. 24th St., New York
Mention American Gardening when you write.

IRON AND STEEL ROOFING
is cheaper than shingles, because the first cost is no greater and the lasting qualities are double; if kept properly painted it will last indefinitely. A Good corrugated Steel Roof at 25¢ per square foot. For testimonials, circulars and estimate address **THE BERLIN IRON BRIDGE CO., EAST BERLIN, CONN.**

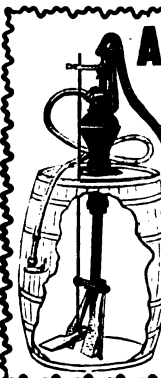
Mention American Gardening when you write.



SOLD BY THE SEED DEALERS OF AMERICA.

For pamphlets address **B. HAMMOND,** Fishkill-on-Hudson, N. Y.

Mention American Gardening when you write.



AGITATORS THAT AGITATE

keep the liquid always stirred to a point of utility.

The DEMING AUTOMATIC combines more good qualities than any agitator on the market. Used only on the **DEMING SPRAYING OUTFITS**. Spray with Bordeaux Nozzle, "The World's Best." Handle some 40-Page Book on Spraying sent free on application.

THE DEMING CO., SALEM, OHIO.
HENTON & HUBBELL,
General Western Agents,
61-69 Jefferson St., Chicago.

Mention American Gardening when you write.

The Cultivation of Phalaenopsis*

In early boyhood I made up my mind to study the nature of the phalaenopsis, and believe I was fairly successful with the collection which was under my care at Summit, N. J.

I venture to say that it is only a question of a very short time when we will have the phalaenopsis on the cut flower markets of the United States, as plentiful as is the cattleya to-day. Who of us would have thought, ten years ago, that the demand for cattleya blooms would have reached the proportion it has assumed at the present time? Fifteen—yes, or even ten—years ago there was little indication that the love for orchids and orchid flowers would grow so rapidly.

I do not deem it expedient to go into the history of the phalaenopsis, in this or any other country, for the simple reason that it is not yet well enough known to have any really authentic history. There is now, I believe, only one noteworthy collection of this orchid in the country, since the sudden and untimely ending of Mr. G. Am-sinck's collection at Summit, N. J., which was the healthiest ever seen, according to the unanimous opinion of orchid experts on both continents.

In treating of the cultivation of any plant grown under glass, we must begin with the house in which we are to grow it. It is not necessary to have a house specially built for phalaenopsis; any ordinary stove house will do. Neither does it make much difference whether the house is built north, south, east or west, providing you have the desired temperature, which is 65 degrees; nothing more nor less; no variation from that in the winter.

The next thing necessary about the house is a full supply of pure air. Ventilation is one of the greatest essentials to their well being. I have often been told by orchid growers never to put air on the phalaenopsis when it was freezing hard outside. Well, contrary to advice, I have put it on, and kept it on all the time, whether the temperature was above or below zero; but when the weather was damp or cloudy, down came the ventilators tight, to remain so until the outside atmosphere became purified, when I would put on air again very gradually.

Heating is another factor which is too often omitted when required. It is absolutely necessary to have a little fire heat in summer to keep the inside atmosphere purified. The fires, therefore, should never be allowed to go out during the summer months; so that when the day is damp or cloudy, you are always prepared to get the best of the fungi which are sure to accumulate on the compost in such weather—a disease which, if allowed to grow and reach the roots or foliage of the plants, is bound to bring dire results. An excessive dampness in the house will bring black or yellow spot on the foliage—the worst disease of all to get rid of. In this case, I know of only one course to pursue, and that is a continual watch over every individual plant. When this trouble is discovered the remedy is simple, viz.: As soon as observed on the leaf, take your knife and cut off that portion of it where the disease has manifested itself, cutting at least half an inch below the spot, though it may be the top leaf. It seems hard to do this, but you will find by continuing this course right along in every case, and then using plenty of sulphur on the part of the leaf you have cut through, that you will have no more trouble with spot.

Another mischievous imp that brings about a great deal of vexation, and proves a great drawback to this magnificent orchid, is yellow thrip—the most desperate little insect that I have ever had to contend with. To get rid of him, as usual, keep a close watch and use tobacco in all forms; have some fresh stems on your pipes, and always keep a little fresh stems in water to sponge with; give a light fumigation three times a week. If this is done regularly, it will keep the thrip within bounds.

Phalaenopsis requires to be shaded from the direct rays of the sun at all times.

Watering is another of the most essential duties connected with the growth of this

*Paper read by Peter McDonald, before the New York Gardeners' Society, February 13, 1897.

Corn

is a vigorous feeder and responds well to liberal fertilization. On corn lands the yield increases and the soil improves if properly treated with fertilizers containing not under 7% actual

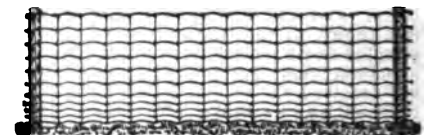
Potash.

A trial of this plan costs but little and is sure to lead to profitable culture.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.



Unruly Stock at a Premium

We want animals to show off our fence, persistent fighters for "liberty," whose war cry shall be "up and at 'em" again. We bought a Jersey bull, "highly recommended" for the position, but two rounds satisfied him, and neither dogs or red rags could induce him to give the Page Fence another trial.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

GOULDS' SPRAY PUMPS



are either made of Brass or are Brass lined. No Iron to rust or corrode. 13 Varieties, meeting all the requirements of Spray Pumps.

GOULDS' NOZZLES ARE BEST.

Made in 28 styles. This shows one of

GOULDS' PORTABLE BRASS FORCE PUMPS.

All about Spraying, "How and When to Spray," and Valuable Formulas for insecticides sent free. Address

THE GOULDS' MFG. CO.,
11 Ovid St., Seneca Falls, N. Y.

Mention American Gardening when you write.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.
CYPRESS SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.
GREENHOUSE
AND OTHER BUILDING MATERIAL.
Send for our illustrated Book "CYPRESS LUMBER AND ITS USES." Send for our Special Greenhouse Circular.
THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

orchid. I seldom used any other than rain water, and that always of the same temperature as the house. In watering baskets or pans (the plants are generally grown in such), the best way is to have a barrel or tank in the same house, as near to the pipes as you can get it, and dip your plants at least once a week. By this I don't mean the foliage of the plant, but the compost and roots and up as far as the bottom leaf. This done, they require to be looked after with the watering pot every morning. They require this treatment only when growing.

When resting, i. e., drying them off a little, in order to get their flower spikes through the hard skin in their natural way, one has to be very careful; because on this depends principally general results. You have to study and know at what time your plants are through growing, and whether it is wise to get them into flower. To stop a plant from growing in order to get it into flower, you should lessen the watering gradually, and when you see the flower spikes appear, increase the amount of water very slowly until the flower spikes are fully expanded.

Do they need to be fed? Well, yes, they do. I don't know what they get to eat in their native home, but I do know that under cultivation they will take a good meal once a week when growing. Fresh cow manure, diluted in water about one peck to the barrel, is what I used; and although I have also used several fertilizers I have found this liquid manure to be the best. But they should never be fed while in flower. The same course should be observed after they are through flowering, for at least two months. It is bad policy to let them flower too freely. I always made it a point to pinch out all flower spikes from weak plants, and prevent them flowering at all that year. The following year you will get a flower spike twice as strong and the plant will almost be double in size as a result of stopping it from flowering.

Now there are a great many little details which I do not consider necessary to mention here; these can be found in several orchid books. Suffice it to say that you have in this paper the principal points necessary to proper cultivation in order to obtain best results with phalaenopsis.

Black Knot in Connecticut.

State Pomologist N. S. Platt, of Cheshire, thinks black knot is spreading in many parts of the State, feeding on trees of the wild cherry and the sweet cherry and multiplying itself from them. The disease is one that is readily brought under control by cutting and burning the knots and spraying the trees with solutions of sulphate of copper. The knot spreads by spores and copper is death to the spore that it touches. Spray in spring before the buds open, with the copper solution of one pound sulphate of copper in twenty-five gallons of water. Later on, in early summer, when the tree is growing, give two or three sprayings of strong Bordeaux mixture, finishing by the time the fruit is half grown. The copper solution and the Bordeaux are both useful and necessary in controlling the shot hole fungus of the leaf and the rotting of the fruit of the plum, so one method of work is serviceable in controlling these distinct troubles. Bordeaux upon Japanese plums had always worked injury to the foliage.

Dicentras Without Price.

The Dicentra, or Lyre flower, known popularly as Bleeding Heart, enjoys the distinction of being both an old and a new favorite. Its brilliant color and long season of bloom make it especially desirable, too, in a new light, that of a plant for winter forcing. Being in almost every garden, and easily accessible during any open spell, it may be utilized thus in hundreds of homes where bulbs and costly plants are beyond reach. The new interest in this species, known as *Dicentra spectabilis*, has stimulated interest in others of the genus. *Dicentra cucullaria*, popularly known as Dutchman's Breeches, is now offered for sale at 20 cents per plant. Those who know its haunts may easily obtain it from the woods, as both this and the allied Squirrel Corn may be known by their peculiar roots.

ARMSTRONG & McKELVY
Pittsburgh.
BEYMER-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR
Cincinnati.
ROCKSTEIN
ATLANTIC
BRADLEY
BROOKLYN
JEWETT
New York.
ULSTER
UNION
SOUTHERN
Chicago
SHIPMAN
COLLIER
MISSOURI
RED SEAL
St. Louis.
SOUTHERN
JOHN T. LEWIS & BROS CO
Philadelphia.
LORLEY
Cleveland.
CALUM
Salem, Mass.
CORNELL
Buffalo.
KENTUCKY
Louisville.

THESE brands of White Lead (see list) are not made by any patent or quick process, but by the "old Dutch" process of slow corrosion. They are the best; are the standard, and have been for years. Protect your interests by making sure the brand is right.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price with list extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bells, Ferns.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

GLASS For Greenhouses, Grap-
eries, Conservatories, **GLASS**
Hothouses and Hotbeds.
VANHORNE, GRIFFEN & CO.
Importers of French Glass. 13, 15 & 17 LAIGHT ST., AND
52, 54 & 56 VARICK ST., NEW YORK.

Mention American Gardening when you write.

BOWKER'S FERTILIZERS
for HOUSE PLANTS,
LAWNS, GARDENS,
FARM CROPS.
A book on "Window Gardening,"
and enough odorless fertil-
izer for thirty plants three
months, sent by mail for
25c.
Catalogue free. State for what purpose fertilizer is wanted when writing.
BOWKER FERTILIZER CO., Boston.

Mention American Gardening when you write.


LORD & BURNHAM CO.,
HORTICULTURAL ARCHITECTS AND BUILDERS.
STEAM AND HOT WATER HEATING ENGINEERS.
Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York.
Mention American Gardening when you write.


THE BURDENS OF THE FARMER'S WIFE ARE MANY FOLD



and often seem to be greater than she is able to bear. This is doubly true when sickness comes to her and leaves in its wake that condition of lassitude which bespeaks a broken down condition. The most fruitful causes of these conditions are

FEMALE COMPLAINTS, BRIGHT'S DISEASE, URINARY TROUBLES, GENERAL DEBILITY, AND MALARIA.

A sure and effectual remedy for these and all diseases resulting from disordered Kidneys and Liver is



It is a purely vegetable preparation that has cured thousands and will cure you. Large sized bottles or new style smaller ones at your nearest store.

Mention American Gardening when you write.

DISCOVERED A shoe wash that will remove that gray complexion and in a week remove all pimples, blackheads and tan. Bleaches the skin without irritation. Perfectly harmless; contains no poisons. Costs but five cents to prepare enough to last six months. Recipe and full directions, 25 cts. Mrs. B. HUNTER, 4215 Evans Ave., St. Louis, Mo.

PRIZE WINNING DAHLIAS
\$1.00 per doz. Catalogue Free.

LOTHROP & HIGGINS, E. Bridgewater, Mass.
Mention American Gardening when you write.

ALL THE LATEST NOVELTIES AND PLANTS THAT CAN'T BE HAD ELSEWHERE.
Cannas, Italia and Austria, at \$1 each.
New Roses, New Fruits, New Shrubs, New Bulbs.
10 Cents for \$1.-5 for \$5 cts. Book on Cacti 116 pages, 125 cuts, 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbiferous.
A. BLANC & CO., - Philadelphia.

Mention American Gardening when you write.



We have the largest and finest collection of **PALMS, ORCHIDS, FERNS and FOLIAGE PLANTS** for Conservatories, Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting Places and furnishing stock (free).

SIEBRECHT & SON'S,
Reese Hill Nurseries, - New Rochelle, N. Y.

AMERICAN GARDENING AND THE OHIO FARMER.

Both One Year Each for only \$1.60.
THE OHIO FARMER is a large, 20 page weekly, \$1 per year. A National Farm, Stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for illustrations, Correspondence and Market Reports than any other of its class. It is the Best and Costs no more than others. Send for a SAMPLE COPY TO THE OHIO FARMER, Cleveland, O.
THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1893-14 months, if ordered at once. Address all orders to AMERICAN GARDENING, P. O. Box 1697, New York

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

CONTAGIOUS CHARACTER OF ROUP.

A late bulletin, put out by our Government, deals largely with roup as a contagious disease. The greatest cause for its increase and spread lies in this, coupled with the fact that poultry keepers cannot yet be made to understand the absolute need of separation of the infected from the non-infected birds. It is said that fowls are more subject to contagion than any other farm animals, from the way in which they obtain their food. There are those who affirm that a genuine case of diphtheritic roup was never yet cured. Our Government experts, however, deprecate the killing of birds affected, and consider that, though the disease often runs through a long chronic stage, it is controlled with fair ease by the use of disinfectants. Of these, a weak solution of carbolic acid is the best. The present writer, however, is loath to put into words the warning never to allow the disease to reach the third, or diphtheritic stage. If it does, the unfortunate poultry owner will wish that he had never been born, or, at least, that he had never been born to poultry keeping.

A STANDBY AND ITS IMPROVEMENT.

"The good old petunia" is so old and so common that many are inclined to pass it scornfully. Its value for the window box never fails to appear with experience, and as a window pot plant it seldom fails to give the best of results (in single forms, at least), unless the heat is too great. Those who know only the good old petunia could hardly believe their eyes if newly introduced to the good new petunia. In size, in form, in coloring, the improvements are marvelous, while the satisfactory character of the plant is still one of its best features. An exceedingly fine veranda box seen last fall showed nothing else anywhere approaching a pale pink double petunia, of only medium size, but extremely floriferous. In its solid pink doubleness and round smoothness of form it much resembled a dainty pink rose. Cuttings taken from it in the fall are now budding.

THE NEW BOUGAINVILLEA.

The Bougainvilleas are practically unknown as window plants; yet when the open eyed window gardener sees any one plant described as "the most useful and brilliant flowering plant known" she at once recognizes a subject for inquiry and experiment. The words quoted are applied descriptively to the new Bougainvillea glabra Sanderiana. It has also been called the most sensational plant of its introductory year, and is said to be of very easy culture in the window. It is a plant, however, which one must know how to handle. Its brilliancy consists not so much in the flowers as in the large rosy crimson bracts which surround them. It is a summer bloomer.

GREVILLEA ET AL.

When the tiny Grevilleas were seedlings of barely two inches high it was said that their beauty barely equaled that of any self-respecting "rag-weed." But as they approach more nearly the stature of real plants their beauty increases. It was only yesterday that an onlooker exclaimed: "Oh! isn't it beautiful! And see, here is a little one that has come up in the pot just beside it!" Now, the little one was a "rag-weed!"

SEEDLING MORNING GLORIES.

It was but a few days ago that a gray headed man, who has been in the seed business more years than many of us have lived, said to me: "Did you ever try Morning Glory in the window?" "Oh, yes." "Well, didn't you like it?" "Yes, indeed! And the most interesting part of it was that the vines bloomed while so very small." "You are right; and they keep it up, too. There isn't anything better adapted to give pleasure," he said, fervently. The present

A Lost Voice.

Advertising will do a great many things, but it won't bring about the return of a lost voice. The best thing to do is to begin, at once, the use of the sovereign cure for all affections of the throat and lungs—Bronchitis, Asthma, Croup, Whooping Cough, etc. It has a reputation of fifty years of cures, and is known the world over as

AYER'S Cherry Pectoral.

is a very good time to put in a few Morning Glory seeds 'nto some extra pot, and it might be well worth while to find out whether the glorious new Japanese sora are amenable to window culture.

MYRA V. NORRIS.

Now that almost every State has an experiment farm or station, it is of interest to note that *The Rural New-Yorker* established the first experiment grounds in this country. It is being conducted yet solely for the benefit of the readers of the paper, in which the reports of the experiments are exclusively published. Send to *The Rural New-Yorker*, New York, for free sample. We can send it and AMERICAN GARDENING, both one year for \$1.80.

GRAY HAIR MADE DARK

By a hairless Home Wash. Also makes the hair grow. Full directions sent for 25 cts. Mrs. A. HUNTLEY, 4215 Evans Ave., St. Louis, Mo.

HENRI BEAULIEU, Seedman and Florist, Woodhaven, N. Y. Prices list free.

GLADIOLUS. A Superfine Mixture, made up of very best named varieties and choice un-named seedlings. Fine blooming bulbs at \$1.00 per 100, \$3.00 per 1000; by express, purchaser's expense. J. A. REED, (Gladiolus Specialist), CANTON, OHIO.

Allen's Seeds are carefully selected as to purity, quality, earliness, productiveness and high germinating qualities; thousands use them. Flower or vegetable. Large catalogue free. The best and earliest Peas, Corn, Beets, Astors, Fancies, Nasturtiums, Sweet Peas.

C. E. ALLEN, Brattleboro, Vt.
Mention American Gardening when you write.

10c. FOR ONE DIME 10c.

LEROY N. BROWN & SONS,
OLYDE, OHIO, U. S. A.,
To introduce themselves to the trade, will send you, postpaid

3 Extra Fine Cherry Currant Roots.
WRITE TO-DAY.

Mention American Gardening when you write.

Wild Ferns and Flowers

The most beautiful that grow in all countries. I grow and test them in this climate, and sell the hardiest. Hardy orchids, ferns, vines, climbers, lilies, shrubs, trees. Plants for sun and shade, for bog and rock-work, border plants, etc. Surprisingly low prices for the quality and kind of stock.

My illustrated catalogue describes about 700 kinds, tells where to plant and how to grow them. Mailed for 2 post stamp.

F. H. HORSFORD, Charlotte, Vt.

Mention American Gardening when you write.

Questions Answered.

Our Inquiry Department is a Bureau of information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

•• We cannot undertake to reply by mail.

MAKING A GREENHOUSE.

(Being a lover of flowers and not having a good place to raise them in, I apply for information. In the rear of the house I rent stands an old wood shed, which I think I can turn into a small greenhouse. I have an opportunity of purchasing very cheaply some sashes, 2 feet 4 inches by 3 feet 11 inches. With six of these I think I could cover a place about 7 feet square. Please tell me which way I am to build the roof, whether to make it a lean-to or even span. Do you think an oil heater would give sufficient heat to keep the plants from freezing? I have a heater that heats a room 15 feet square, but do not know how it would answer in the place I am thinking of building. I think one bench would be sufficient for the flowers I have. I am not able to go to any great expense, as I do not expect to make any money by it, wanting the plants for house and small garden.—F. J. M.)

The even span would give the most light and in that way would be the best; but, on the other hand, it would increase the exposure and make the heating in the winter more difficult, which, with you, is a consideration. There is no doubt that by lining the board walls with felt or paper used for building purposes to keep out the cold, and by the aid of the oil heater, you would be able to store quite a good many plants and get considerable satisfaction. Certainly in the early spring it could be turned to good account.

BERMUDA LILIES FADING.

(Last year my Bermuda Lilies in conservatory, twenty-five in number, all formed buds, but they did not fill out, turned white and dropped off. I am afraid the same thing will happen this year. Please tell me what to do to prevent it.—J. H. C.)

If the roots are in good condition and proper attention be paid to watering, there is no reason why the buds should fail to mature. Possibly in a previous season they were kept too hot and too dry.

SOIL FOR ROSES.

(I have a quarter of an acre of land that was used for cow pasture until three years ago. Since then it has been used for growing vegetables. If I sow the same in cow peas this summer and plow under will that soil (if cow manure be mixed with it) be suitable for growing roses under glass? Which grass forms the best sod for roses, violets, etc.?—Subscriber, Md.)

The soil mentioned can hardly be considered fit for forcing roses. It would contain over much humus and be deficient in fiber. The best sod is that from old pasture land with good strong loam, no matter if it has not been recently manured, for to such cow manure can be added.

TUBEROSES OUT OF DOORS.

(What is the right treatment for tuberoses to make them bloom in the open ground? Will eastern exposure do? Do not have any sun after 12 o'clock.—S. W. G. P., Mass.)

The exposure suggested is not well adapted for tuberoses. They would be apt to bloom late. The tuberoses is a heat and light loving subject, and as such enjoys a strong exposure.

VIOLET LEAF WITHERING.

(If you could give me any information as to the cause and remedy of the withering of leaf on English violets which have been in a cold frame for the winter, I would be obliged.—F. B. T., Mass.)

The leaves would hardly wither unless the plant suffered in some way, as want of moisture. Send specimen of leaves for examination.

RHODODENDRONS NOT FLOWERING.

(My Rhododendrons have not bloomed in two years. Can you tell me the reason? They look perfectly healthy, the leaves are a fine color and the plants are growing larger each year, but no bloom. I have twelve in a clump partially shaded by large trees. Do you think the roots of the trees are interfering, or is the soil not rich enough? It is only three years since they were set out.—Mrs. A. F. M.)

Cut a trench a foot wide near the bed so as to check the roots of the trees robbing the rhododendrons; cover the roots with short manure and water copiously during the month of June while the new growth is being made in order to make it vigorous enough to set flowers.

TWELVE GARDEN ROSES.

(Will you kindly name for me twelve roses for garden that will, with good care, and protection, if necessary, give me large, handsome flowers and plenty of them, in color

white, pink, yellow and shades of red?—Jack.)

General Jacqueminot, Ulrich Brunner, Alfred Colomb, Paul Neyron, Marie Baumann, Mabel Morrison, Anne de Diesbach, Heinrich Schultheis, La Reine, Mme. Gabriel Luiset, Margaret Dickson, Gloire Lyonnaise. These give a great variation in shades, except of yellow, only the last named having any pretense to that shade. Among large flowering kinds we know of no real yellow to recommend. The list is strong in light colors, but for all that we would recommend to you to try the new white rose, Marchioness of Londonderry.

TUBEROSES NOT PROFITABLE.

(Will you kindly inform me if there is any demand for tuberoses blooms in winter, and if so, average prices and method of forcing; also best means of disposing of cut flowers?—B. N. J.)

Tuberoses are not forced to any extent for the New York market, except in frames, which blooms usually come in about June, July and August. They are then frequently a glut on the market. The price varies from one cent to three cents per spike, in bunches of twenty-five, and the flowers must be very white and in good shape to sell at all. They are worth more for home or local trade.

WHAT INTENSIVE CULTIVATION MEANS.

(When you advocate intensive cultivation, how close together would you deem it safe to plant the various vegetables, respectively, if all work was to be done by hand and without horse power? If you decrease the distance between the plants, which do you have to increase in proportion thereto; the amount of manure, or the amount of water, or both? And if you increase either, how much increase is necessary?—Amateur.)

Intensive cultivation does not necessarily mean the crowding of plants, but rather the getting of many crops from the same soil and allowing no waste space or time. If room be not allowed for horse cultivation, some will certainly be needed for hand culture, but just how much must depend upon

the cultivator himself. To crop heavily means to manure heavily, to dig deeply and to cultivate the surface thoroughly when the same is exposed, in order first to liberate all available plant food in the soil, and next, to conserve all the moisture possible. Successful market gardeners often use 100 tons of stable manure to the acre, and surface dressings of lime and fertilizers besides. Intensive cultivation therefore means system and application.

PLANTS FOR DRY PLACE.

(What is a good list of plants for bedding that will stand drought in a sandy soil?—Amateur.)

It would not be wise or safe to give such a list. No flowering plants will stand drought satisfactorily. Tuberoses, Gladioli, Salvias, Phlox Drummondii, Petunias, Cannas, Pelargoniums, all stand strong exposure; so do Caladium esculentum and Ricinus and Coleus as foliage plants. Portulaca is a drought plant par excellence.

FERTILIZERS FOR VEGETABLES.

(What quantities of fertilizer is it safe to drill into the hills or drills when planting the various vegetables respectively, stating what percentage of nitrogen, potash and phosphoric acid is in such fertilizer, as you may assume for a standard in answering?—Amateur.)

The question asks too much for a reply here. An answer would require details in the whole business of vegetable growing. Some of the recently published books had better be consulted. See page 173.

DWARF PEAS.

(What are the best dwarf peas—those requiring no brush—for a small garden, quality and quantity considered? I saw it stated that early kinds do not do well when planted later for main and late crops. Is that so?—N. J., Elizabeth.)

Nott's Excelsior, Chelsea Gem and American Wonder, in the order named, are the best. For late crops it is better to sow late kinds, but they all need supports. For a very late or chance crop, early kinds are usually tried; sometimes this succeeds, but more often not.

Hot Flashes.

General Derangement and Nervousness Precluded by Stomach Trouble.

Blood Disorder and Nervousness of Years Standing.

From the Commercial, Mattoon, Ill.

Mrs. Christiana Foster is a matron of Mattoon, who has recently been restored to the ranks of health after many years of suffering. She gave her statement to a reporter in such concise shape that we print it:

"My name is Christiana Foster, I am fifty years of age and a housekeeper. I have lived in Illinois ever since I was twelve years old. During the latter years of my life I have been much afflicted with stomach trouble, blood disorders and nervousness, and these were greatly aggravated about two years ago, when I became subject to most disagreeable hot flashes, (or perhaps I should say 'flushes').

"I seemed to be losing ground all the time. I could not sleep but for a short time, not being able to obtain any appropriate rest, and I may say I was truly wretched.

"About one year ago, after reading an advertisement of Dr. Williams' Pink Pills for Pale People, I determined to get some of them, and did so, beginning to take them strictly according to directions. I had not taken half a box before I experienced relief, and before I had taken four boxes, I was, I may say, well. Of course I am growing old,

but that did not account for the bad condition I was in, my blood did not circulate, and if I pricked my finger while sewing, no blood followed the puncture. All this is different now, thanks to Dr. Williams' Pink Pills.

(Signed) "MRS. CHRISTIANA FOSTER."

Witness: MRS. ED. HEARN.

Dr. Williams' Pink Pills are not looked upon as a patent medicine, but rather as a prescription. An analysis of their properties shows that they contain, in condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effects of la grippe, palpitation of the heart, pale and sallow complexions, and the tired feeling resulting from nervous prostration, all diseases resulting from vitiated humors in the blood, such as scrofula, chronic erysipelas, etc. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. They build up the blood, and restore the glow of health to pale and sallow cheeks. They are for sale by all druggists, or may be had by mail from Dr. Williams' Medicine Company, Schenectady, N. Y., for 50c. per box, or six boxes for \$2.50.

WHOLESALE MARKET REPORT

New York.

The effect of the opening up of spring weather early in the week was soon apparent upon local or frame grown stock; nevertheless, the market cleaned up fairly well, with prices normal. Southern stock suffered considerably in transit, and arrived heated; possibly 50 per cent. of the total was of no value, especially of strawberries.

Hot-house strawberries will be abundant next week.

Cucumbers are abundant and good in quality: No. 1, \$1 to \$1.25 per dozen; No. 2, 75c. per dozen.

Mushrooms are selling more freely; prices, 25c. to 35c. per lb.

Hot-house tomatoes, fancy, 30c. per lb.; inferior quality meets with no sale.

Hot-house lettuce when strictly fancy moved well, at 50c., 75c. and \$1 per dozen; inferior stock sold slow at very low prices.

Radishes, Scarlet Globe, sold freely at from \$2 to \$3 per 100 bunches. White Tipped is not popular in the market now as against the scarlet.

Bermuda potato growers refused \$8 per barrel in the island, but were unable to make this figure on the dock some mornings this past week.

Onions are firm.

Fancy celery is making \$5 to \$8 per 100 stalks.

Asparagus is very plentiful, and falling in price.

Apples.

Baldwin, Vt. and northern, prime... 1 37@1 50

Greening, Vt. & ntnn p'me, pr bbl... 1 50@1 75

Baldwin & Greening, Vermont, good 1 12@1 25

Baldwin, w'n N.Y., gd to fcy, pr bbl... 1 25@1 37

Baldwin, up-river, per bbl... 1 90@1 25

Greening, w'n N. Y., prime, per bbl... 1 12@1 25

Greening, w'n N. Y., usual lots... 1 90@1 00

Greening & Baldwin, ordinary, pr bbl 75@ 90

Strawberries.

Florida, ice boxes, fancy, per qt... 18@ 19

Florida, ice boxes, average best, pr qt 16@ 17

Florida, ice boxes, common to good... 10@ 15

Florida, open crates, Lawley... 17@ 20

Florida, open crates, average prime... 15@ 18

Florida, open crates, poor to fair... 8@ 14

Vegetables.

Asparagus, Ch'n, choice, p. doz. beh... 3 50@

—Ch'n, fair to prime, doz. behs... 2 50@3 00

—Ch'n, culls and seconds... 1 50@2 25

Beets, Florida, new, per bush, crate... 75@

—Fla. bunches, per bbl. crate... 1 50@3 00

—Charleston, per 100 bunches... 3 00@4 00

Cabbages, per 100... 1 50@3 00

—Charleston, per bbl. crate... 1 00@1 25

—Florida, per barrel crate... 50@1 25

Celery, Fla., large, per dozen stalks... 75@1 25

—Florida, small to med., per doz... 20@ 60

Cucumbers, Florida, per carrier... 2 00@2 50

Egg plants, Fla., per 1/2 bbl. box... 1 50@3 00

—Fla., per bbl., crate or bbl... 3 00@6 80

Kale, Norfolk, Scotch, per bbl... 20@ 40

—Norfolk, Sprouts, per barrel... 20@ 40

Lettuce, Fla., prime, per 1/2 bbl. basket... 1 75@2 00

—Fla., fair to good, per 1/2 bbl. basket... 25@1 00

—Fla., inferior, per 1/2 bbl. basket... 75@1 00

—Charleston, per bush, basket... 75@1 00

—N. C., per barrel... 2 00@3 50

Onions, Eastern white, per bbl... 3 50@6 00

—Eastern, red, per bbl... 3 25@3 50

—Eastern, yellow, per bbl... 3 00@3 25

—State and w'n yellow, per bbl... 2 50@2 75

—Orange Co., yellow, per bag... 2 75@3 25

—Orange Co., red, per bag... 3 00@3 50

—Bermuda, per box... 2 75@3 00

Peas, Florida, per crate or carrier... 1 00@2 00

String Beans, Fla., express, per crate... 2 00@3 00

—Beans, Fla., freight, per crate... 2 00@2 75

Spinach, Norfolk, per bbl... 25@ 65

Tomatoes, Fla., prime, per carrier... 2 00@2 50

—Fla., poor to good, per carrier... 1 00@1 75

—Key West, fancy, per carrier... 1 75@2 00

—Key West, poor to good... 75@1 25

Turnips, Canada, Russia, per bbl... 60@ 65

Philadelphia.

The market has been in very poor condition for several days. Stock is plentiful, but buyers are few, and good prices difficult to obtain.

Apples remain firm. Receipts have been much less; in fact, many firms have refused consignments, claiming that there are so many complaints now, as the apples keep but a very little time.

Florida strawberries are arriving in very poor condition, and sell slowly at 15@20c. per quart.

Apples.

Spitzenberg, fancy... 2 00@2 25

Russetta, fancy... 1 50@1 75

Baldwins, fancy... 1 75@2 00

—Fair to good... 1 25@1 60

Greenings... 1 00@1 25

Vegetables.

All Southern stock arrives in poor condition, and low prices prevail; in fact, in many things the price scarcely pays freight.

Asparagus, per bundle... 25@ 30

Beets, Fla., per 100 bunches... 2 00@3 00

Cabbages, Fla., per bbl. crate... 1 00@1 25

Celery, extra large, per dozen stalks... 50@ 75

Kale, Norfolk, per bbl... 50@ 75

Lettuce, Fla., 1/2 bbl. basket... 1 50@2 00

WATER LILIES

and AQUATICS. All sorts.

WE ARE GROWERS.

Stock fresh and reliable. Prices rock bottom. Catalogue free.

GEO. B. MOULDER, Lily Park, Smith's Grove, Ky.

Mention American Gardening when you write.

—Fla., fair to good... 75@1 25

Mushrooms, per qt... 25@ 30

Onions, Eastern, white, per bbl... 3 00@5 00

—Eastern, yellow... 2 50@3 00

—Eastern, red... 3 00@3 50

Peas, Fla., per crate... 1 25@1 50

Radishes, Charleston, per 100 bunches... 1 50@2 00

String beans, Fla., per crate... 2 50@3 00

Spinach, Norfolk, per bbl... 40@ 60

Tomatoes, hot house, per lb... 25@ 30

—Fla., per carrier... 3 00@4 00

—Fla., fair... 2 25@2 75

New Hampshire Agriculture.—The report of the State Board of Agriculture of New Hampshire for two years ending November 1, 1896, just issued, shows that the agriculture of New Hampshire is an industry represented by 29,151 farms, containing 1,727,387 improved acres, valued at \$66,162,160. The number of persons engaged in it is 42,670, and the total value of farm products about \$13,000,000 annually.

\$1.00 THE CHAMPION OFFER \$1.00
OF THE SEASON.

ELLIOTT'S \$1.00 COMBINATION!

AS FOLLOWS:

Eighteen Full Packets Choice Flower Seeds, value \$1.50

And, by special arrangement with the publishers,

Am. Gardening, one year, NEW names only, " 1.00

Total value, - \$2.50

\$1.00 under the terms of this offer, therefore, gives you AMERICAN GARDENING, the brightest gardening paper issued, one year, and sufficient seed to start a goodly sized garden with some to spare for your friends. We look for thousands of responses to this the greatest bargain of the season.

THE SEEDS OFFERED

are not of the cheap varieties which one finds advertised and described in glowing terms in all the papers at this time, but are full-sized packets, of the most reliable sorts, such as we put up for the Trade. There is not one cent of profit to us in this offer; in fact we lose money on every order we fill, but in these days it is necessary to make some sacrifices to promote business. We want to obtain new patrons to whom to send our 1897 catalogue, and take this method as the most direct means to accomplish same.

THE FOLLOWING IS A LIST OF THE PACKETS:

Alyssum, Sweet. Good border plants.

Asters, fine mixed. Select strains.

Balsam, Lady's Slipper. Finest double mixed.

Calendula. Needed in every garden.

Candytuft, mixed.

Carnation Marguerite. Mixed. A genuine novelty for the garden.

Batchelor's Button. The German Emperor's favorite flower.

Cosmos, mixed. The pride of the Fall in the open garden.

Larkspur. Fine for mass planting, the herbaceous border, or a rock garden.

Marigold, French varieties.

Mignonette, most fragrant of all plants.

Nasturtium, assorted colors.

Pansies, Giant strain, assorted colors.

Petunias, in superb mixture.

Phlox Drummondii, choicest strain, elegant for bedding.

Poppy, Elliott's mixture, double flowering.

Sweet Peas, in mixture, including all the standard varieties.

Ricinus, Castor Oil Plant. For sub-tropical effect, very showy.

The above collection is all of choice, fresh seed, in full packets, such as retail at Ten Cents each, and is not made up of cheap, unreliable or worthless stock. Our reputation in the seed trade for the past Fifty years is our voucher.

If you are already a subscriber to AMERICAN GARDENING, but want the above collection, it will not take you ten minutes to obtain the subscription of some one interested in gardening. Send in this new name, together with \$1.00, money order preferred. Orders filled without delay. Paper and seeds sent to separate addresses when so requested. Address

WM. ELLIOTT & SONS, SEEDSMEN, 54 Dey St., New York.
Est. 1846.

OUR PREMIUMS ARE OFFERED

doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers. Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

THE THREE BEST CANNAS KNOWN.**OFFER****No. 66.****Austria, Italia and****Mrs. Fairman Rogers**

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed Madam Crozy type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of Mme. Crozy, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{4} \times 1\frac{1}{4}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.

ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. Austria is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. Italia has flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the Gladiolus, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of Austria with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 33 growths, and attained a height of 42 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and Italia were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.

Plants ready for shipment on and after May 15th, but to avoid delay this premium should be earned now, as thousands will want it.

**OTHER PREMIUMS NOT ADVERTISED HERE ARE:**

Yellow Rambler Rose. The Hardest Climbing Rose ever introduced, and the Novelty sensation of 1897. The demand for this new rose is something phenomenal; readers wishing one should be early with their orders.

New Hybrid Sweet Briars. Every garden should possess a group of these beautiful hardy Roses—prolific bloomers; sweetly scented; beautiful; hardy; vigorous growers; free from disease and the attacks of insects.

Standard and Small Fruits, offered by growers and specialists from various parts of the country.

Strawberry Plants. The offers in this line embrace all the standard well established sorts and many Novelties. No garden should be without a strawberry bed, and in no way can a collection be obtained so easily.

IF YOU ARE INTERESTED IN ANY OF THESE OFFERS SEND US A POSTAL CARD FOR FULL DESCRIPTIONS.

Our Premium Offers open the way to all who want a fine garden, but lack the means wherewith to buy.

Offer No. 35.



SENT postpaid, for ONE NEW subscription at \$1.00

....BEAUTIFUL....

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection

and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene

Empress of China

Bridesmaid
Pink Souper
Taman Cochet

Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Hermet

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

Offer No. 47.

Sent, Postpaid, for one NEW Subscription at \$1.00.

NEW GIANT FANCY COSMOS

(MRS. SHEPHERD'S STRAIN).



Mrs. Shepherd's New Fancy Cosmos was offered for the first time last season, but this is the first time they have been offered, put up in separate colors, as here described:

Of this strain, five packets of which are offered in this collection, the grower, Mrs. T. B. Shepherd, of Ventura, California, says:

"No one else grows it, and it is so distinct as to be readily recognized anywhere by one who has once seen the different varieties in bloom. I have been working with it so long that it has an individuality peculiarly its own."

One packet of the above, in splendid assortment, containing over 35 varieties of beautiful flowers, in all shades of red, pink, mauve, tinted and white... 15c.

Three packets of above, in separate colors, Red, Pink and White, one packet of each, at 15c..... 45c.

"Tints of Dawn," one packet of above, lovely tinted flowers, white ground, delicately tinted or flecked with pink or mauve in lighter or darker shades..... 15c.

Curled and Crested ZINNIAS, splendid mixed, one pkt..... 10c.

These are the gayest, brightest and most esthetic bedding flowers imaginable, all colors and shades, with petals daintily curled and crested, having none of the coarseness of other Zinnias.

IPOMOEA, Heavenly Blue, one pkt..... 10c.

A perfect dream of beauty.

SCABIOSA, New Large Flowering, red and pink varieties, mixed, one pkt.... 10c.

These are very beautiful.

Total Value..... \$1.05

The Choicest Collection of Seeds ever sent out for the money; a poem in flowers and a revelation in nature.

Offer No. 60.

CACTUS.

The following collection will be sent for one new subscription at \$1.00, with 35 cents additional to prepay express charges. The plants offered are worth \$2.00 at retail, and come from a noted collector.

One plant each of

Astrophytum myrtilloides. *Echinocactus setispinus*.
Anhalonium Lewinii. *Berlandieri*
Mammillaria dillipensis. *Opuntia Engelmannii*.
Hederlii. *Senilis*.

Offer No. 42.

For one NEW subscription at \$1.00, receiver to pay express charges, or by mail, postpaid, for \$1.35.

25 NIAGARA GRAPE VINES

Comment on this offer is unnecessary, beyond stating the fact never before was such an opportunity offered to start a vineyard at so small an outlay.

Offer No. 54.

THAT GRAND NEW SINGLE VIOLET PRINCESS of WALES



Away and beyond the best of all the single varieties lately introduced. The Queen of Single Violets. Fragrance equal to Marie Louise. Blooms very large, strong grower and productive. Grower, who is one of our most renowned violet experts, will send, postpaid, for one new subscription,

Eight (8) good rooted plants, with some flowers accompanying same; carefully packed for safe arrival. Plants ready for delivery now. Grown in New York.

Offer No. 43.

DAHLIAS

The recent revival of interest in this most worthy class of plants, coupled with the introduction of many new and interesting varieties, renders it incumbent on every one to see to it that their garden is supplied with the best obtainable.

Any one of the three collections here offered will be found up-to-date and choicest kinds, and as they come from celebrated growers and prize winners, we can assure our friends we are offering them a remarkably good thing and trust they will not be slow to take advantage of one or more of these offers.



A—Four Superb Cactus Dahlias.

One strong root each, Wm. Agnew, Oriental, Nymphs and Zulu, by mail, postpaid, for one new subscription.

B—Four Show and Fancy Dahlias. (Bwarf)

One strong root each, New Double Tom Thumb, Arabella, Blumenfalter and Lucy Fancett, by mail, postpaid, for one new subscription.

C—Four Pompon or Bouquet Dahlias.

One strong root each, Elegante, Sprig, Ariel and Vivid, by mail, postpaid, for one new subscription.

Any one of these collections is worth over \$1.00 at retail, but will be sent postpaid, carefully packed, and guaranteed to arrive in first-class condition for one NEW subscription to AMERICAN GARDENING at \$1.00. Order by Offer No. and Letter.

Offer No. 64.

POTATOES

One half pound each of the four following varieties sent, postpaid, for one new subscription:

Early Michigan. Carman's No. 3.
Early Fortune. Livingston's Banner.

Two pounds or eight potatoes in all.

Option: One pound Early Michigan, or two pounds of any one of the other three varieties. Grown in Michigan.

Offer No. 56.

GLADIOLUS BULBS.

The following offers on Gladiolus Bulbs are well worth striving for. Your choice of one of the two collections offered for only one new subscription at \$1.00. Sent, postpaid, in neat pasteboard boxes. Order by Offer No. and Letter.



A.—6 Bulbs each of May, Bertha, Mabel, and Marie Lemoine.

May.—Large spike, well expanded flowers. White, edge of petals touched pink. A grand variety.

Bertha.—This is the finest variety of its color, which is a brilliant light scarlet. Makes a tall spike, with large side branches.

Mabel.—Dwarf, upright habit. Full spike open at one time. In color it is a blending of carmine, cherry and pink. One of the first to bloom.

Marie Lemoine.—Upper division of flowers of pale creamy color, flushed salmon lilac, the lower petals spotted purple violet, bordered canary yellow. Peacock blotched.

B.—100 Cushman's High Grade Seedling Gladioli.

All blooming size. No two alike. Rivaling the floccelle silks in coloring and sheen.

Offer No. 69.

VEGETABLE SEEDS.

The following collection of Seeds is offered by a reliable dealer, with a view to introducing his stock. They are of precisely the same grade as is sold to market gardeners and all desiring the best. The entire collection of twenty named varieties will be sent, postpaid, for one new subscription at \$1.00.



One oz. Beet, Eclipse; one pkt. Cabbage, Early Wakefield; one pkt. Cabbage, Early Flat Dutch; one pkt. Cabbage, Savoy Early; one pkt. Cabbage, Savoy Late; one pkt. Cauliflower, Erfurt; one-half oz. Carrot, Half Long Nantes; one pkt. Celery, Paris Yellow; one oz. Sweet Corn, Early Mammoth; one pkt. Cucumber, White Spine; one pkt. Onions, Early Flat, Red or White; one pkt. Parsley, Double Curled; one pkt. Lettuce, Summer Blonde; one pkt. Radish, Early White Tipped; one pkt. Tomato, Acme; one pkt. Spinach, Viroflay; one pkt. Squash, Early Bush; one pkt. Turnip, Red Top; one pkt. Rutabaga, Champion; one pkt. New Victoria Spinach.

Offer No. 57.

CHRYSANTHEMUMS

For one new subscription and \$1.00, we will forward, postpaid,

A Collection of 36 Plants.



All different; prize-winning varieties, comprised in great part of last year's novelties, in all shades of color and types of bloom.

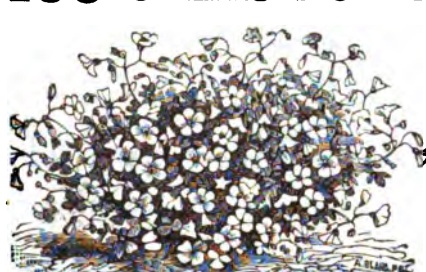
This offer comes from a noted grower, and we hope to receive a great many orders for this collection.

Offer No. 49.

Sent, postpaid, for ONE NEW subscription at \$1.

SUMMER BEDDING

150 OXALIS BULBS



These bulbs make beautiful borders for summer flower beds, as well as attractive pot plants. The collection includes 150 Bulbs in equal proportions of the four following varieties, named, and in separate packets:

OXALIS DEPPEI ALBA.—White.
OXALIS DEPPEI ROSEA.—Old rose or salmon.
OXALIS ERYTHILLA PURPUREA.—Purple.
OXALIS LASLANDRA.—Crimson. Tall, fine pal-
mate leaves.

Offer No. 50.

THE COMPLETE VEGETABLE GARDEN.

Plants all ready to set out.



All good plants. Grown in Maryland. Delivery April 15, postpaid. This is an offer we are not able to make our friends every week in the year, and we will be mistaken if this Bargain is not taken advantage of by thousands.

12 Peppers, two kinds.
12 Egg Plants.
12 Cauliflower Snowball.
12 Tomatoes, two kinds, select.
50 Cabbage or Sweet Potato Plants.
50 Lettuce, two kinds.

148 choice vegetable plants, and AMERICAN GARDENING one year, to a NEW name, for only \$1.00.

Offer No. 52.

Collection of Flower Seeds



Sent, postpaid, for one new subscription to AMERICAN GARDENING. The following list embraces 16 varieties of choice flower seeds; fresh and true to name, eight of which are of 5 cent packets, six of 10 cent packets, and two of 15 cent packets valued in all at \$1.80. This collection is offered by a reliable

grower, in whom we have full confidence.

Alyssum, Sweet	Nasturtium, Dwarf
Asters, mixed	mixed
Cosmos, Large	Poppy, Carnation
Flowered	flowered, mixed
Calendula, Price of	Sweet Peas, Eck-
Orange	ford's mixed
Calliopsis, mixed	Heliotrope
Datura, Double,	Larkspur, Dwarf
mixed	double
Carnation Marguer-	Cobaea Scandens
ite, finest double	Zinnia, Double,
mixed	mixed
Mignonette Machet	Lobelia compacta

Offer No. 40.

THE COMPLETE

Flower Garden

Plants all ready to set out.

This is a collection which everybody should be sure to obtain. It only requires one NEW subscription to become the possessor of all the plants here mentioned. Ready for delivery May 1st. Postpaid. Grown in Maryland. Save time growing from seed and get this lot all ready to set out.



10 Antirrhinum, choice mixed.	10 Phlox Drum-
10 Asters, mixed.	mondii, mixed.
10 China Pinks, mixed.	10 Marigold Eldora.
10 Cosmos, choice mixed.	10 Scabiosa, mixed,
10 Petunias, mixed.	choice.
	10 Zinnias, mixed,
	choice.
	10 Scarlet Sage.

100 Choice Flowering Plants and AMERICAN GARDENING, one year, to a NEW name, for only \$1.00.

Offer No. 59.

GRAPES



Every country and suburban home needs a vinery, and those who avail themselves of the offer which follows will be well satisfied and pleased for years to come with the result. A grower offers:

Agawam,
Lindley,
Brighton,
Worden,
Niagara,
Moore's Early.

Your choice of Ten one-year vines, all of one variety, or three each of three of the above sorts, for only one new subscription. Forwarded postpaid.

EXTRA FINE PLANTS.

Superior Quality. Carefully Graded.

Gooseberries, Raspberries, Strawberries, Currants, Blackberries, Grapes, etc.

I offer all standard varieties. Introducer of the PEARL GOOSEBERRY. Largest Grower of Small Fruit Plants in United States. Send for Circular.

ALLEN L. WOOD, Rochester, N. Y.
Mention American Gardening when you write.**TREES AND PLANTS.**

FRUIT AND ORNAMENTAL, DECIDUOUS AND EVERGREEN, OLD STANDARD AND BEST NEW VARIETIES.

Large supply of SHADE TREES, 1 1/2 to 4 inch calliper.

KEENE & FOULK, BLOODGOOD NURSERY, Flushing, N.Y.
Mention American Gardening when you write.

1840 Old Colony Nurseries. 1897

Hardy Shrubs, Trees, Vines, EVERGREENS and PERENNIALS.

A large and fine stock of well-rooted plants grown in a sandy loam. Good plants, best sizes for planting, very cheap. Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.
Mention American Gardening when you write.


OUR NURSERY STOCK
is grown on the banks of the Hudson River. It is first-class. Prices are Low. 50 acres of FRUIT TREES, Plants, and Ornamental Stock to sell. 1897 Catalogue Free. T. J. DWYER, Cornwall, N.Y.

Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

100 BEST EVERGREEN SEEDLINGS

delivered free by mail, only \$1. 100 best evergreens 2 to 5 ft. delivered east of Rocky Mts. only \$10. Write for free catalogue and price list a 50 big bargains, selections from complete nursery stock. Cash paid for getting up clubs or to salesmen with or without experience. Address

D. HILL, EVERGREEN SPECIALIST, DUNDEE, ILL.
Mention American Gardening when you write.Berberry, California Privet and Japan Quince
For Ornamental**HEDGES.**

HARDY ROSES ON OWN ROOTS.

Write for Prices to FAIR OAKS NURSERY, OAK PARK, ILL.
Mention American Gardening when you write.**NURSERY STOCK**

Apple, Pear, Plum, Peach, Cherry and other trees, Grape Vines, Currants, Rasp., Straw., Black and Gooseberries sold at lowest living prices.

We furnish large trees and plants by freight or express, and smaller but extra well rooted and thrifty ones BY MAIL POSTPAID. Everything guaranteed TRUE TO NAME, NORTHERN GROWN AND HEALTHY. Will send you one yr. trees by mail as follows: Peach 7c., Apple 7c., Pear 25c., Plum 15c., etc. Large trees by freight or express at same price. Our price list is free, or our 84 page catalogue, which gives full descriptions, cultural notes, etc., for 25c., which amount may be deducted from your first order of \$2 or over. We can do you good and save you money. See our adv. of Grapes by Mail in another column. Nursery established in 1877.

F. L. WRIGHT, Plainfield, Mich.
Mention American Gardening when you write.**TREES-SHRUBS-ROSES**

The largest and most complete collections of GENERAL NURSERY STOCK in America, including all desirable novelties. Beautiful Catalogue (168 pages—1896 edition) free to customers; to others 10 cents. Every intending buyer should have it. ELLWANGER & BARRY, Mount Hope Nurseries, Rochester, N.Y.

Mention American Gardening when you write.

STRAW RASP
BLACK
GOOSE
DEW**ASK WM. C. BABCOCK, BBDOMAN, MICH.,**
For prices of strong STRAWBERRY PLANTS, dug out in solid blocks, not from between the rows, true to name. Competition Defied. QUALITY considered. Complete Stock of CURRANTS AND GRAPES. (Mention this paper.)**BERRY PLANTS**

Mention American Gardening when you write.

For Many Years

Well-posted buyers in all parts of the country have made our Nurseries their source of supply for

NEW AND RARE TREES, SHRUBS, RHODODENDRONS, AZALEAS, EVERGREENS, PERENNIAL PLANTS and every hardy variety of the choicer garden subjects which critical growers of taste are always looking for. Our new Catalogue, 170 pages, is full of interest to the amateur, and to every one who seeks the best for garden or grounds. In it will be found many things quite rare, and not generally offered.

Any buyer can get from us Plans and Suggestions for the arrangement and planting of grounds.

THE SHADY HILL NURSERY CO.,

102 State St., Boston, Mass.

Mention American Gardening when you write.

**THE MANWELL**

Mention American Gardening when you write.

Manwell Strawberry.

The verdict given by competent judges. Prof. Budd, Iowa Hort. Station, says: "Have fruited it two seasons, its perfect foliage and capacity to resist drought, makes it very desirable; it bore more good fruit than Parker Earle, Beder Wood, Warfield or Haverland." John Wragg & Sons, Waukegan, Iowa, says: "There is no doubt it will be one of our very best varieties for shipping, and I think it the richest berry I have eaten of over a dozen of our best varieties; the plants are fine." R. M. Kellogg, Mich., says: "I am fully persuaded you have a grand berry. It is surely taking a lead in my trial plot; the quality and the color of the berries are superb and the vigor of the plants is simply splendid." C. G. Patton, Nurseryman, Iowa, says: "Its good size, bright color, firmness and quality combined give it high rank among strawberries, and being a strongly staminal variety, with the bearing quality that it has, makes it just what we have been looking for."

Send for catalogue of plants and runner cutter to

ALLEN D. MANWELL, P. O. Box 606, Vinton, Ia.

THE WM. H. MOON CO.

Glenwood Nurseries, Morrisville, Pa.

Offer, for the SPRING OF 1897, a Complete Assortment of

EVERGREEN AND DECIDUOUS TREES.

Flowering Shrubs, Grasses, Dahlias, Climbers and Climbing Roses.

Special attention is called to the following.

Chestnuts, large varieties Numbo and Paragon.
Asparagus Roots, strong 2-year olds, Palmetto,
Barr's Mammoth and Conovers.
Strawberry-Raspberry, a Japanese Novelty.
Burbank's Golden Mayberry.
Industry Gooseberries and Fay's Prolific Currants.
Purple-leaved Beech, 4 to 6 feet.
Kims, American and English.
Horse-chestnuts, Lindens and Magnolias.
Maples, Norway, Sugar, Sycamore, Ash-leaved and Silver-leaved. By the thousand, from 6 to 12 or 14 ft.
Oaks, English, Pin, Mossy Cup, Red, Scarlet and Turkey.
Poplars, Carolina and Balsam.

Willows and Weeping Trees, in variety.
Hedge Plants. Evergreen and Deciduous varieties, including 300,000 California Privet, from 1 to 5 feet.
Evergreens, Arber Vines, dwarf and tall growing sorts.
Nordmann's Fir, from 1 to 5 feet.
Balsam and European Silver Fir.
Hemlock, Colorado Blue, Norway and White Spruce.
Eucalyptus, in variety of all sizes.
Pines, White, Scotch, Austrian and Dwarf.
Evergreen Shrubs, including Mahonias, Hollies and Rhododendrons.
Deciduous Flowering Shrubs. General assortment of various sizes.

DESCRIPTIVE ILLUSTRATED CATALOGUE of 48 pages, containing prices, etc., to be had on application. Correspondence solicited.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 119.
COMBINED SERIES VOL. LI.

NEW YORK, APRIL 3, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Annals, Starting.....	241	Foreign Correspondence.....	244	Lawn, The.....	238	Plants Under Glass.....	241	Tomato Plants, Profit in.....	240
Boston Show.....	246	Forests, Planting.....	243	Lawn Fertilizer.....	244	Poultry Notes.....	250	Tomatoes Under Glass.....	
Carnation, McGowan.....	244	Fruit Garden.....	238	Lawns, Ants on.....	244	Premiums at Shows.....	242	.....	244, 251
Catalogues Received.....	240	Good Roads and Farmers.....	245	Lettuce Marketing.....	251	Private Gardeners.....	246	Vegetable Garden.....	238
Chrysanthemums.....	238	Gooseberry, The Pearl.....	237	Market Reports: N. Y.,.....		Questions Answered.....	251	Vegetable Sowing Table.....	239
Curculio Catcher.....	241	Grapes.....	238	Philadelphia, Boston.....	248	Radishes Damping Off.....	251	Viburnum Opulus.....	241
First Impressions.....	242	Greenhouse Heating in.....		Mealy Bug, to Destroy.....	244	Raspberries, Notes on.....	238		
Flower Garden.....	238	N. W.....	240	Millet, Japanese.....	240	Readers' Notes.....	244	Illustrations.....	
Food from the Garden.....		Home Plot, The.....	250	Obituary.....	240	Seedlings.....	238	Curculio Catcher.....	241
Good.....	242, 234	Labels, etc.....	238	Orchids at Cornell.....	245	Sheep Manure.....	251	Gooseberry, The Pearl.....	237

A Prolific Gooseberry.

Owing to the prevalence of mildew on the finer English varieties, which have been introduced into this country, the culture of the gooseberry has been, in a great measure, neglected, and this fine fruit has not received that attention which its value demands. Believing that by crossing some of our hardy natives with the best English varieties, this difficulty might be overcome, and a gooseberry produced that would

planted an acre for fruiting, myself, and after seven years' trial I have never found any trace of mildew; and I have sent it into several States and Provinces, and have never yet heard a report of its mildewing. The universal opinion is that it is equal in hardiness, superior in size and quality, and more productive than the Downing, which has hitherto been the standard of excellency among American gooseberries.

The following is the report of the editor of the *Canadian Horticulturist*, who saw this gooseberry in bearing on the

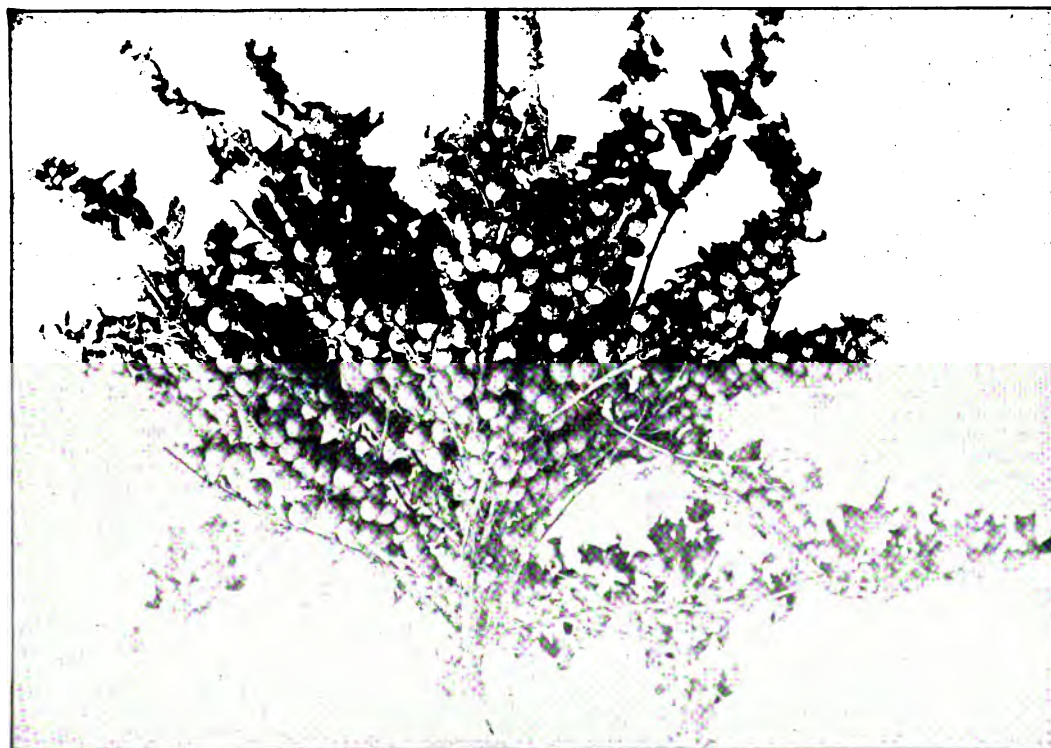


FIG. 72.—THE PEARL GOOSEBERRY.

combine the hardiness of the one, and the superior qualities of the other, Professor Saunders—now of the Experimental Farm, Ottawa—some eight or nine years ago, made several crosses between the Houghton Seedling, one of our most productive and hardy natives, and several of the best English sorts. After testing for several years, the one now named the Pearl was selected as the best in quality, productiveness, and freedom from mildew, and is being introduced to the trade by A. L. Wood, of Rochester, N. Y., who speaks of it thus: I have

grounds: The Pearl is a gooseberry grown from the seed of Houghton, crossed with Ashton Seedling, by Professor William Saunders, and worthy of special notice because (1) of its good quality; (2) its size; (3) its productiveness; (4) its freedom from mildew.

Now, with reference to these points, I will state the result of my observations: The quality is good, very much like the Downing in this respect, as well as in color marking; but in size it averages nearly double that berry, and that in spite of

the prodigious crop under which the bushes were laden. There was a row of some sixty fine bushes one year planted, and most of them were literally bent to the ground with heaps of fruit. The average was eight berries per inch of wood, and on one bush we estimated that there must have been 2,500 berries. We have had great loads upon the Smith, the Downing and others, on our own grounds, but we have not seen quantity of fruit upon the bushes of any variety to equal that upon these bushes of the Pearl. Should this productiveness prove constant, the berry will be of great value for the market. With regard to the mildew, all we can say is what we saw, viz.: it was entirely free from it. One bush stood next a Whitesmith, and while the berries of that bush were covered with mildew and utterly worthless, no trace of this fungus could be found upon the Pearl.

Some idea of the prolific fruiting capacity can be gathered from the accompanying illustration (fig. 72), which is reproduced from a photograph.

An old English gardener writes of the Pearl, saying it is a splendid gooseberry and hard to beat. From some of his bushes that had only been planted one year he picked three quarts each. Such a robust growth he never saw in the old country. Some of the new wood is over two feet long and nearly half an inch thick.

Notes on Raspberries.—A meeting of the Douglas County Horticultural Society was held on March 20 at Lawrence, Kan. This is the oldest society in the State, and is an energetic body. A circular letter from the State Horticultural Society was read. It advised that the planting of all trees, shrubs, vines and hardy plants should be done before the buds start. Strawberries should be set out while overcoats and mittens are a necessity. Cold frames and hot beds must be watched or the mice may ruin them; a trap or a little strychnine in dry corn meal is a good medicine for such pests. Raspberries and blackberries was the special topic, and it was presented in a short paper by A. H. Griese. The cultivation of these berries for commerce is of quite recent date. The first successful grower of the raspberry was a Mr. Doolittle, of Ontario County, New York. He had in cultivation as much as ten acres at one time. The varieties known to the trade are numerous, but the sorts grown for profit are very few. The Kansas, by common consent, stands at the head of the list for profit. J. H. Hale, of Connecticut, in a recent letter, wrote: "The Kansas is the best raspberry in America to-day."

B. F. Smith remembers that when the Doolittle and McCormick raspberries were first offered for sale in the towns of Illinois the people would not buy them. But it was but a short time before a taste and demand for these fruits were created, and the grower could readily sell all he could market; he also called attention to the fact that small fruits deteriorate and run out after a series of years, and hence the necessity of developing new varieties. He instanced the Doolittle, McCormick and Souhegan as examples. Professor Siler thought the deterioration was caused by seedlings coming up from imperfectly developed fruit, the plants of which were often indiscriminately used for resetting. D. G. Watt would not set out raspberry plants till the buds had made a start. G. W. Maffet spoke well of the Kansas. It was everywhere reported on favorably. The Emmet raspberry was described by Mr. Watt as a dark red berry, propagating from tips. He considers it a cross between the Cuthbert and Shaffer. A. H. Griese referred to a red berry known as the New Cardinal. It propagates from tips, and its product is immense.

The Fruit Garden.

Raspberries.—If the supply of fruit does not exceed the demand new plantation may yet be made, giving the plants a chance to do their best by planting them in deep, moist soil. Lines between young fruit trees will do first rate until the tree roots reach them, or the branches make too much shade; but a slight shade is rather beneficial than otherwise in this dry climate. Plants on a western aspect will come in well for late crop.

Figs.—Should be uncovered as the weather becomes settled. The best varieties for general use are Brown Turkey and White Genoa.

Gooseberries and Currants.—The pruning finished (the prunings gathered up and burned), give the bushes some manure, if such has not already been done, and fork it in lightly if it be not the intention to mulch the bushes with some coarse material, such as seaweed or thatch.

Grapes.—If your grape vines have anthracnose, syringe them before the buds open, using a solution of 1 lb. of copper sulphate in 11 gallons of water, or a saturated solution of iron sulphate. This disease attacks the tender leaves, showing as dark spots and later the tissue becomes dry and small cracks appear through it. The most noticeable stage is when it attacks the fruit; then the appearances are as though a pin had been pushed into the berry and the pulp around the hole had dried up so as to expose to view a portion of a seed.

Planning to Plant.—We do not always decide where we will plant everything before we order it, but a sensible man will take a duplicate of his order and before they arrive decide what is to be done with the plants.

Nursery Plot.—A small nursery plot is one of the best features of any private estate.
J. HOLLOWAY, L. I.

Lawn and Flower Garden.

The Work of Cleaning up is nearly completed.

The Planting of all hardy trees, shrubs and herbaceous plants should be in progress, for the sooner these are in the ground the better.

Borders.—Many of the coarser growing members of the compositae will be taking up too much room in the borders, and will need reducing. A little fresh manure may be worked in lightly.

The Rock Garden will need going over, and it will be something unusual if many blank spaces be not found. To fill these we must fall back upon our reserve garden.

Summer Flowering Bulbs.—Gladiolus, Tigridias, Tritomas, Montbretias, and other summer flowering bulbs may be planted as soon as convenient.

Preparations should be made for putting out summer flowering annuals. These we keep together, and lay out a convenient lot of neat beds in a corner, where the plants will be effective, as well as useful. Beds for the summer require a fresh supply of manure, and turning over. It is better to have this work done a week or two ahead.

Potting Soil.—A fresh supply will be wanted for next autumn's use, and for this purpose save all trimmings of grass edges, and with the addition of a little fresh loam taken from a pasture, if possible, make up the desired quantity.

In composting we endeavor to use some fermenting material, which will heat up the pile to about 120 Fht.; this is with the object of destroying insects and weed seeds. Bone meal and sheep manure, used in layers, alternately through the loam work splendidly. One autumn I had a pile made up in this way which kept warm all winter.
T. D. H.

Photographs

Of notable fruits, vegetables, views in gardens, or in conservatories, etc., or of other subjects of interest to lovers of gardens, are solicited for the purpose of reproduction in our pages.

The Vegetable Garden.

Kohl Rabi.—Sow now outdoors for early.

Celery and Lettuce.—Successional sowings should now be made.

Seedlings.—Transplant all seedlings that are coming up in the hotbed or greenhouse and which are showing a third and fourth leaf. Put into other flats, each variety to be kept separate. In this way they can be moved into various situations and structures to suit their requirements, always remembering to keep plants of a tropical nature in a warm situation, and giving plenty of fresh air to those of a harder nature whenever the weather permits.

Artichokes, Asparagus, Rhubarb, Seakale.—For such vegetables as these an out-of-the-way plot of ground should be selected, where they can remain until the following spring. Sow in rows 15 to 18 inches apart, and as soon as large enough thin out, leaving the strongest three inches apart in the rows. In gardens of any extent where these are forced for winter use it is a good plan to make sowing of them, thus insuring a regular supply of roots in best condition.

Carrots, Onions and Parsnips.—These should be sown as early in the spring as the ground can be worked. Adjoining these sufficient ground should be left to plant later on the onions for exhibition purposes that are started early in heat. All crops should be kept as much together as is convenient. The systematic planting of crops is an advertisement of our own business methods.

Tread the Ground.—Previous to seed sowing the ground should be thoroughly dug up or plowed, then evened up nicely with harrow or rake. Before opening drills or sowing on seed, roll the ground, if dry; if no roller be available, treading it all over will have the same effect.

Depth to Plant.—Early in spring seeds should not be planted deeper than half an inch to one inch, according to size of seed, and if the soil be dry they should be compacted with roller or back of spade. This is an important matter in a dry season, as they will germinate more satisfactorily if rolled, and are liable to fall if only loosely covered up.

Labels and Dating.—In all seed sowing operations the name of each variety, with date of sowing, should be written on a wooden label and placed at the end of the first row. They are very convenient for consulting as to the time to make successional sowings, as well as being reminders of what we have planted.

W. M. EDWARDS.

Chrysanthemums.

Treatment of Cuttings.—One of the commonest faults is to leave the cuttings in the sand-bed till they begin to grow, making a spindly top and long wiry roots. Nothing is worse; it impairs, to a large extent, the constitution of the future plant. Just so soon as the cutting stands up stiff, and looks you in the eye, so to speak, it will be found that the roots are about half an inch long, and then is just the time to pot or box it up. It will go right into the new soil and you will have in place of the attenuated, long drawn out object, a clean, thrifty, close jointed, little plant, that is sure to render a good account of itself.

Individuality in varieties begins to show itself even in the initial stages, and it will be found that some will root at least a week earlier than others. Golden Wedding will take six days longer than the average under exactly the same conditions. The cultivator must study the peculiarities of each variety if he would grow it with the greatest measure of success.

Soil for first potting should be principally good loam, with lots of fiber in it, and made light by the addition of a little sand, burnt refuse, and leaf soil. Just a sweet, healthy rooting medium only is needed.
C. TOTTY, N. J.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

KITCHEN GARDEN PLANTING TABLE.

A Guide to the Proper Times for Sowing of Various Seeds in Order to Obtain Continuous Succession of Crops.

VEGETABLES in the KITCHEN GARDEN.	January	February	March	April	May	June	July	August	September	October	November	December	Explanation of Signs Used in the Table.
Artichoke, Fr. Globe	4	..	5	1	1	<p>● To be sown in open ground without transplanting. Plants to be thinned out to proper distances apart.</p> <p>1. Sow on seed bed in garden and transplant into permanent place.</p> <p>2. Make two sowings in open ground during the month.</p> <p>3. Make three sowings in open ground during the month.</p> <p>4. Start in greenhouse or hotbed, and plant out as soon as the weather is favorable and ground dry.</p> <p>5. Sow in open ground as soon as it can be worked.</p> <p>6. To be grown only in hotbed or greenhouse.</p> <p>7. Sow in cold frame. Keep plants there over winter with protection. Plant out as soon as weather is favorable.</p> <p>8. To be grown in open ground and protected with litter during winter.</p> <p>9. Plant in frame, when cold weather sets in, cover with sash mats and shutters, admit fresh air whenever weather with permit.</p> <p>10. Plant in cellars, barns or under greenhouse benches that are free from draughts, with equable temperature.</p> <p>11. Few may be started in pots for early and transplanted as soon as ground is warm.</p> <p>12. Sow every week in greenhouse or frame for constant supply.</p> <p>NOTES.</p> <p>Egg plant, tomatoes, peppers in early spring should have sufficient heat to grow without check; and grown separate from other and hardier varieties, as cabbages.</p> <p>For last planting of beans, sweet corn, peas, lettuce, select earliest varieties as for first early plantings.</p> <p>Salsify and parsnips may remain undisturbed over winter and will be in prime condition, if sufficient protection of litter be given to facilitate digging during severe weather.</p>
Asparagus	..	..	5	1	1	..	..	..	..	..	..	..
Beans, Broad.	..	..	5	..	..	..	..	..	..	..	..	..
" Bush	6	6	6	●	2	2	2	●	..	..	..	..
" Pole Lima	..	..	..	..	●	●	..	..	..	..	..	..
Beets	..	6	4	4	●	●	●	●	..	..	..	..
Borecole or Kale	..	..	..	..	1	1	1	..	7	..	..	..
Broccoli	..	..	..	1	1	1	..	..	..	..	..	..
Brussels Sprouts	..	..	..	4	1	1	..	..	..	..	..	..
Cabbage, all sorts	..	4	4	1	1	1	●	..	7	..	..	..
Cardoon	..	..	..	●	●	●	..	..	..	..	..	..
Carrot	6	6	5	●	●	●	●	..	..	..	..	..
Cauliflower	6	4	4	1	1	1	●	..	..	..	..	..
Celeriac	..	4	4	1	1	1	..	..	..	..	..	..
Celery	..	4	4	1	1	..	..	..	..	..	..	..
Chicory, Whitloef	..	..	..	●	●	●	..	..	..	..	..	..
Corn, Field	..	..	..	●	●	●	..	..	..	..	..	..
" Sweet	..	..	..	2	2	2	●	..	..	..	..	..
" Pop.	..	..	..	..	●	●	..	..	..	..	..	..
" Salad	..	..	..	..	●	●	●	●	..	..	..	..
Cress	12	12	12	12	3	3	3	3	3	12	12	12	<p>8. To be grown in open ground and protected with litter during winter.</p> <p>9. Plant in frame, when cold weather sets in, cover with sash mats and shutters, admit fresh air whenever weather with permit.</p> <p>10. Plant in cellars, barns or under greenhouse benches that are free from draughts, with equable temperature.</p> <p>11. Few may be started in pots for early and transplanted as soon as ground is warm.</p> <p>12. Sow every week in greenhouse or frame for constant supply.</p> <p>NOTES.</p> <p>Egg plant, tomatoes, peppers in early spring should have sufficient heat to grow without check; and grown separate from other and hardier varieties, as cabbages.</p> <p>For last planting of beans, sweet corn, peas, lettuce, select earliest varieties as for first early plantings.</p> <p>Salsify and parsnips may remain undisturbed over winter and will be in prime condition, if sufficient protection of litter be given to facilitate digging during severe weather.</p>
Cucumber	6	6	4	4	●	●	..	6	6	..	..	..
Egg Plant	..	6	4	4	4	..	..	..	..	..	..	..
Endive	..	..	..	●	1	●	1	..	..	..	..	..
Kohlrabi	6	6	4	●	●	●	●	..	..	..	..	..
Leek	..	..	4	1	1	1	..	..	..	..	..	..
Lettuce	6	4	4	1	2	●	2	●	7	9	..	..
Melon	6	6	6	4	●	●	●	9	6	6	..	..
Mushroom	10	10	10	10	10	..	..	..	10	10	10	10
Nasturtium	..	..	..	●	●	..	..	..	..	..	..	..
Okra	..	..	11	11	●	●	..	..	..	..	..	..
Onions	..	4	4	●	●	..	..	..	..	..	..	..
Parsnips	..	..	5	●	●	..	..	..	..	..	..	..
Parsley	6	6	4	●	●	..	●	..	..	..	..	..
Peas	..	..	5	2	2	2	..	●	..	..	..	..
Pepper	..	..	4	4	4	1	..	..	..	..	..	..
Potatoes	..	..	..	●	●	..	..	..	..	..	..	..
Pumpkin	..	..	..	4	●	●	..	..	..	..	..	..
Radish	12	12	12	12	3	3	..	2	9	9	..	..
Rutabaga	..	..	..	..	..	..	●	●	●	..	..	..
Rhubarb	..	..	5	..	..	..	..	..	..	..	..	..
Salsify	..	..	5	●	●	..	8	8	..	..	..	..
Seakale	..	..	5	●	●	..	..	..	..	..	..	..
Spinach, Ordinary	..	6	5	2	2	..	..	2	2	8	..	..
" New Zealand	..	..	4	4	..	..	..	..	..	..	..	..
Squash	..	..	4	4	●	●	..	..	..	..	..	..
Tomato	6	6	4	4	1	..	..	6	6	6	..	..
Turnips	..	..	5	5	●	..	●	●	●	..	..	..

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

C. CAMERER, Madison, Wis.—Vineless Sweet Potatoes.

SCHLEGEL & POTTIER, Boston.—Special Price List of Seeds.

R. S. JOHNSTON, Stockley, Del.—Wholesale Price List of Fruit Trees.

WM. CARSON & SON, Rutland, Ohio.—Price List of Strawberry Plants.

A. H. GRIESE, Lawrence, Kan.—Small Fruits and Ornamentals. Wholesale list.

STEPHEN HOYT'S SONS, New Canaan, Conn.—Wholesale Price List of Nursery Stock.

THOMPSON'S SONS, Rio Vista, Va.—Strawberries, raspberries and vegetable plants.

H. F. SMITH, Waterbury Centre, Vt.—Circular of the Polaris and Joseph Potatoes.

WM. L. SWAN, Oyster Bay, N. Y.—Wholesale Price List of Plants, Rooted Cuttings, etc.

R. H. BROWN & CO., Victor, N. Y.—Pedigree Western New York Potato Seed. Wholesale list.

A. GOFFERJE, 413 East Thirty-fourth st., New York.—Catalogue of Flower and Vegetable Seeds.

RICHARD VINCENT, JR., & SONS, White Marsh, Md.—Wholesale Price List of Vegetable and other plants.

OLIVER H. DREW, Hibernia, N. Y.—Forage Plants and Grasses, Vegetable, Flower Seeds and Seed Potatoes.

LAMBERT & SON, Trier, Germany.—Wholesale Price List of General Garden Flower Seeds and Plants, etc.

A. A. BERRY SEED CO., Clarinda, Ia.—Illustrated Catalogue of Agricultural Seeds, especially of appliances.

DAVID KNIGHT, Sawyer, Mich.—Catalogue of Small Fruit Plants, chiefly strawberries, with cultural directions.

LETELLIER & SONS, Caen, France.—Circular of the Strawberry Louis Gauthier, claimed to carry two crops in one season.

GEORGE H. MASS, Woodstock, Vt.—Catalogue of Greenhouse and Bedding Plants, Flower and Vegetable Seeds, illustrated.

CHESTNUT HILL NURSERIES, Montclair, N. J. (E. & J. C. Williams).—Catalogue and Price List of Fruit and Ornamental Trees, Vines, Plants, etc.

A. W. LIVINGSTON'S SONS, Columbus, Ohio.—1897 Annual of True Blue Seeds. This year's catalogue is prepared in the usual exhaustive style of this firm, and is a valuable guide to all kinds of vegetable and flower seeds and plants. The tomatoes are a specialty. Cover contains illustrations in color of assorted varieties of tomatoes.

Obituary.

Charles Elliot, a member of the concern of Olmstead, Olmstead & Elliot, the well known landscape gardeners, of Brookline, Mass., died on Thursday, March 25. The deceased was thirty-seven years of age, a son of President Elliot, of Harvard College, a life member of the Massachusetts Horticultural Society, and devoted to his chosen profession.

William Magill. It is with feelings of deepest sorrow that we record the death of one who until some eighteen months ago was closely connected with the work of American Gardening. Mr. Magill acted as proofreader here till ill health compelled his resignation, when he left with the full respect of all his coworkers—a respect and regard which was the greater in proportion to the length of acquaintance. Mr. Magill was born in Scotland April 10, 1828, and was the father of the treasurer of the company owning this paper.

Dr. Robert Hogg, the renowned English pomologist, died at his home in London on March 14. He was in his seventieth year, having been born at Duns, Scotland, in the year 1818. He is known as the author of the "Fruit Manual," an encyclopaedic dictionary of fruits grown in Britain, and also as the editor-in-chief of the Journal of Horticulture. He was for many years secretary of the Fruit Committee of the Royal Horticultural Society and a prominent figure in European horticulture.

Mr. George Ville, the eminent agricultural chemist, died Feb. 21, aged 73 years. He was one of the foremost advocates of chemical fertilizers and his name has been authority for a period of 30 years.

Greenhouse Heating in the Northwest.

In answer to inquiries concerning the best means of heating greenhouse structures in the Northwest, this opportunity is taken to relate the results of three years of personal experience and observation.

Much time has been given to experiments in Massachusetts, New York and in Michigan to determine the superiority of steam or hot water for purposes of greenhouse heating. While these experiments throw much light upon the question, the results are necessarily limited in their application to the conditions under which they were carried on. This also explains why it is that one observer declares in favor of hot water, while another, equally as careful and conscientious, holds that steam is preferable. The longer one observes the workings of any particular heating system in various localities the more thoroughly he becomes convinced that the success or failure of any particular system depends more upon local surroundings than upon any arbitrary law which may determine its limits.

In many respects the prairie region of the United States is the ideal quarter of the country in which to grow flowers and vegetables under glass. This is due in the main to the abundance of sunshine during the months of December and January. In this respect the West presents a marked contrast to the dark, cloudy days which characterize these months in New England and the Middle States.

The great hindrance to the commercial growing of hothouse plants in the Northwest is the cost of fuel, but in cities of 10,000 or more inhabitants a florist and gardener will, even under existing conditions, find ready sale for his products at remunerative prices.

The great problem to the owners of greenhouses in this climate, subject to sudden changes, is how best to heat the plant. If it happens that the one contemplating entering the business is familiar with the good results obtained by the use of hot water in some concern in the East, he will be liable to use hot water in his venture. Hot water is very satisfactory in climates where changes can be foretold some hours in advance, but in sections liable to extremes and where the thermometer will fall fifteen to thirty degrees in as many minutes hot water is too sluggish in its movements to maintain the temperature of even the most perfectly constructed house. Under such circumstances it is necessary to have a heating plant that will respond quickly to an increased fire. Steam is the only form of heat that can be so changed; it is quick-acting in both directions.

If the temperature of a greenhouse fall as the cold becomes more rigorous, it is next to impossible to restore it. With the slow response which water gives to increased fire this result is almost certain to follow, but with steam the fall in temperature, if started, can soon be overcome.

A florist in Sioux Falls, S. D., had a very expensive experience in an attempt to use hot water, but since substituting a steam plant in its stead he has had no difficulty in maintaining the temperature of his houses.

The lesser cost of the steam plant is also an advantage in its favor which any one contemplating building a commercial plant cannot afford to neglect.

L. C. CORBETT.

W. Va. University, Morgantown.

Profit in Tomato Plants.

In a large city of 33,000 population, and a number of smaller towns near it, I noticed in tomato plant season, standing in front of most grocery stores, boxes about 10 inches square and 3 inches deep, which contained one dozen each of as fine stocky tomato plants as one would think it possible to grow. They were so strong and stocky when placed on the market that one dozen plants would "take the shine" off of about everything else in front of the store. They sold readily at 25 cents per box, while other tomato plants were a very dull sale at from 5 to 10 cents per dozen.

To satisfy my curiosity and find the secret of the grower's success I visited his houses, which were about seven miles from the city.

He sows the seed in the hothouses in which he grows lettuce, radishes, etc., for winter sales. The plants are grown in the seed bed until large enough to "prick out," and are then set an inch or more apart on the benches, and are watered with a fine spray attached to the hose, giving just enough water to keep the soil moist, but not wet. As the plants get larger water is gradually withheld.

After getting 2 or 3 inches high the plants are transplanted to the boxes and set so that each will occupy one-twelfth of the space in the box. They are again watered quite freely for a few days; then the water, which should be of a warmish temperature for the first month's growth of the plants, should again be gradually withheld, and after the plants get nicely to growing in the boxes they are transferred to large rows of hotbeds (if there is not room enough in the hothouses). The temperature is gradually lowered as the season advances, to harden them off, as the grower wishes the plants to make a short, stocky growth.

The grocerymen and other dealers receive 5 cents per box commission for selling, and the boxes cost 2 or 3 cents each and are so nailed at the ends that they can easily be torn off, and by cutting with a knife to the bottom of the box each plant can have one-twelfth of the soil in the bed left on the roots at transplanting time.

This grower is on a farm, but hires most of his farm labor, personally seeing to his hothouses, and from tomato plants alone he clears more money than from the whole farm.

CHARLES C. NASH.

Japanese Millet.—The Massachusetts Agricultural Experiment Station has recently introduced three new varieties of millets from Japan. Among them is a variety of barn-yard grass, *Panicum Crus Gallicum*, which, while it differs in its habits of growth, is botanically identical with the common barn-yard grass. The variety from Japan has been grown for a few years at the Massachusetts Experiment Station. Professor Brooks of that station is very enthusiastic about it and recommends it as a fodder crop either for feeding green or for the silo. As a forage plant it may yield ten to twelve tons of fodder per acre, and when thinly sown in rows about a foot apart, a yield of fifty to ninety bushels of seed may be obtained. The Maine State Station sounds a warning.

Ordinary barn-yard grass is a coarse annual, with stems two to four feet in length, appearing in mid-summer, in low, somewhat damp places or on cultivated grounds. The ordinary variety is a very troublesome weed. Certainly the seed of *Panicum Crus Gallicum* should be bought only of reliable dealers, who will be sure to furnish the seed of the Japanese variety. The mischief that would be wrought by sowing seed of ordinary barn-yard grass is self evident.

Starting Annuals.

Now is the time to prepare for sowing annual flower seeds for the decoration of the garden. One of the very best ways of raising the majority of annuals is to prepare a slightly heated frame, by placing about 9 inches of fresh horse manure under about 1 foot of soil. The surface of the soil should not be less than 6 inches from the sash. In two or three days after the frame is made up the soil will be in nice condition for receiving the seeds, which should be sown in shallow drills, the drills being about 6 inches apart. The sash should be kept quite close until the seeds have germinated. If the bed be sprinkled with tepid water on fine mornings the seeds germinate very rapidly.

As soon as the seedlings are through air may be given (with caution) on all fine days, and as the seedlings grow stronger and the days warmer the sash may be removed altogether during the day, but must be closed at night until all danger of frost is over. For such annuals as Asters, Stocks, Linnias, Cosmos, Marigolds, Helichrysms, Coreopsis, and others of this character, which make very fibrous roots, this way of raising them is far preferable to sowing in boxes in the greenhouse, which is the usual custom.

To grow annuals properly they

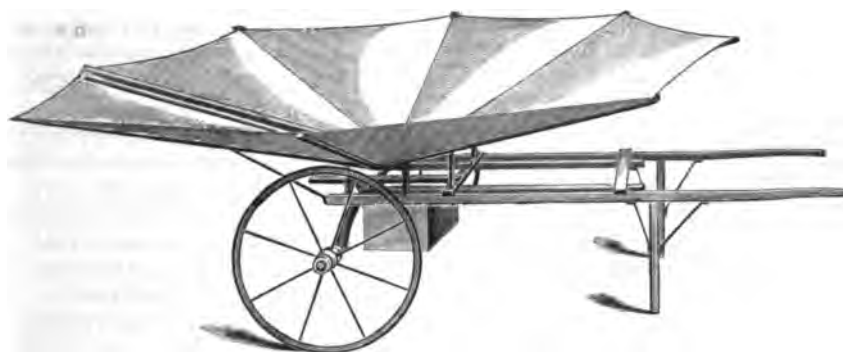


FIG. 73.—CURCULIO CATCHING APPLIANCE.

should receive no check. When sown in boxes in the greenhouse the plants are apt to become stunted from overcrowding, or "drawn" for want of sufficient air and light, but when grown in frames, with abundance of air and so near to the glass, they make nice, healthy, stocky plants by planting-out time, and lift easily with a good ball of roots.

I generally prepare a frame about the last week in March and sow my seeds the first week in April, which just gives them time to make nice plants by the end of May, which is the earliest we can plant out in this section (Massachusetts).

Such annuals as Mignonette, Poppies, Eschscholtzias, etc., which do not bear transplanting readily, on account of their not making many fibrous roots, I sow in the open ground where they are intended to flower.

In addition to the above lists of annuals, which are the kinds usually grown, being the most showy, it would be as well to grow each year a few of the many other kinds not usually met with, but which are equally beautiful, though not as showy, and thus help to educate and refine the taste for flowers, which is just as capable of being refined here as in literature and art.

E. J. C.

Our publishers will supply any book wanted. Send your orders.

A Curculio Catcher.

In an article on the plum curculio in our issue of March 13, page 174. Professor Johnson alluded to an apparatus for the catching of the pest. In this issue we present an illustration of such an appliance, the merits of which have been indorsed by some of our most noteworthy orchardists and fruit growers.

The "inverted umbrella" into which the curculios fall on the farring of the tree converges into a tin box. Into which the insects roll and are safely trapped. It is said by one user of the catcher that with it one man caught more bugs in a given time than ten could in the ordinary way. The maker is J. B. Johnson of Geneva, N. Y.

Viburnum Opulus.

As the spring planting season is close at hand, allow me to commend this native shrub to the readers of "American Gardening."

If it were more widely known I feel confident it would become a great favorite. Planted in masses I know of no hardy shrub that is more effective either in bloom (about the first week of June here), and again in the fall when it is covered with its bright red berries.

It grows wild in this region. I find it on bleak hilly land, at an altitude of two thousand feet. I have found single bushes here eight feet high and five feet in diam-

eter, perfect beauties. It seems to delight in a high and dry situation.

Incidentally allow me to ask why nurserymen call the shrub *Viburnum oxycoccus*, the High Bush Cranberry. Although the fruit resembles the cranberry, and people in country districts call it high bush cranberry, and use the fruit as a substitute—and a very bad substitute it is—it is not a cranberry; it is far too handsome to be classed along with such.

G. FRIEND,
Hamilton Lake, N. Y.

Plants Under Glass.

Under glass plants for a spring display are coming along without much forcing. Astilbes, Deutzias, Kalmias, Azaleas, Camellias, Calceolarias, Pelargoniums, Hybrid Roses, Standard Wistarias, Lilacs, and Crimson Rambler Rose, and Cannas in pots, will all be in bloom by the first of May.

Tender Evergreens and Rhododendrons stored for the winter in deep pits may be removed to their permanent summer quarters any time.

Gloxineas will need careful attention now, and should be shaded during the heat of the day. They require good light, but not direct sunshine.

Chrysanthemums intended for specimen plants will be making sturdy growth, and require frequent stopping to obtain well branched symmetrical plants.

Seeds of Primulas.—A first batch of Chinese Primulas should be sown now. We have a nice lot of the Japanese Primrose (*P. Japonica*), which should make a good show. Seeds of this should be put in now, in order to obtain a good foundation of growth before the winter.

T. D. H.

The Currant.

From Paper by Professor W. M. Munson Before the Maine Pomological Society.

The currant possesses great vitality and will grow almost anywhere, but for the best results good, deep, rich, clay loam is best. It is a gross feeder and sends its roots far into the soil. For ordinary field culture the plants are set about five feet by four, and thorough cultivation should be given. If clean culture cannot be given, good results are sometimes obtained by heavy mulching.

Propagation.

The currant is propagated almost exclusively by means of cuttings of the new wood made at any time after the new growth is mature. If practicable they should be set at once in the field.

Pruning.

As a rule annual pruning should be practised and all weak shoots should be removed, while the more vigorous ones should be shortened to induce the formation of fruit spurs. The fruit is borne on wood at least two years old, and for this reason when it is desired to renew a bush two years are required to accomplish the result, provided we wish to get fruit every year. It is a good practice in the summer to pinch in the young growth, in order to make it stocky and hasten the maturity of the wood, as well as to increase the size of the fruit. There are two principal methods of training a currant bush in common use—the bush form and the tree form. The former is for most purposes preferable.

Varieties.

Victoria is, perhaps, all things considered, one of the best. Prince Albert is a valuable late market variety. Fay does very well in many localities and the fruit is very large and handsome. The important objection to this, however, is the habit of splitting down, and where there are heavy snows this objection is a very serious one. Moore's Ruby is considered a valuable sort for home use. North Star is a variety which is receiving much attention; the fruit is but little larger than the Old Red Dutch and we do not consider the quality as superior.

Market and Home.

The Crandall currant is said to be a hybrid between the red currant and the so-called buffalo currant of the West. It appears to be simply an improved variety of the latter, which we know as the flowering currant of very good quality. It lacks the strong, disagreeable flavor of the ordinary English black currant; it does not ripen evenly and the skin is rather tough. A few for home use are, however, desirable.

For market purposes the red varieties are preferred to the white. No home garden should, however, be without a few bushes of the white imperial or the white grape.

Home Grounds—How to Lay Out.

This supplement contains a half-tone drawing (6½x10½ ins.) of an estate of about six acres; this plan, together with the accompanying explanatory text, presents in a nutshell all the salient points of landscape gardening.

With the aid of this plan, and by careful study of its suggestions one can lay out an estate of one acre or fifty acres, for we give the cardinal principles which govern the art so clearly that all can understand.

Printed on heavy paper and forwarded, securely packed in a cartoon, on receipt of price, 25 cents, or given as a premium for one new subscription.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY

A. T. DELAMARE PTC. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 3154 Cortlandt. P. O. Box 1697.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates 25 cents per estate line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

ROSE PREMIUM YELLOW RAMBLER.

To the many subscribers to whom a plant of Yellow Rambler Rose is due we wish to state that the plants are not being sent off at once, because it is not safe to set them out until all danger of frost be past. The list of names will receive attention just so soon as the weather will justify.

First Impressions. AMERICAN GARDENING this spring will come into the hands of many who may not be familiar with the scope and character of the work of the journal, and in order to obtain the attention of new friends we desire to state briefly that our columns afford all information necessary to successful results in garden culture, from the city lot to the most extensive grounds of the thorough plantsman. The range of subjects covered in one year embraces all the details of flower, fruit, plant and vegetable culture, and the knowledge is imparted by specialists and practical growers, great

care being taken to produce articles seasonably; this being rendered possible through the fact of our weekly editions. No guide is a safe guide if not absolutely reliable; and the fact that AMERICAN GARDENING enjoys the confidence of all practical men should be its highest recommendation to those who are interested in gardening and fruit growing.

Study the paper carefully for a month, and we feel assured you will ever after be enlisted as one of our many thousands of firm friends.

Food from the Garden. IN a recent lecture before the Massachusetts Horticultural Society,

this subject was brought forward, and it is one full of the deepest interest to our readers. The value of the garden as a source of food supply is not properly comprehended to-day. It is not merely enough to take crops from the land, but care should be exercised that these crops are of some special extra value either by reason of freshness, tenderness, or in high nutrient ratio.

Gardens are not properly regarded by the majority; and again, many having the best of opportunities fail to realize the fullest proportion of benefits through lack of knowledge as to how to set to work. The fact is that the garden and the kitchen are not brought together sufficiently. Many housekeepers—and such as pass muster as good ones too—are lamentably deficient in that knowledge which would enable them to make the best and most of what the garden supplies.

The learning of the principles and details of the art of cookery should be made a sacred duty of both man and woman—or, rather, boy and girl—for on sound nutrition rests very largely sound health, and, we all recognize the corollary, sound mental capacity.

If the man who, for his livelihood, raises crops of fruits or vegetables appreciated the demands of the kitchen, it would often result in better returns to him. How often are peas, for instance, marketed when just a couple of days too old? And what is true of peas is true also of hosts of other crops; tenderness and delicacy of flavors can be had only in the young state. Radishes offer another striking example; yet even in the home garden, right under the kitchen window, this crop is far too often allowed to become too old before being pulled.

How many people there are who really do not know the flavor of a good cabbage properly boiled! The plan of always boiling this vegetable with some pork or other fat in the water is to be persistently condemned. A cabbage has a distinctive and delicate flavor which is thus destroyed and, moreover, limits the occasions when such green vegetable can be eaten.

The better plan is to boil the cabbage in water, having a little salt and sugar in it; if so treated (and, of course, the

top of the vessel left off), we venture to think the demand for cooked cabbage would be greater than it is to-day.

The commonest and most popular vegetable of all, the potato—we refer to the so-called Irish potato—is very easily ruined in the cooking. Hot and cold water have very different action on the gluten contained in the tuber, and in order to get the best results when to be boiled, it should be put into boiling water, not cold, as is frequently the case.

The foregoing are merely striking cases; the list could be extended enormously, but let those suffice. Miss Barrows did good service in her lecture, and if the example of the Massachusetts Society, in engaging a cookery expert to instruct the members, be followed in other sections, we may reasonably hope for a better time for the one whose business it is to supply "good food from the garden."

Premiums. THERE is seemingly a variety of opinions as to what at Shows. is a reasonable premium to be awarded to exhibits in competition. Some managers consider that a nominal cash award (to cover the traveling expenses of the exhibitor) suffices, and that the chief satisfaction he seeks is the personal honor of having had the prize exhibit in an open competition.

But the exhibitor's feelings are not the same, his produce often means his livelihood, and when he runs the risk of getting absolutely no return (by being beaten), it is only reasonable that he should be encouraged to enter by the big value of the premium offered.

In too many of our fairs and shows all over the country, the lack of horticultural interest lies right here, as evidence the following remarks extracted from a Syracuse, N. Y., paper.

The moral indicated is capable of application in hundreds of instances:

"While there have been big displays of flowers at the State Fairs, it has been noticed and remarked that such displays have been made by but few florists. The Central New York Horticultural Society held a meeting Saturday evening, at which the cause of this dearth of flower exhibitors was partially explained. The Society avers that too small and too few premiums are given by the fair managers to draw out anything like a universal exhibition on the part of the florists of the State. It was said that the cost of shipping the plants to and fro was not met by the small amount of premiums offered, and if an increase was not made this year by the fair managers, members of the Society would not exhibit."

GLAD TO HEAR IT.

We are well pleased with the results of our "ad." in your paper, and will use it again.—A. B. DAVIS & SON, Virginia.

I am getting a number of answers from my advertisement now and am pleased with the position you give me, and also the looks of the advertisement itself.—W. E. WALLACE, Hartford, Conn.

Good Food from the Garden.*

Producer and consumer seem to be separated by a multitude of middlemen, who perhaps from ignorance of the best methods of handling garden produce often injure rather than help this branch of trade. The gardener, the marketman and the housekeeper should have frequent conferences to the end that all people should be better fed and that the human body may repel disease and temptation to crime and may be able to bear the heavy burdens of the twentieth century. Let us look at the possibilities of obtaining good food from the garden in the past and at the present time, and then consider what may be done to improve the supply of such products and increase their use in the future.

The progress of the arts of agriculture and cookery is shown by the general interest in cookery displayed by various agricultural organizations. The quality of a food product is not assured when it leaves the hands of the farmer; much depends upon its preparation for the table. Among the topics discussed recently by the granges have been such as "The Garden of the Farmer versus The Pork Barrel." Another worth considering would be "The Home Garden versus Patent Medicine." It has been said that vegetables to the early settlers of New England meant only potatoes and beans and corn, with a boiled dinner now and then. That was a slight advance upon the habits of the Indians, but to their instruction we are indebted for much of our knowledge of corn and beans.

Not only have we failed to learn how to use new vegetables, but have nearly lost the art of making some of the standard dishes of the past. The increased facilities for obtaining meat from the West and the cheapness of canned goods packed in California and the South have made it unnecessary for us to exercise our ingenuity to prepare a variety of palatable dishes from the scanty store of products available to our ancestors. As yet we have not taken kindly to soups and salads and have yet to learn the possibilities of vegetables in these directions.

We are criticised for eating too much meat. We should see that meat eating is not essential to strength, and that the very poor in other countries often depend upon vegetable food because it is cheap. For the majority of our people to-day vegetarianism is hardly practicable, but its adherents increase rather than decrease. Vegetable substances are less quickly digested and less completely assimilated than animal tissues. Animal food should not, however, constitute more than one-fourth of the whole amount eaten. Some of the most troublesome diseases like intemperance, cancer and gout are thought to have a direct connection with excessive meat eating. We are beginning to realize that a knowledge of the composition of each food is essential to its wise selection and preparation. Vegetables and fruits afford all the five necessary food principles, but the proportions are hardly satisfactory for a perfect diet. Fats and proteids need reinforcement, and this is accomplished by the use of butter, oil, eggs and meats.

A large part of the vegetables displayed in our markets are overgrown, wilted or carelessly prepared. Those which suffer most from this treatment are radishes, cucumbers, green peas, beets, corn and summer squashes. The public must be educated to appreciate quality rather than size, to recognize the fact that wilted Southern vegetables never equal natives in flavor, and that gain in size usually means a corresponding loss of flavor. The housekeeper knows little of the comparative merits of the vegetables in market, and often is no wiser than the New Jersey family who used 14.8 per cent. of the whole sum spent for food for oranges and celery, which furnished but 1.4 per cent. of the total full value.

There is usually some one best way to cook each vegetable, but where one kind only is available it is necessary to serve it in a variety of ways. This perhaps explains why the average cookbook gives more recipes for the potato than for all other vegetables. Suitable utensils are es-

sential; vegetables should not be cooked in iron kettles when others are obtainable. Strong flavors frequently are due to careless preparation. Careful trimming and thorough washing are essential. Wilted vegetables are improved by soaking. Salad plants need especial care in washing to remove parasites as well as hellebore, or Paris green. By cutting in small pieces the time of cooking may be lessened. Use soft water and boil till tender. If uncovered the color is better preserved and the odors are less pronounced. Salt should be added when the cooking is partly completed. Soda may be used in small quantities to aid in softening the water. As a rule with all sweet, well-flavored vegetables the water should be allowed to evaporate at the end instead of draining it off. Vegetables may be warmed over if care is taken in the process.

In the home garden we look for the real luxuries in the vegetable line. The best land is none too good for a garden. The garden should be planted to fit the family as carefully as a library should be selected. It has been worth while to study fermentation thoroughly, because an immense amount of capital is invested in breweries. Cattle foods are investigated, because they are a large expense to the farmers. Might not equal profit accrue from a thorough study of changes which take place in vegetable foods between the garden and the table?

Planting Forests.

Robert Douglas, the pioneer nurseryman of Waukegan, Ill., has shown by his own experience that it is not only easy to plant a forest of 100 or 1,000 acres in a season, but that it is also possible to make it pay for the planter—that is. It pays richly for the owner later. He is not inclined to glorify the European forestry, as some of our Americans do. If the Europeans had the task of setting out forests upon our treeless Western prairies, they would find it harder than maintaining a standing army.

Americans can, however, manage the task because they do things by the large. They cultivate by horse and steam power instead of by hand power. The forest trees should be planted in rows and tended like orchard trees. In selecting trees to plant those native to the locality, if there are any, should have first consideration, as these will surely thrive best. Many growths that do well in the East are not suitable for the West. "Western trees for Western planting," is the motto, because Western trees are the surest. The green ash, for instance, makes a fine and vigorous growth in the West, while in the East the white ash is far superior to it. The chestnut has been thoroughly tried in the West and has been found wanting. The pines and other conifers of the Pacific slope will not grow at all in the prairie belt, although the conifers of the Rocky Mountains will.

Mr. Douglas finds that 100 men can plant 1,000 acres of forest in 30 days. The ground should, however, have been previously prepared. Either autumn or spring will do for the planting. In spring the seeds of the trees should be sown so soon as frost is out of the ground. By fall they will have made a growth sufficient for transplanting to the forest that is to be. Forty acres will grow seedlings enough to plant 1,000 acres.

The farmers of Kansas have set out in the past few years 147,340 acres of forest. Among them are 11,500 acres of black walnut, 12,486 acres of maple, 2,637 acres of honey locust and 55,553 acres of cottonwood. The cottonwood grows the quickest and makes fuel for the farmer sooner than any of the others, hence his preference for it. Land prepared as for corn planting will grow the seedlings.—Norwich (N. Y.) Sun.

The Oldest Pear Tree.—Advices from Europe state that what is believed to be the oldest pear tree then in existence was blown down during last November. It was growing in France and had a reputed age of 600 years. The trunk measured over five feet in circumference.

True Blood Purifier

Such a medicine you need at once to remove the impurities which have accumulated in your blood during winter. Such a medicine is Hood's Sarsaparilla. Therefore take Hood's Sarsaparilla now. It will do you wonderful good. It will purify your blood, give you an appetite, and cure all humors.

Hood's Sarsaparilla

Is sold by all druggists. Price \$1, six for \$5.

Hood's Pills are prompt, efficient and easy in effect. 25 cents.

GRAY HAIR MADE DARK

By a hairdresser Home Wash. Also makes the hair grow. Full directions and recipe for 50 cts. Mrs. A. HUNTLEY, 4215 Evans Ave., St. Louis, Mo.

Mention American Gardening when you write.

Premium American Pansy SEEDS AND PLANTS.

Also other plants and seeds described in my catalogue, sent free to any address with "How to Grow Pansies." Over 50 varieties and mixtures of Pansy seed. Hebe-Pansies, 25c. per pkt.; selected mixed, 15c.; extra choice mixed, 10c.; trade pkts. containing triple quantity, at double prices. Pansy plants in season. In bud or bloom, \$1.75 per 100. 50 plants, \$1.00. Smaller plants, by mail, prepaid, at same rates, or 50c. per doz. Many other seedling plants listed in catalogue.

WM. TOOLE Baraboo, Wis.

Mention American Gardening when you write.

NEW PINK VIOLET

MRS. J. J. ASTOR.

(Named by permission.)

Very fragrant, similar in form and habit to Marie Louise, but more vigorous, stems longer, flowers larger.

Price, \$2.00 per doz.; \$10.00 per 100. Orders booked now and filled in rotation after May 1.

Marie Louise, \$1.00 per 100, any quantity.

G. SALTFOORD, Violet Specialist, RHINEBECK, N. Y.

Mention American Gardening when you write.

WINTZER'S NEW AMERICAN PEDIGREE CANNAS

1897 set—12 magnificent varieties, including Duke of Marlboro, Duchess of Marlboro, Maiden's Blush, Gloriosa, Triumph, California, Sunset, Champion, Pillar of Fire, Brilliant, Lorraine, and Golden Pearl—embracing the newest and most distinct colors and the highest prices of Cannas yet produced. Description List of New and Rare Cannas, with Catalog of New Roses, Plants, Flower Seeds and Garden Fruits, FREE. ALFRED F. CONARD, Box C, West Grove, Pa.

Mention American Gardening when you write.

ASSIGNEE'S SALE OF

Hardy American Plants and Flowers

FINEST COLLECTION IN AMERICA.

40,000 Native Azaleas, five species well budded and with balls.

Entire stock of the well-known Highlands Nursery must be sold this spring. A great opportunity for Parks, Cemeteries and Owners of property contemplating large or small planting.

For lists, prices and information, address ASSIGNEE, Highlands Nursery, Kewanee, N. C.

Mention American Gardening when you write.

For IMPORTED and ESTABLISHED



ORCHIDS

APPLY TO

LAGER & HURRELL,

Orchid Growers and Importers,

SUMMIT, N.J.

Mention American Gardening when you write.

*Read by Miss Anna Barrows before the Massachusetts Horticultural Society.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Crops of Tomatoes Under Glass.—I notice in your issue for Feb. 13, 1897, on page 107, Mr. W. Turner claims that Sutton's Best of All tomato is better for forcing than is Lorillard. I would like to ask where to get the seed of Sutton's Best of All. I can't find it listed in any of the numerous catalogues I receive. I would like to ask, also, how far apart he plants his tomatoes, and how he manages to get fifty perfect fruits to a plant, or even twenty-five, with Lorillard.—N. E. BAKER, Kansas.

—There certainly should be no difficulty in producing twenty-five good fruit to a vine of Lorillard. In looking over my figures for 1895-96 I find we had 150 plants, which produced 4,500 tomatoes, an average of thirty to the vine. Those were all Lorillard. Our season of forcing extends from November to May. To be successful with tomato forcing avoid soft growth, build up the growth as the plants make it, which can be done by giving air on every chance. It is useless to force tomatoes in a close, humid atmosphere. The results would be long-jointed, soft vines, but mighty little fruit, and that of poor quality. As to how I manage to get fifty fruits from one vine (variety Sutton's Best of All); answering facts is an easy subject. This variety was planted on a side bench three and a half feet apart, the plants pinched once, then taking up three shoots from a vine and training them up at equal distances, they were allowed to extend about four feet, then stopped, and after that all young growth was kept off to give the fruits a chance. Tomatoes handled this way make quite a show. There is one point which should be remembered in forcing tomatoes for winter: Commence early, so as to build up the plants. Tomatoes for winter should be sown in July or August at the latest. Sutton's Best of All is an English variety.—W. TURNER.

Lawn Fertilizer.—In an article signed by T. Harrison, N. Y., in your issue of March 6, a fertilizer for lawns is spoken of, giving the pounds of each ingredient used up to 2,000 pounds, but it is not stated how heavily it should be applied per acre. I would like to try it, but might make a sad error. Would T. Harrison give me more light?—S. L. CUSHMAN, Massachusetts.

—The fertilizer should be sown at the rate of 500 pounds to the acre before the grass starts to grow, distributing it evenly over the surface. If it can be sown just before a shower, so much the better.—T. HARRISON.

Carnation Lizzie McGowan.—In a recent issue of the American Florist I notice a member of the American Carnation Society speaking about the fine blooms of McGowan raised on Long Island. I can raise Daybreak, Scott, Stuart and Garfield very well, but my McGowans burst their calyx every time and make them worthless for anything but design work, and, of course, only bring one-third the returns of the others. My soil on benches is a light fibrous loam in the nature of rotten, tough, timothy sod, but as I have a heavy soil on my place similar to river bottom land I should like to know if the Long Island soil is of that nature. If you can advise me about that I shall try how McGowan will thrive in it.—EMIL A. KUHNKE, O.

—Generally speaking, the soil on Long Island is of a very light, sandy nature. We suspect that the success referred to is more a question of selection of stock than anything else. One celebrated Long Island grower has followed the selection so closely that he has now almost a distinct type. Several other growers of note do the same and with marked results.

Ants on Lawn.—I am troubled with ants raising great mounds on lawn with

their nests. Can any one inform me how to get rid of them, and yet not harm the grass? Any information would be thankfully received.—J. C.

Banana as a House Plant.—I am so thoroughly pleased with "American Gardening" that I don't want to miss a single issue. In the Feb. 27 issue Mr. Benson tells of his banana and papaya plants. Last summer I had a Musa Ensete grown from seed in January, and it made a fine plant on the lawn; hating to see it frosted I lifted it (having very small roots) into a lard tub. It now is a beautiful decorative plant in our parlor, and in my estimation takes much beauty from some of my palms. For sub-tropical effects I think it has no equal.—FORREST A. GANONG, Ohio.

FOREIGN CORRESPONDENCE.

Myatt's Early Ashleaf Potato.—In a recent issue I noted a complaint as to quality of this potato after the first season's trial of newly imported seed. In my experience I have found that potatoes when brought from a great distance and from a very different soil give a far better result—especially in the quality—the second year than the first. I have had a sort which was usually of a dry, mealy quality, brought from a soil totally different from mine, where the first year's crop gave potatoes which were quite close and soapy, as we describe them. These were planted a second year in my ground, the resulting crop being as dry and mealy as any one could desire. I strongly advise any one growing potatoes—the seed of which is from a soil which is a great contrast to that in which they are then being planted—to try them at least a second year.—W. B. SMALE, F. R. H. S., Torquay, England.

To Destroy Mealy Bug.—The following I learned from a good practical gardener: Clear the house during the frosty season, and repeatedly syringe all parts of the house, woodwork, walls and floors, leaving the house fully open for a week or ten days after.—W. B. SMALE, F. R. H. S., Torquay, England.

Hybrid Nepenthes.—In the issue of "La Semaine Horticole" for March 31 is a list of these with date, name of raiser, parentage, and size of pitcher—that is, so far as it has been possible to get at the facts.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c. per bottle. Sold by all Druggists. Testimonials free.

FARMERS have advantages that other people do not have. When they have some question about their business that they do not understand, they can write to *The Rural New Yorker* and get in reply the experience of the best informed men in the country on that particular subject, and it costs only a dollar for the paper a whole year. They can ask all such questions they please. Such information would cost a merchant or a manufacturer or a professional man hundreds of dollars, when they could get it all. We can send it and AMERICAN GARDENING both one year for \$1.80.

PEACH TREES \$2. per 100.

List Free. RELIANCE NURSERIES CO., Geneva, N.Y. Mention American Gardening when you write.

FAY'S CURRANT LARGEST STOCK, EXTRA STRONG.

Two years old, 25 bushes for \$1. or \$2.50 per 100. One year old, 25 bushes for \$1. or \$2.50 per 100. FRED H. BURDETT, Clifton, N.Y. Mention American Gardening when you write.

You think of Scott's Emulsion as only for those who have consumption or who have inherited a tendency to it. Almost its greatest use is for those whose condition is so impaired as not to be able to get the good they should out of their ordinary food. In nearly every case with these, Scott's Emulsion of Cod-liver Oil brings back appetite stimulates digestion, restores color and plumpness, and controls the diseases of thinness. Book about it, free,

50 cts. and \$1.00, at all druggists. SCOTT & B. WNE, Chemists, New York.

DISCOVERED A few wash that will remove that gray complexion and leave it soft and white in 10 minutes after washing, and in a week remove all pimples, blackheads and tan. Removes the skin without irritation. Perfectly harmless; contains no poisons. One box 50 cents to prepare enough to last six months. Recipe and full directions, 25 cts. Mrs. E. HUNTER, 4513 Evans Ave., St. Louis, Mo.

Mention American Gardening when you write.

BLINDNESS PREVENTED

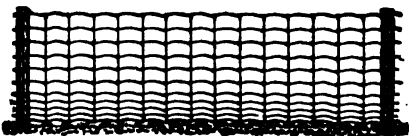
The Absorption Treatment a Success. Hundreds successfully treated for all diseases of the eyes or lids without knife or risk at their homes and at our Sanatorium, the largest and most successful institution in America. "Don't want to be blind." Pamphlet Free. THE REMIS EYE SANITARIUM, Glen Falls, N.Y. Mention American Gardening when you write.

HAMMOND'S "WHITE PAINT,"

For Outside or Inside Use on Greenhouses or other Buildings.

For 19 years this Paint has been in use for this specific purpose, and it is as indestructible as paint can be made. Put up in 5, 10, 15, 20 and 25 Gallon Kegs, and in Barrels of 50 Gallons. B. HAMMOND, Fishkill-on-Hudson, N. Y.

Mention American Gardening when you write.



MAKE IT UNANIMOUS.

Years ago a Michigan Farmer commenced using Page fence, and afterwards took an agency. He now boasts that he can travel over 35 adjoining farms without going off "Page Territory." He hopes to furnish two more, thus "filling gaps" and making 35 consecutive farms using Page. You will find particulars in March "Hustler."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

PROFITABLE

FRUIT CULTURE

finds an important adjunct and a valuable assistant in

GOULDS' "POMONA"

A new Spray Pump which embodies new and distinct features of great value. The Plunger, Plunger Connections, Glass, Valves, Valve Seats and Strainer are all made from best brass and are practically indestructible. Every stroke of the handle works the agitator as will be seen in cut. Long handle makes it work easy. Will supply 1 or 2 leads of hose. Valuable book on "How a When to Spray," FREE.

THE GOULDS MFG. CO. 11 Ovid St., SENECA FALLS, N. Y.

Mention American Gardening when you write.

Orchids at Cornell University.

Although the botanical department of the university has no special orchid house, the gardener in charge here, Mr. R. Shore, always has a few specimens carrying blooms and which would interest callers.

One of the most attractive species now in flower is *Coelogyne cristata*, native of Nepal. One specimen has thirty spikes of bloom, with three flowers to a spike (while some have as many as four flowers), making about one hundred flowers in full bloom. The plant is in a ten-inch pan.

Strongly contrasted with the gorgeous colors of the more showy orchids are the *Cypripediums*. Standing with their solitary flowers perched on slender stems, they remind one of a little bird with outspread wings ready to soar away. They are of very easy culture and should be grown by amateurs along with other plants. *Cypripedium Boxallii*, from India, is making itself known by its very dark spotted upper sepal, and its side petals curled backward nearly into a cylinder. *Cypripedium insigne* is now in its waning stages, having been in flower two months; the side petals stand out flat, with a slightly crimped edge, and are of a light green color, contrasting remarkably with the upper sepal, which is tipped with pure white. A very fine *Cypripedium* is the species *villosum*, native of India. Its flowers shine as if a new coat of varnish had just been given them.

Passing by the *Cypripediums*, we come across a specimen of *Ada aurantiaca*, the golden orchid of New Granada, with its bright orange colored blossoms. This species make a unique show among other forms, as the color is rare among orchids.

Several specimens of *Calanthe Veitchii* are now before us; this orchid is a hybrid and is of deciduous habit. Its name translated means "beautiful flower," and the long graceful spikes standing two feet or more above the surrounding foliage and bearing over a dozen flowers of a beautiful rose color, justify the name.

That lovely genus *Laelia*, is represented by *anceps*, from Mexico. The lip of deep purple stands out against the lilac background of petals and makes a magnificent contrast.

Another magnificent orchid is *Lycaste Skinneri*, or monk orchid, from Guatemala. The name is good, as the lip is inclosed in a dull white hood, which in form reminds one of the hood of the monk.

Some distance on we see *Odontoglossum falcifolium*, of Mexico; the flowers are of brown, yellow and orange.

An orchid which stands second to none is *Phalaenopsis amabilis*, of Java, the queen of orchids. This is certainly magnificent, with its pure white flowers borne on one large stalk three feet long, with four sprays of flowers hanging from it, and with twenty-five flowers and buds.

WARREN SHINN.

Good Roads and Farmers.

Speaking recently at a meeting on the subject of good roads at Newburg, N. Y., Hon. G. E. Harrison (of the United States Department of Agriculture Bureau of Roads) said he had spent fifty years on a farm, in New Jersey and Pennsylvania, and ten years in his present position; he was therefore, he thought, qualified to speak. The road question had loomed up because it had been found that it takes a third of their value to move the crops, the cost of primary transportation being very large. On an average it costs 25 cents per ton to pay for primary transportation. In 1895 it cost \$946,000,000 to move produce, to pay for its primary transportation. Farms could not be put on lines of railroads, and railroads will not go into farms any more than they now are. Investigation had shown that it costs 7 cents per mile to move farm products over country roads. Farmers do not think of this, or if they do, they figure that it does not really cost them anything, as they do the hauling with their own teams. The Government found that the cost of transportation from the farm could be reduced two-thirds by having good roads, and had issued 24 bulletins giving information on the subject. New Jersey was the first to adopt the State aid law, and it is economical, and produces

the best results. That law was started by farmers. The speaker gave the wheelmen credit, but remarked dryly that they don't move the National Government. The wheelmen knew nothing about the State aid act, and it was passed without their help and hardly their knowledge. Being asked about wide tires on good roads, the speaker replied that the best rolling any road could be given was a by wide-tire wagon. In New Jersey men who use wide-tire wagons are given a rebate of \$1 per wheel per annum on their taxes.

Hingham (Mass.).—The Agricultural and Horticultural Society has inaugurated a series of monthly exhibitions, the first of which took place on March 15. Potatoes and salads were very fine.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advertisement, and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

RASPBERRY PLANTS. 50,000 Cuthbert, \$3 per 1000. J. M. Zion, Carks Hill, Ind.

STRAWBERRIES.—Best plants of the best varieties. 60 cts. per 100 by mail. Wm. Perry, Cool Spring, Del.

DAHLIAS—500 varieties. Flower or Vegetable seeds, \$1.50 per hundred packets. H. F. Burt, Taunton, Mass.

NEW and Rare Trees and Plants. Write for our new illustrated catalogue, to J. W. Adams, & Co., Springfield, Mass.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedman, Rochester, N. Y.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York

LONGSTRETH'S SEEDS grow. Seven full sized packets only 15c.; best, cucumber, radish, etc. Catalogue free. W. B. Longstreth, Gratiot, Ohio.

CHOICE CACTI, labeled, 8 cuttings 25c., 3 for 10c. *Gladiolus*, blooming bulbs, 6 Childsall 25c., 30 *Lemoines* 25c., 25 French Hybrids 25c. J. Peckens, Wayland, N. Y.

SEND FOR Catalogue of Small Fruit. Best Eastern grown stock. Choice new varieties given as premiums for every order. E. W. Wooster, S. Hancock, Maine.

EGYPTIAN or Top Onion sets cheap; one dollar per bushel in any quantity; purchaser to pay freight. W. W. Thompson & Sons, Station D., Milwaukee, Wis.

CEDAR OIL INSECTICIDE, better and cheaper than fir-tree oil, \$2.50 the gallon; \$1.00 the quart tin. Cedar Oil Soap, pound tins, 50 cents; half pounds 25 cents. Sold by seedmen and florists. August Rolker & Sons, New York, P. O. Station E.

MAMMOTH PANSIES. 2 packets of the most superb varieties grown; Bugnots superb mixed and large Belgian for only 10c. in silver. Extra choice imported seeds picked from the most perfect flowers grown. E. Steinhofner, West Haven, Conn. Box 231.

CALIFORNIA PRIVET make the finest ornamental hedge and are perfectly hardy. Strong plants one to three dollars per hundred. Atlantic Coast Nursery, James H. Cornell, Proprietor, 608 4th Ave., Asbury Park, N. J. Reference 1st National Bank of Asbury Park.

SUCCESS, an early market berry, a seedling of the Bubach, fertilized by Michel's Early. Perfect blossom, an improvement on Bubach in size, firmness and quality. Early and productive. Dozen, 40 cts.; 100, \$1; 1,000, \$6.—Address Originator, Geo. N. Hannah, Whigville Conn.

FOR SALE.—Forcing sash. Through a factory mistake, we have on hand 76 sash 10x14 20 ft. The outside dimensions on these are 9-2x3, sash 18 in. thick. We offer these glazed at \$1.25 each. E. O. B. cars at Lynn, which is half cost, cash with order. The Brockway-Smith Corporation, Manufacturers of all kinds of Sashes, Lynn Mass.

1,000,000 Strawberry Plants of 30 well tested varieties, from \$1.50 to \$2.00 per 1,000. 100,000 Michel's Early, \$1.25 per 1,000, \$10 per 10,000. All healthy, young well rooted plants, true to name, and securely packed free. A good stock of No. 1 Peach-trees, of a few well tested reliable varieties, healthy and free from scale. Get my price list before purchasing. Any information of varieties culture etc., cheerfully given to those who want stock. Address Chas. Black, Hightstown, N. J.

PRIZE WINNING DAHLIAS

\$1.00 per doz. Catalogue Free.

LOTROP & HIGGINS, E. Bridgewater, Mass.

Mention American Gardening when you write.

ALL THE LATEST NOVELTIES
AND PLANTS THAT CAN'T BE HAD ELSEWHERE
Canna, Italia and Austria, at \$1 each.
New Roses, New Fruits, New Shrubs, New Bulbs.
10 Cents for \$1.—5 for 50 cts. Book on Cacti 115 pages, 125 cuts for 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free.
A. BLANC & CO., - Philadelphia.

Mention American Gardening when you write.

POSTPAID 20 GRAPE VINES for \$1.

4 Worden for 50c.; 4 Niagara, 25c.; 4 Moore's Early, 25c.; 4 Brighton, 25c.; or the whole 20 as above for \$1. Also Apple, Pear and other trees cheap. 1,000,000 Strawberry plants, \$3 per 1000. Raspberry plants, \$5 to \$8 per 1000, by freight or express. Everything guaranteed healthy and true to name.

F. L. WRIGHT, Plainfield, Mich.

Mention American Gardening when you write.

SWEET POTATO PLANTS

SPECIAL DESCRIPTIVE CIRCULAR and PRICE LIST for our Northern customers, with full instructions for growing the crop, now ready. Send for it. Our SWEET POTATO PLANTS go to New England, and as far West as Montana.

HOLLY, MAGNOLIA and TULIP TREES. STRAWBERRY PLANTS of leading varieties.

P. C. SQUIRES, Berlin, Md.

Mention American Gardening when you write.

Berberry, California Privet and Japan Quince

For Ornamental

HEDGES.

HARDY ROSES ON OWN ROOTS.

Write for Prices to FAIR OAKS NURSERY, OAK PARK, ILL.

Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.



We have the largest and finest Collection of PALMS, ORCHIDS, FERNS and FOLIAGE PLANTS for Conservatories. Hardy Herbaceous Plants, Flowering Shrubs and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting Place and furnishing stock (free).

SIEBRECHT & SON'S,

Rose Hill Nurseries, - New Rochelle, N. Y.

Mention American Gardening when you write.



Vineless Sweet Potatoes

Tubers and Plants.

MCKINLEY'S CHOICE. Indor ed by our President, and no one else has them, and

GOLD COIN PROLIFIC Genuine home grown, no Arkansas Yams.

G. CAMERER,

Madison, Jefferson County, Ind.

Mention American Gardening when you write.

AMERICAN GARDENING AND THE OHIO FARMER,

Both One Year Each for only \$1.60.

THE OHIO FARMER is a large, 20 page weekly, \$1 per year. A National Farm, stock and Home Journal, and is clearly the Leader of the Agricultural Press of America. It pays more for illustrations, Correspondence and Market Reports than any other of its class.

It is the Best and Costs no more than others. Send for a SAMPLE COPY to THE OHIO FARMER, Cleveland, O.

THE OHIO FARMER will start their paper the date the order is received by them, and continue to Jan. 1898—14 months, if ordered at once. Address all orders to AMERICAN GARDENING, P. O. Box 1697, New York

SOW NOW
W. & D.'s Central Park
Lawn Grass
20 lbs. per bus. 25c. qt.: \$1.25 peck; \$4.50 bus.
W. & D.'s New York Market

Peas
25c. qt.: \$1.25 peck; \$4.50 bus.
W. & D.'s Large Flowering
Sweet Peas
10c. oz.; 50c. per lb.
Illustrated Catalogue Free.
WEEBER & DUN, Seed Merchants and Growers.
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, April 6, 11 A.M.
A choice assortment of Roses, in bundles of ten, in ten varieties. A large quantity of well budded Ghent Azaleas, also Hardy Rhododendrons. Spring Bulbs of all kinds will also be offered.

Friday, April 9, 11 A.M.
Roses, Nursery Stock, Gladioli, Tuberoses, Caladiums, 500 Lilium Giganteum, 500 Pancratium Caribaeum.

At each sale will be offered a choice assortment of house plants, Ficus, Palms, etc., also quantities of plants in flower suitable for Easter.

Goods on view morning of sales. Catalogues free.
Mention American Gardening when you write.

CLEARY & CO., 60 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on

Tuesday, April 6, at 11 A.M., with a complete assortment of Irish Grown Roses, Nursery Stock, Tuberoses, Caladiums, Dahlias, Canna Roots, Gladioli, also Holland grown Roses, Rhododendrons, Azaleas, Viburnum, etc. Sales every Tuesday and Friday hereafter. Catalogue on application.

Mention American Gardening when you write.

R. M. GARDNER & CO.,

199 Fulton Street, NEW YORK.

Will sell every **TUESDAY** and **FRIDAY** at their rooms at 11 a.m. H P. and Standard Roses. A general line of Nursery Stock and Spring Bulbs.

Mention American Gardening when you write.

EXHIBITION.

AT THE ROOMS OF THE
AMERICAN INSTITUTE,
111 to 115 W. 38th Street,
TUESDAY, APRIL 13,
A GRAND EXHIBITION OF

Forced Fruits and Vegetables.

INCLUDING
Grapes, Strawberries, Lettuce, Cucumbers, Mushrooms, Seakale, Asparagus, Radishes and Tomatoes.

Exhibits to be in place by 1 P. M. Meeting 2 P. M.

President, Dr. F. M. HEXAMER,
53 Lafayette Place.

Application for space, and notification of intending exhibits to be made to:

JAMES W. WITHERS,
Superintendent of Exhibition.
Box 1697, New York City.

Mention American Gardening when you write.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City

PRIVATE GARDENERS.

We solicit for publication under this heading notes on the work being done by private gardeners, changes in appointment, and all matters of interest to horticulturists generally.

Auction Sales.

Tuesday, April 6—Hardy Roses, Standard Roses, Lilacs, Hydrangeas, Nursery Stock, Spring Bulbs, at Elliott's Rooms, New York.

Special sale of Irish Roses, General Nursery Stock, Bulbs, Rhododendrons, Azaleas, etc., at Cleary's Rooms, New York.

Dwarf H. P. and Standard Roses; Azaleas, Paeonies, and Flowering Shrubs, at Gardner's Rooms, New York.

Friday, April 9.—Sales will also be held as indicated above.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

Mr. James Allen, formerly gardener to H. Sidenberg, Hastings-on-Hudson, N. Y., is now gardener for Mr. Coppel, Tenafly, N. J.

Mr. Peter Wright has secured the position of head gardener to Mrs. C. R. Agnew, Palisades, N. Y. This place was made vacant by Mr. William Ferrier, who is now in New York looking for a position.

Mr. John Graff, who last season was gardener to Mrs. Stevens, Bernardsville, N. J., is now head gardener for O. J. Smith, Dobbs Ferry, N. Y.

Mr. John Grant, formerly assistant gardener with Mr. William Turner, Rockwood Hall, Tarrytown, N. Y., has accepted the position of head gardener to Mr. F. de R. Wissman, Westchester, N. Y.

Mr. George Cook, who was formerly head gardener for Mr. H. McKay Twombly, Madison, N. J., is now superintendent in charge of the Castle Grove Dairy Farm, Danville, Pa.

Mr. William H. Hewson, who was formerly gardener to Mr. George H. Lewis, is now working with a commercial florist in Buffalo, and it is reported that Mr. Lewis is looking for a successor to Mr. Hewson.

It is reported that Mr. Henry Dale of Tarrytown, N. Y., is looking for a man to take charge of his place.

Mr. David Emory, late gardener to Chas. Dissel, Esq., Wynnewood, Pa., has engaged as gardener to Clay Kemble, Esq., Glenside, Pa.

Mr. James J. Smith, late with George McFadden, Esq., Bryn Mawr, Pa., goes as gardener to W. R. Mercer, Esq., Doylestown, Pa.

Mr. John Donn, well known in commercial circles, has retired from active business and is at present gardener for W. W. Spence, Esq., Baltimore, Md.

Mr. John Hitchman, for many years a gardener, has now started in the seed and plant business at Oceanic, N. J., having resigned his position as gardener to H. A. Spalding, Esq.

Mr. Albin Sanger, formerly gardener for Dr. Wiley, of Seabright, N. J., resigned his position this spring and took the position of head gardener to Mr. H. A. Spalding, of same place. He subsequently resigned the latter position and secured an engagement as head gardener for Mr. Gibson, of Little Silver, N. J.

Mr. James Hartshorn has engaged as gardener to H. N. Higinbotham, at his beautiful farm and country house near Joliet, Ill.

Mr. John Cunningham, who has for some time past served with Richard Brett, at Yonkers, N. Y., has secured the position of gardener to Mrs. Osborne, Poughkeepsie, N. Y.

Mr. Henry Wild succeeds Mr. Trepass as gardener to Mr. A. W. Blake, Brookline, Mass.; he has been an assistant to William Thatcher on the J. L. Gardener estate.

Mr. Carl Blomberg, gardener to Oakes Ames of North Easton, has a new cold orchid house, which is coming along to his entire satisfaction.

Philadelphia.

About two years ago C. H. R. Curtis bought the well known Barker place at Wyncote, Pa., and a recent visit there found the place transformed into a modern establishment. A splendid range of five greenhouses has been built; the center house is devoted to palms, its dimensions being 25x35 feet, curvilinear roof; the other four houses are each 18x30 feet, with roofs similarly formed; the entire range is of iron, with iron benches and cement walks. The plant is heated by hot water, the boilers being in a large cellar under the potting shed and gardener's office. This office is a model room worthy of inspection by fellow gardeners. Here are ample closets for seed supplies, etc., and large cases with glass doors for all small tools, such as pruning shears, hedge shears, pipe wrenches, saws, etc. Electric light is laid throughout.

Much credit is due J. H. Jones, the gardener, for the present trim condition of all; on June 1 last not a plant was on the place, while the houses are now well stocked with healthy plants. The first house contains flowering plants; on the center bench is a fine batch of L. Harriell, 7 to 9 size bulbs, most of the stalks having eight flowers. Freesia and Allium in four-inch pots were in full bloom, as were also some good plants of Cinerarias and Primulas, and some fine plants of scarlet and pink Geraniums. The next house contained tomatoes in the center and bedding plants on side benches; the tomatoes are planted directly in the center of the bench in a box 18 inches wide, the roots being allowed to get out to the soil on the bench; Lorillard is the variety grown; seed was sown in June; plants were planted in house in August, grown to single stem, attached to wires fastened to ridge pole. The crop has been a great success, an ample supply of splendid large fruit having been kept up all winter. The Palm house contains Palms in center and Dracaenas, Crotons, etc., on the side bench and Ferns on the other. The next house contains Carnations and Violets; the former have done well, but it is rather too warm for Violets. The end house is the Rose house. Here are the prominent varieties, all doing well except Meteor, which shows lack of heat.

The entire lawn of twelve acres has been sown the past season and looks very well. As soon as the season opens more work will go on, such as making drives and enlarging the vegetable garden.

DAVID RUST.

Boston.

The show of flowers, etc., at Horticultural Hall March 20th, was doubtless not as large as it would have been but for the annual spring exhibition which was to begin on Tuesday, 23d. The most prominent object was a large plant of Dendrobium nobile, with hundreds of flowers, from Mrs. H. F. Durant. James Comley exhibited two new double-flowered varieties of Japan plums, Malus spectabilis, a very pretty new white Genista from the Nikko Mountains in Japan, and his seedling carnation, Oxford, one of the best white kinds. Mrs. P. D. Richards exhibited the pretty Pyxidantha barbulata (Pyxie, or Flowering Moss) from the sandy pine barrens of North Carolina, and Lycopodium alopecuroides. Gratuities were awarded by the Vegetable Committee to George D. Moore for cucumbers, lettuce and radishes, and Arthur F. Coolidge for dandelions and Tennisball lettuce.

Spring Show.

The annual spring exhibition of plants, flowering bulbs and cut flowers of the Massachusetts Horticultural Society occurred on Tuesday, Wednesday, Thursday and Friday, March 23 to 26, and ranked both in quantity and quality of exhibits among the best ever held in Boston. The attendance, so far as the general public was concerned, was far from what it ought to have been, considering the magnitude and excellence of the exhibition. However, the exhibitors were out in goodly numbers, and the competition in many of the classes far exceeded expectations. The exhibit of bulbs was especially large, and where but one or two had competed in past years, there were this year a larger number of

exhibitors. The Carnations were an exhibition in themselves, nearly filling one of the largest tables in the lower hall.

Violets, too, were entered in profusion, but Alex. McKay, gardener to Mr. David Nevins, was on hand with some of his wonderful products in this specialty and carried off all the honors, as usual.

A fine exhibit of hybrid roses was presented, but they were, perhaps, hardly up to some seen here before. Tender roses were shown in fully as good shape as ever, W. H. Elliott, Robert McGorum and F. R. Pierson carrying off the honors. The entries for Antirrhinums were few and the specimens not especially good. Joseph H. White and James Comley made fine displays of Camellias.

The plant show was in many respects especially fine. Indian Azaleas, from Dr. C. G. Weld (Kenneth Finlayson, gardener) and Bussey Institution (Charles Jackson Dawson, gardener) have seldom if ever been excelled here, and other fine specimens of hard wooded and greenhouse plants were shown by the above, and Mr. N. T. Kidder (William Martin, gardener), Mr. B. S. Converse (D. F. Roy, gardener) and J. W. Howard. Dr. Weld showed a fine specimen of *Imantophyllum miniatum*, with many clusters of bloom, which attracted much attention.

The display of Cyclamen was superb, and it was generally conceded had never been equaled in this country, while the *Cinerarias* were of a high grade. The bulb show was very large and first class in all respects.

The Orchid growers evidently do not like to risk their valuable plants out at this early season, and this feature, which attracts universal interest at these exhibitions, was only represented by a few specimens.

Prizes were awarded as follows:

PLANTS.

Indian Azaleas.—Four distinct named varieties, Dr. C. G. Weld; second, Bussey Institution. Two distinct named varieties, Dr. C. G. Weld; second, Bussey Institution. Specimen plant, named, Dr. C. G. Weld; second, Bussey Institution; third, James Comley.

Orchids.—Three plants, John L. Gardner. Single plant, John L. Gardner. Stove or greenhouse plant, specimen in bloom, other than azalea or orchid, named, Dr. C. G. Weld; second, J. W. Howard. Hard-wooded greenhouse plants, four, in bloom, Dr. C. G. Weld; second, the same. Hybrid perpetual roses, forced, six plants in pots, not less than three distinct varieties, Charles H. Souther; second, James Comley. Climbing rose, *Crimson Rambler*, specimen plant in bloom, Jackson Dawson; second, Charles Dawson. Hardy Flowering Deciduous Shrubs, forced, four, of four distinct species, named, Bussey Institution; second, the same. Hardy Flowering Evergreen Shrubs, forced, four, of four distinct species, named, Bussey Institution. *Cannas*, displays, in pots, the second prize to James L. Little. Hardy Primroses and Polyanthus, twelve plants, of distinct varieties, John L. Gardner; second, the same; third, James L. Little. Auriculas, six, in pots, Dr. C. G. Weld. Cyclamens, ten plants, Mrs. B. P. Cheney; second, the same; third, N. T. Kidder; fourth, G. M. Anderson. Ten plants, in, not over seven-inch pots, Mrs. B. P. Cheney; second, N. T. Kidder; third, Mrs. B. P. Cheney. Single plant, E. S. Converse; second, N. T. Kidder; third, Mrs. B. P. Cheney. *Cinerarias*, six varieties, J. S. Bailey; second, G. M. Anderson; third, John L. Gardner; fourth, Dr. C. G. Weld. Three varieties, J. S. Bailey; second, G. M. Anderson; third, E. S. Converse. Single plant, J. S. Bailey; second, H. H. Rogers; third, the same.

Hyacinths.—Twelve distinct named varieties, in pots, John L. Gardner; second, Bussey Institution; third, Dr. C. G. Weld. Six distinct named varieties, Dr. C. G. Weld; second, Bussey Institution; third, E. S. Converse. Three distinct named varieties, Dr. C. G. Weld; second, Bussey Institution; third, J. W. Howard. Single named bulb, Bussey Institution; second, J. L. Gardner. Three pans, ten bulbs of one variety in each, Dr. C. G. Weld; second, Bussey Institution; third, John L. Gardner. Two pans, John L. Gardner; second, Bussey Institution; third, Dr. C. G. Weld. Single pan, Dr. C. G. Weld; second, J. L. Gardner; third, Bussey Institution. Tulips—Six eight-inch pans, nine bulbs of one variety in each pan, W. S. Ewell & Son; second, Dr. C. G. Weld; third, W. S. Ewell & Son. Three eight-inch pans, W. S. Ewell & Son; second, Bussey Institution; third, the same. Three ten-inch pans, twelve bulbs of one variety in each, Dr. C. G. Weld; second, the same; third, James L. Little; fourth, Bussey Institution. Polyanthus *Narcissus*—four pots, five bulbs in each, distinct varieties, Dr. C. G. Weld; second, the same; third, Bussey Institution. Jonquils—Six pots

or pans, the number of bulbs in each to be at the discretion of the grower, W. S. Ewell & Son; second, the same; third, Bussey Institution. *Narcissus*—Six pans, distinct varieties, single or double, Dr. C. G. Weld; second, W. S. Ewell & Son. Three pans, W. S. Ewell & Son; second, Dr. C. G. Weld. Lillium *Longiflorum*—Six pots, J. W. Howard. Lillium *Harrisii*—Six pots, Dr. C. G. Weld; second, J. W. Howard. Lily of the Valley—Six pots—Bussey Institution; second, the same; third, W. S. Ewell & Son. Anemones—Three pots or pans, the second prize to the Bussey Institution. Freesias—Six pots or pans, James L. Little; second, Dr. C. G. Weld; third, Bussey Institution. *Ixias* and *Tritonias*—Six pots, in varieties, Dr. C. G. Weld; second, the same. Roman Hyacinths—Six pans, ten bulbs each, W. S. Ewell & Son; second, the same; third, Dr. C. G. Weld. General display of spring bulbs—All classes, Bussey Institution; second, J. W. Howard; third, W. S. Ewell & Son.

Gratuites.—James Comley, display of Azaleas; Bussey Institution, display of Azaleas; G. M. Anderson, display of Cyclamens; H. H. Rogers, display of Cyclamens and *Cinerarias*; W. S. Ewell & Son, display of Crocuses; Mrs. B. P. Cheney received a silver medal for superior cultivation of Cyclamens, and W. A. Manda received honorable mention for new foliage *Canna*, John White.

FLOWERS.

Awards for Flowers.—Hybrid Perpetual Roses—Twelve blooms, of not less than four distinct named varieties, David Nevins (Alex. McKay, gardener); second, James Comley; six blooms, not less than three named varieties, David Nevins; second, James Comley; twelve blooms of Ulrich Brunner, David Nevins. Tender Roses in vases—Twelve blooms of American Beauty, F. R. Pierson & Co.; twenty-five blooms of Bridesmaid, William H. Elliott; second, Robert McGowan. Meteor, F. R. Pierson & Co.; Souvenir du President Carnot, F. R. Pierson & Co. The Bride, William H. Elliott; second, Robert McGowan. Papa Gontier, William H. Elliott; second, the same. Vase of fifty blooms, assorted varieties, the second prize to David Nevins. Carnations—Vase of 100 cut blooms, with foliage, not less than six varieties, William Nicholson; second, W. N. Craig; third, W. H. Elliott. Twenty-five blooms of any named *Crimson* variety, William Nicholson. Ferdinand Mangold; second, F. A. Blake. Meteor. Dark Pink variety, William Nicholson. William Scott; second, F. A. Blake. William Scott. Light Pink variety, William Nicholson. Daybreak; second, Peter Fisher. Daybreak. Scarlet variety, William Nicholson. Hector. White variety, Peter Fisher. Freedom; second, H. A. Cook. Nivea. Yellow variety, William Nicholson. Eldorado. Violets—Bunch of fifty blooms of California, David Nevins; second, J. Comley. Lady Hume Campbell, D. Nevins; second, Jos. H. White. Marie Louise, David Nevins; second, Joseph H. White (James Wheeler, gardener). Any other variety, David Nevins, Farquhar; second, the same for Swanley White. Antirrhinums—Displays not less than three distinct varieties, Mrs. E. M. Gill; second, John Jeffries. Camellias—Display of named varieties, cut flowers with foliage, not less than twenty-four blooms, of not less than six varieties, Joseph H. White; second, James Comley.

Gratuites.—David Nevins, display of Roses; William E. Doyle, display of Violet Lady Hume Campbell; David Nevins, display of Orchids; James L. Little, display of *Streptocarpus*; James Comley, display; Mrs. E. M. Gill, display. James Comley received a silver medal for new variety Japanese Flowering Cherry.

Among Massachusetts Gardeners.

Mr. Fred L. Harris, one of the veterans of the profession, who for the past thirty years has managed the extensive grounds and houses of the H. H. Hunnewell estate in Wellesley, was an interested visitor to the Massachusetts Horticultural Society's spring exhibition last week. Mr. Harris is held in the highest esteem by all who are so fortunate enough as to enjoy his acquaintance, and is looked up to as a model by all the younger members of the craft.

Mr. James Comley, who has been a continual exhibitor at the rooms of the Massachusetts Horticultural Society since 1858, was in attendance with a good show, including some of his Japanese novelties, at the spring exhibition last week.

Johnny Barr may well feel proud of his cyclamen exhibit at the spring exhibition in Boston last week. It was conceded that their equals had never been seen in this country and bulb experts from abroad who were in attendance stated that they had never seen as fine specimens on the other side.

W. K. W.

Successful

growers of fruits, berries, and all kinds of vegetables, know that the largest yields and best quality are produced by the liberal use of fertilizers containing at least 10% of

Actual Potash.

Without the liberal use of Potash on sandy soils, it is impossible to grow fruits, berries and vegetables of a quality that will command the best prices.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,

93 Nassau St., New York.

Mention American Gardening when you write.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION wanted, as gardener on private place or some institution. German, middle age, single, strictly sober, competent in all outdoor and greenhouse work. Good references; for particulars address, Charles Arnold, Gardener, 700 North First Street, St. Louis, Mo.

PRACTICAL gardener and florist, thoroughly experienced with gardening and greenhouse work, would like situation with a gentleman's private place. 32 years, married, no family, personal and written references. Address Connecticut, Box 52, Wethersfield, Conn.

GARDENERS, farmers, etc.—Employers desiring the services of reliable men to fill positions as above, are invited to correspond with us. On our Register are the names of excellent men whom we have known for a long time. No fee charged to any one.—R. & J. Farquhar & Co. Seedsmen, 16 and 19 South Market St., Boston, Mass.

HEAD GARDENERS.—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 85 & 87 Cortlandt St., New York.

WANTED situation by thorough practical English gardener, with twelve years' experience in America in all branches, including palms, orchids, roses, chrysanthemums, forcing vegetables and fruit, decorating, and the building of greenhouses, first-class references. age 34, married, one girl; would not refuse second position on good place. Address Palmer 28, Gardner Park, Rochester, N. Y.

BOOKS.—We can furnish any book treating on horticulture printed in this or any other country. Send for our Select Catalogue of Horticultural Books, free. American Gardening, P. O. Box 1697, New York.

BINDERS.—Every subscriber should have one. We offer the best to be had, sent, postpaid, for 66 cents, or given free for two new subscriptions and the renewal of your own. American Gardening, P. O. Box 1697, New York.

PAPER TUBES FOR MAILING PLANTS.—The most perfect contrivance for shipping plants through the mail so as to reach their destination in best condition; furnished in all lengths and diameters. All dealers in plants should have them in stock. Send for our price list. A. T. De La Mare Pat. and Pub. Co., Ltd., P. O. Box 1697, New York.

HOME GROUNDS, HOW TO LAY OUT.—The most perfect plan ever given the public, by which to lay out an estate of one to ten acres or more. We give the cardinal principles which govern the art so clearly that all may easily understand. Heavy paper, safely packed, postpaid, for 25 cents. It will pay you to study this plan. American Gardening, P. O. Box 1697, New York.

THERMOMETER WITH WEATHER GLASS.—One of the best combinations ever offered. Thermometer is specially scaled for greenhouse use, and we warrant it. Weather Glass is very correct, indeed. Both sent, prepaid, for two new subscriptions or 60 cents in cash. Highest recommendation from the trade and experts generally. You should not be without the combination one week longer. American Gardening, P. O. Box 1697, New York.

Hardy Flowering Plants.

Spring is at hand, and the time is fast approaching when the preparation of the flower garden must receive attention. The question is always asked: What shall I plant different from previous years? To this we will reply: Plant a collection of Hardy Perennials, which will give a continuous bloom, varied in color and form, throughout the season. With a very small outlay a most desirable collection can be secured, which will be a continual source of beauty from year to year. We offer twenty of the most popular varieties, which we will furnish at the prices attached, or will send them all for \$2.50.

Achillea The Pearl.....	\$0 15	Heuchera sanguinea.....	\$0 90
Anemone japonica Whirlwind.....	20	Iris germanica Mad. Chereau.....	15
Aquilegia chrysantha.....	20	Lycchnis semperflorens.....	15
Campanula periclymenifolia alba plena.....	25	Monarda didyma.....	15
Coropha lanceolata.....	15	Paeonia, double, in variety.....	25
Delphinium formosum.....	20	Pajaver orientale.....	15
Gaillardia grandiflora.....	15	Phlox, choice named varieties.....	15
Gypsophila paniculata.....	20	Pyrethrum roseum, double.....	25
Helopsis Pitcheriana.....	15	Rudbeckia Golden Glow.....	25
Hemerocallis Kwanoo plena.....	15	Veronica longifolia subsessilis.....	20

PITCHER & MANDA, JOHN N. MAY, Short Hills, N. J.
RECEIVER.
Mention American Gardening when you write.

You Can Eat

Campbell's Early Grapes without eating the seeds. The pulp is sweet to centre, so the seeds are easily separated without making the tongue sore, as common grapes do.

CAMPBELL'S EARLY GRAPES

are unusually hardy and vigorous. Largest clusters, finest quality. Ripen early and keep late. None genuine without our seals. Elegant Catalogue free.

Geo. S. JOSELYN, FREDONIA, NEW YORK.

Mention American Gardening when you write.

BOWKER'S FERTILIZERS

for HOUSE PLANTS,
LAWNS, GARDENS,
FARM CROPS.

A book on "Window Gardening,"
and enough odorless fertil-
izer for thirty plants three
months, sent by mail for

25c.

Catalogue free. State for what purpose fertilizer is wanted when writing.

BOWKER FERTILIZER CO., Boston.

Mention American Gardening when you write.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897

Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." Mailed FREE to all.

W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

Fruit, Vegetables, Melons, Berries, Etc., grow

TWICE their
usual SIZE.

A Wonderful Plant Food,

Address,

Send 2-cent stamp for particulars.

Reputable references.

W. H. GARRETT, - - Box 247, Mobile, Ala.

Mention American Gardening when you write.

Andorra Nurseries

Specialties: Large specimen ORNAMENTAL TREES,
large hardy RHODODENDRONS and AZALEAS.

2500 Norway Maples, 12 to 16 ft.; 2 to 3 in. caliper.
5000 Sugar Maples, 12 to 16 ft.; 1 1/2 to 2 1/2 inches caliper.
800 Schw. dler Purple-leaved Maple, 12 to 16 ft.; 2 to 3 inches caliper.
800 Sycamore Maple, 10 to 12 ft.; 1 1/2 to 2 1/2 inches caliper.
750 White Cat-leaved Maple, 12 to 16 ft.; 1 1/2 to 3 inches caliper.
500 White flowering Horse Chestnut, 10 to 12 ft.; 1 1/2 to 2 1/2 inches caliper.
150 Purple Birch, 10 to 12 ft.; 1 1/2 to 2 1/2 in. caliper.

200 Golden Catalpa, 12 to 16 feet; 1 1/2 to 2 1/2 inches caliper.
1200 Western Catalpa, 10 to 14 feet; 1 1/2 to 2 1/2 inches caliper.
75 Weeping Weech, 8 to 12 ft.; 2 in. caliper.
500 Purple Birch, 8 to 12 ft.; 1 1/2 to 2 in. caliper.
1000 Oriental Plane, 12 to 15 feet; 1 1/2 to 2 1/2 inches caliper.
50 Ballerina Poplar, 16 to 18 feet; 2 1/2 to 3 1/2 inches caliper.
1500 European Linden, 10 to 12 feet; 2 to 3 inches caliper.

WILLIAM WARNER HARPER, Manager, Chestnut Hill, PHILA., PA.
Mention American Gardening when you write.

WHOLESALE MARKET REPORT

New York.

The cut flower market is in an exceedingly stagnant condition; stock fails to clear, and prices are low on all grades.

Fruits and vegetables are clearing out fairly well, and business generally is in a fair condition.

Hot-house strawberries are only in limited supply, but appearances of stock in sight indicate a very abundant supply by the end of the week. Prices vary on No. 1 stock from \$1 to \$1.50 per cup (3 cups to a quart), No. 1 make 50c. per cup.

Cucumbers are in good condition, and move freely at from \$1 to \$1.25 per dozen for No. 1 stock; No. 2, 60 to 75c.

Mushrooms, 25c. to 35c. per lb.

Hot-house tomatoes, if bright, 30c. per lb. Radishes, \$2 to \$2.50 per 100 bunches, 12 to 18 in a bunch.

Hot-house lettuce is getting scarce; that is, really fancy stock. Some of this reached as high as \$1.25 per dozen; \$1 would represent the general run of top figures. Sales for inferior stock limited.

Florida celery is selling well at fancy figures.

Apples.

Receipts for week..... 2,571

Receipts since Sept. 1..... 1,511

Receipts same time last year..... 63,54

Exports for week..... 12,73

Exports since Sept. 1..... 58,84

Exports same time last year..... 25,88

The market shows a little improvement. There has been demand enough to use the quantity arriving and toward the close there is a little firmer tone; the range of prices is about the same as lately reported, but late sales have shown a slightly better average. An occasional lot of fancy refrigerator stock, closely selected, is placed at better prices than we quote, but the ranges given are full high for the stock generally arriving.

Baldwin, Vt. and northern, prime..... 1 3/4

Greening, Vt. and northern p'me, pr bbl. 1 5/8

Baldwin and Gr'n's, Vt., good..... 1 3/4

—W't N Y, gd to fcy, pr bbl..... 1 3/4

—W'n N Y, avge prime..... 1 1/2

—Up-river, pr bbl..... 1 1/2

Greening, w'n N Y, prime, pr bbl..... 61 5

—W'n N Y, usual lots..... 1 1/2

—And Baldwin, ordinary, pr bbl..... 75 0

Vegetables.

Receipts of onions for the week 3,500 bbl. Market for old onions has made a sharp advance under very light offerings. The supply remaining in the interior to come forward is said to be very small, and the recent receipts have been cleaned up promptly. Old cabbages are still plenty and cheap. Other local winter vegetables have shown no material change.

Asparagus, choice, per doz. bunches..... 2 00

—Fair to prime, per doz. bunches..... 1 50

—Culls and seconds..... 1 00

Beets, Florida, new, per bush. crate..... 0 75

—Fla., bunches, pr bbl. crate..... 1 50

—Charleston, per 100 bunches..... 1 00

Cabbages, L. I., per 100..... 1 00

—State, per 100..... 1 00

—Fla., per barre. crate..... 1 00

Celery, California, per dozen stalks..... 75 0

—Fla., large to extra, doz. stalks..... 1 00

—Fla., small to medium, per doz..... 25 0

Cucumbers, Fla., per carrier..... 2 00

Box plants, Fla., per 1/2 bbl. box..... 1 00

Kale, Norfolk, Scotch, pr bbl..... 0 50

—Norfolk sprout, pr bbl..... 50 0

Lettuce, Fla., prime, per 1/2 bbl. basket..... 1 00

—Fla., fair to good, 1/2 bbl. basket..... 1 00

—Fla., inferior, per 1/2 bbl. basket..... 50 0

—Charleston, per bush. basket..... 75 0

—N. G., per barrel..... 1 50

Onions, Eastern white, pr bbl..... 0 60

—Eastern red, pr bbl..... 65 0

—Eastern yellow, pr bbl..... 50 0

—State and w'n yellow, pr bbl..... 50 0

—Orange Co., yellow, per bag..... 4 00

—Orange Co., red, per bag..... 4 00

—Inferior..... 3 00

—Havana, per crate..... 62 5

—Bermuda..... 2 50

Peas, Fla., per bushel package..... 1 00

—Georgia, per crate..... 2 50

—Charleston, per basket..... 3 00

Radishes Norfolk, per 100 bunches..... 1 00

Romaine, Charleston, pr 1/2 bbl. basket..... 1 00

String beans, Fla., express, per crate..... 1 50

—Fla., freight, pr crate..... 1 00

Solnach, Norfolk, pr bbl..... 50 0

Tomatoes, Fla., prime to fcy, pr car. 3 00

—Fla., poor to good, per carrier..... 1 50

Turnips, Canada, Russia, pr bbl..... 60 0

Boston, Mass.

There is a very good demand for hot house cucumbers and home consumption is quite large; selling in a wholesale way at 80¢ per apiece.

Very little Hubbard squash on the market, and that mostly which has been kept in cool cellars and which commands \$45.00 a ton.

Florida strawberries are here in all conditions and selling from 15c. to 50c. per quart. When we take the season into consideration we can say there is very big hunting for the good berries.

Florida tomatoes very light in supply, and

PREMIUM OFFERS

...OF...



GOING FOR WARNER'S SAFE CURE

is much better than going for the doctor, and is quite as effective and costs less money. You need always at hand a safe, sure remedy like

Warner's Safe Cure

which will bring instant relief from sudden illness and work out a permanent cure.

A POSITIVE CURE FOR
**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

Cures also, all those diseases arising from disordered Kidneys or Liver. Large sized bottle or new style smaller bottle at your nearest store. Try it and know the satisfaction of such a remedy.

ONE YEAR FOR 10 CENTS

We send our monthly 16-page, 46 col. paper devoted to Horticulture, Home Decorations, Fashions, Household, Orchard, Garden, Floriculture, Poultry, etc., one year for 10 cents, if you send the names and addresses of six lady friends.

WOMAN'S FARM JOURNAL, 4815 Duane Ave., Saint Louis, Mo.

Mention American Gardening when you write.

INCUBATORS \$25, \$15, \$12 each. Breeders, 8 styles, \$6. Fowls, eggs. Ill. cir., So. J. A. Chelton, Fairmont, Md.

Mention American Gardening when you write.

POULTRY BOOKS. ABC Poultry Culture 25 cts.; 500 Questions and Answers, 25 cts.; Poultry House Plans, 25 cts.; Pigeon Queries, 25 cts.; Fancy Pigeon 1 year, 50 cts. All \$1.00. Any 2 books, 40 cts.; 3 for 50 cts. J. DARROW, CHATHAM, NEW YORK.

Mention American Gardening when you write.



HATCH Chickens BY STEAM
With the MODEL
EXCELSIOR Incubator
Simple, Perfect, Self-Regulating. Thousands in successful operation. Low cost priced first-class Hatcher made.
GEO. H. STANLEY
114 to 122 S. 6th St. Quincy, Ill.

Mention American Gardening when you write.



HIVES

and all supplies for the apian. Send for (24 page) illustrated catalogue of "Cook's complete Hive," and pure Italian Bees.

It tells how to make a start in beekeeping. It gives valuable hints. Address

J. H. M. COOK, 62 Cortlandt St., N. Y. City.

Mention American Gardening when you write.



SOLD BY
THE SEED
DEALERS OF
AMERICA.

For pamphlets address
B. HAMMOND,
Fishkill, N. Y.
Hudson, N. Y.

Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL

AMATEUR.

STARTING DAHLIAS.

If seed be sown in the house in March or April, plants obtained from it will blossom at about the same time with those from tubers. To be sure, one may not obtain a large number of doubles, but many of the sorts will be more or less double. There is almost no plant easier to raise from seed than the dahlia, which sometimes germinates in three days, and grows thereafter like a weed. It must not be allowed to suffer from lack of water. If one has never tried it, there is a new sensation to be gained in growing dahlias from seed, and that one to be obtained at the cost of a few cents and a little pleasant work. Tubers, if to be used, should be started early; as upon this, say the experts, depends very largely the amount and quality of the bloom.

MEAT AND FERTILITY OF EGGS.

Let some novice be thrown off the track, it may, perhaps, be well to add a little to previous remarks upon this subject. Reference has been made to a statement that meat was inimical to fertility of eggs. This statement appeared in a government (not our own) bulletin. Probably most of our breeders might contradict the statement. At any rate, it is a fact that large breeders of market poultry say that they cannot get fertility early in the season without the use of meat. All are asked to study this question.

PUSSY WILLOWS AND APPLE BLOOMS.

These are not often seen together, it is true. Still, by rushing the season a little, one may have them, not only together, but in good shape for household decoration, for which they form a delightful combination. It needs only that the branches, with buds just pushing, be placed in water in the sunny window of a warm room. Pussy willows may thus be had in February or March, while apple branches now showing color in a certain window, show that these, also, may easily be had in March.

TRANSMISSION OF ROUP.

Although it seems positive that fowl diphtheria and diphtheria among mankind are not identical some of the best authorities affirm the fowl diphtheria can be transmitted to human beings, and that the other is often transmitted to fowls. This being the case, it is certainly wise to exercise extreme care in the handling of both kinds of diphtheritic patients. It is utterly impossible to apply local treatment to infected fowls, without the hands becoming contaminated, and it is hardly possible not to inhale the fetid breath of the patient. The part of wisdom, then, from every point of view is to aim to control the disease while it can still be treated through the drinking water, or without local applications to the throat. Disinfectants, such as borax, or other very strong alkalies, or weak carbolic acid solution, should be carefully used upon the hands after every handling of infected fowls. But even this does not prevent the clothing from becoming a source of infection.

FANCY VS. "FARM" POULTRY.

It is a very pertinent query whether it is better to do a \$1,000 business at \$300 profit, or a \$400 business at \$250 profit. The question offers a pretty fair comparison between "fancy" and "farm" poultry, for the former often pays less, while the latter estimate is among the sure possibilities, in so far as any possibility may be called sure. Both capital and work are less for the smaller business. In one case the returns are 30 per cent. upon the investment, in the other over 50 per cent. He who is bitten by the desire to rush into the "fancy," may have here something practical to consider. If he can carefully combine the two, that may be another story.

Blood Pure?

Is it? Then take Ayer's Sarsaparilla and keep it so. Isn't it? Then take Ayer's Sarsaparilla and make it so. One fact is positively established and that is that Ayer's Sarsaparilla will purify the blood more perfectly, more economically and more speedily than any other remedy in the market. There are fifty years of cures behind this statement; a record no other remedy can show. You waste time and money when you take anything to purify the blood except

Ayer's Sarsaparilla.

PAYING PLANTS.

Plants that are paying best for the work put upon them this last week in March are *Dracena terminalis*, *Buttercup oxalis*, *Primula obconica*, *Lycaste Skinnerii*, *Anthurium Scherzerianum* and *Lilium longiflorum*. Most of the bulbs are now at the last gasp, and the Chinese *Primulas* are falling. *Cyclamen*, *Geraniums* and many other standbys do not appear in this collection, hence it is no discredit to them that they are not named.

MYRA V. NORRIS.

"The House that Jack Built" is a familiar title with the young ones, and the cardboard set issued by J. C. Ayer will give them much pleasure. Ask for it at the druggist's store.

HENRI BEAULIEU, Seedman and Florist, Woodhaven, N. Y. Price list free. Mention American Gardening when you write.

GLADIOLUS. A Superfine Mixture, made up of very best named varieties as choice unnamed seedlings. Fine blooming bulbs at \$1.00 per 100. \$8.00 per 1000; by express, purchaser's expense. J. A. NEED, (Gladiolus Specialist), CANTON, OHIO. Mention American Gardening when you write.

Danish Ballhead Cabbage. IMPORTED RELIABLE SEED.

Prices on application. Catalogue Free. FRANK H. BATTLES, Seed Grower Rochester, N. Y. Mention American Gardening when you write.

"FLOWER QUERIES" New book on floriculture 10 Chapters, written in questions and answers, discussing 500 floral topics. Price, 25 cts. The COURIER, Box A, Chatham, N. Y. Mention American Gardening when you write.

CALIFORNIA LANDS AGENCY and only \$25 to \$50 per acre AT ESCROW. Grow fine oranges, lemons, olives, prunes, apples, hay, grains, etc. Best summer and winter climate in U. S. Good money for ill. pamphlet to Riverside Land & Town Co. at Riverside, Los Angeles or San Diego, Cal. Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan Ivy, 2 years, \$8.00 per 100. E. S. PETERSON, Montrose, New York. Montrose Nurseries. Mention American Gardening when you write.

TREES At Very Low Prices. Send now for Free Catalogue. Established 1860. 150 ACRES. THE GEO. A. SWEET NURSERY CO., BOX 1591, DANVILLE, N. Y. Mention American Gardening when you write.

HALL'S FAVORITE. THE COMING NEW STRAWBERRY; de-fuse competition; the best introduced for years. Forty other kinds pedigree plants: Raspberries, Blackberries, Asparagus roots etc. Hear quarters for Second Crop Seed Potatoes, double crop and earlier than other seed. Descriptive Catalogue Free. J. W. HALL, - - Marion Station, Md. Mention American Gardening when you write.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*. We cannot undertake to reply by mail.

HOW TO USE SHEEP MANURE.

(Will you kindly let me know through your next issue what would make a good liquid watering for plants in pots and beds, to improve growth and flowering. Would ground sheep manure be good. If so, how much to five gallons of water? Can I grow a magnolia tree in a large open garden? Where can I purchase an English laburnum tree, and is it suitable in this climate?—Robert Cottingham, Pa.)

—Sheep manure is one of the best manures obtainable for the purpose. Being very active (strong), it needs to be used judiciously. The better plan is to mix up a large tub full of water; put, say a peck, in a bag, tied securely, and place this in a thirty-six gallon barrel of water. After standing a while use the water at the rate of half and half, with clear water, unless for special purposes on plants that are accustomed to it, then it may be applied a little stronger. You do not state what magnolia. There are many that do well in such locations. The English laburnum is usually not so satisfactory as in its own country. It is offered by Ellwanger & Barry, Meehan, and the Shady Hills Nursery Company.

TOMATOES IN GREENHOUSE.

(I have a good greenhouse and on the back bench are tomatoes; the bench is about ten inches deep. I had some plants through the winter; they were planted in October, but did not bear very well and the fruit got ripe when quite small. The bench is about three feet above the pipes. I have other plants in the house and at night it has a temperature of about 65 degrees. I pinch the plants when about two feet high and keep two stems up the back wall. Some persons have told me I ought to take away all side shoots from those two stems. Now I have planted a few young plants in the same bench to get them early. Should I grow to two stems and cut away all side shoots? If so, where do the flowers come from? Must I give plenty of water and should they have any manure water? Would too much water or too little make the fruit ripen when small?—Mrs. B. Jr.)

—All lateral or side shoots should be cut away. The plants must never suffer for want of water, and liquid manure water may be given after fruit is set. The tomato is a gross feeder, so that the soil needs to be made quite rich before planting. Perhaps this part had been overlooked; hence the small fruit.

LEAVES OF QUINCES RUSTY.

(I have a hedge of flowering quince on my lawn. In July and August the leaves turn rusty and drop off. What can I do to prevent that?—Mrs. J. G. H., Hartford.)

—Possibly the trouble is caused by red spider; should that be so water is the remedy. Mulch and water the roots if possible. An occasional hosing may prevent the trouble. Send us specimens of the leaves if the trouble occurs again.

SOIL FOR ASPLENIUMS.

(Aspleniums do not seem to do well with me. What soil would you prefer to give them, and in what temperature would you keep them?—H. M.)

—A mixture of light loam, leaf mold and sand is best for these. A temperature of from 50 to 60 degrees suits very well.

GREENHOUSE FERNS.

(Name best twelve greenhouse ferns.—H. M.)
—A dozen good greenhouse ferns may be made up as follows: *Adiantum cuneatum*, *Davallia*, *Ptiliopsis*, *Lastrea aristata*, *Nephrolepis exaltata*, *N. cordata compacta*, *Onychium Japonicum*, *Polypodium aureum*, *Pteris cretica*, *P. serulata*, *P. tremula*, *P. Victoriae*, *Scolopendrium crispum*.

PROFITABLE OR NOT?

(I have recently come into possession of a farm of seventy-five acres. It is situated within one-half mile of a town of about 2,000 inhabitants. The town is connected with Toledo, O., and St. Louis, Mo., by a railroad, and is within one day's run of Toledo. The farmland is in two general characters, viz., the highland being a sandy clay loam, and the river bottom land being a black loam mixed with a small amount of sand. The climate is sometimes very rigorous; the thermometer has dropped as low as 22 degrees below zero. Small fruits find a good local market. Do you think it would be a profitable venture for me to grow the tree fruits for both the home and the general market? If so, what kinds of fruits would be best adapted to my soil and climate?—C. P.)

—It is a little risky to advise anyone at a distance as to what to grow. If peaches do

ARMSTRONG & McKEVY
Pittsburgh.
BEYMER-BAWMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR } Cincinnati.
LOCKSTEIN }
ATLANTIC }
BRADLEY }
BROOKLYN } New York.
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MISSOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY } Cleveland.
SALEM } Salem, Mass.
CORRELL } Buffalo.
KENTUCKY } Louisville.

PLEASE bear in mind the fact that the "best," or the "standard," in all lines commands a fair price. See list of the brands of Pure White Lead which are the standard. They are the best. Avoid those brands said to be "just as good," offered for "less money," and of "so called White Lead."

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

well in your district it would seem that your highland should be adapted for such a crop, also to Japan plums. The bottom lands should be equally well adapted for all kinds of small fruits. A safe plan is to note what kinds of fruits thrive in your immediate vicinity before expending largely. The question of markets must also be determined by local conditions.

CARNATIONS AS POT PLANTS.

(Can carnations be made to grow and bloom successfully in pots, and how should they be treated?—H. C. C. M., Conn.)

—Carnations are not satisfactory as pot plants commercially. Emily Pierson and Little Gem are fairly well adapted for the purpose.

RADISHES "DAMPING OFF."

(Radishes grown on a forcing house bench began to "damp off" or rot at the surface when half grown, and continued to do so until a third of the crop was lost. Soil was good loam, rotted manure and sand. Ventilation was given freely and water sparingly used. Temperature of house ranged from 40 to 60 degrees. What was the cause and how can it be prevented again?—H. C. C. M.)

—Radishes in a dark house and on solid beds are liable to the trouble mentioned during the early winter months. The remedy is, do not sow too thickly and give all the light possible, at a temperature from 45 to 55.

ANGLE WORMS.

(Will the presence of angle worms in potting soil or the soil of greenhouse benches be injurious to plants?—H. C. C. M.)

—The worms certainly do no good. They can be driven out by drying or by the use of lime water.

RATS AND MOLES IN FRAMES.

(How shall we get rid of rats and moles that have found their way into a cold frame?—H. C. C. M.)

—You will have to devise some means yourself by making their entry more difficult and by using traps, etc.

MARKETING LETTUCE.

(In preparing hot-house lettuce for market, should the heads be cut or pulled up, roots and all? Also, how should the lettuce be packed to carry to market without freezing?—H. C. C. M.)

—Pull the lettuces and wash the roots clean. As the season advances either method may be adopted, but the roots need always to be pulled. To protect from frost, abundance of paper is needed on the inside of the package, but the necessity for this is over for the season.

SOWING CLEMATIS SEEDS.

(To Elizabeth, N. J.): Sow in very light soil with the seeds just covered. Use shallow boxes and cover with brown paper till germination begins, and keep the paper moist.

SOWING ASPARAGUS.

(I would like to know how to sow asparagus seeds; what soil they prefer and what place.—J. V.)

Sow in drills two inches deep where the plants are to remain permanently if so wished. The soil should have been well cultivated and manured. It is better, though, to bring the plants on from seed or nursery rows and transplant to permanent quarters when one year old. Do not sow thickly.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

Wild Ferns and Flowers

The most beautiful that grow in all countries. I grow and test them in this climate, and sell the hardiest. Hardy orchids, ferns, vines, climbers, lilies, shrubs, trees. Plants for sun and shade, for bog and rock-work, border plants, etc. Surprisingly low prices for the quality and kind of stock.

My illustrated catalogue describes about 700 kinds, tells where to plant and how to grow them. Mailed for 2 cent stamp.

F. H. WORSFORD, Charlotte, Vt.

Mention American Gardening when you write.

DAHLIAS! DAHLIAS!

20 Named Varieties.
The Finest Money can Buy.

Strong Field-grown Roots, 10c. each; \$8.00 per 100. Divid'd Roots, 5c. each; \$4.00 per 100. Large stock of Roses, Clematis, Bulbs, etc., as well as a full line of Peach, Pear, Apple, Grapes and all small fruits.

Send for list quoting rock bottom prices.

F. L. WRIGHT, Plainfield, Mich.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.



BRADLEY'S FERTILIZERS

enable farmers to grow Sweet, Field, or Ensilage Corn with large profit, either with or without stable manure. They cause a quick start, promote a steady growth, and ensure the early maturity of full crops of the best quality.

We manufacture fertilizers of ALL GRADES and FOR ALL CROPS, and being the LARGEST MANUFACTURERS OF COMMERCIAL FERTILIZERS IN THE WORLD, as well as the LARGEST IMPORTERS OF CHEMICALS IN AMERICA, our facilities are absolutely unequaled for furnishing all kinds of Mixed Fertilizers, Formulas mixed or unmixed, Agricultural Chemicals, Wood Ashes, etc. We positively guarantee the superior crop-producing value of everything we sell.

It will save you money to write us, or see our local agent before you purchase Mixed Fertilizers, Agricultural Chemicals, or Raw Materials.

Bradley Fertilizer Co., Boston.
 Rochester, N. Y. Augusta, Ga. Cleveland, Ohio.

Mention American Gardening when you write.



WE HAVE IT AT LAST!
AN EARLY DWARF
 LARGE FLOWERING
COSMOS.

Blooms from July till frost.
 Crows only 4½ feet high.
 Color Snowy White, tinted with Rose.

THE FINEST NOVELTY of the YEAR.
 PRICE 25 cts. PER PACKET.
 and to each purchaser will be sent
FREE
DREER'S GARDEN CALENDAR 1897

A handsome book of 168 pages, with beautiful litho-embossed cover showing the new Cosmos in color and containing illustrations and descriptions of all the valuable new and standard seeds, plants & bulbs.

HENRY A. DREER.
 714 CHESTNUT ST.
 PHILADELPHIA.

Mention American Gardening when you write.

Vegetable Gardening

A New Book for the Farmer and Market Gardener. Profusely Illustrated. 224 pages.

BY PROF. S. B. GREEN.

Horticulturist Minn. State Experiment Station.
 Endorsed by leading horticulturists East and West.

Price, postpaid, \$1.25.

Address

Webb Publishing Co., St. Paul, Minn.

Mention American Gardening when you write.

Many Years

Well-known in all parts of the country have made our Nurseries the source of supply for

NEW AND RARE TREES, SHRUBS, RHODODENDRONS, AZALEAS, EVERGREENS, PERENNIAL PLANTS and every hardy variety of the choicer garden subjects which critical growers of taste are always looking for. Our new Catalogue, 170 pages, is full of interest to the amateur, and to every one who seeks the best for garden or grounds. In it will be found many things quite rare, and not generally offered.

Any buyer can get from us Plans and Suggestions for the arrangement and planting of grounds.

THE SHADY HILL NURSERY CO.,

102 State St., Boston, Mass.

Mention American Gardening when you write.

THE WM. H. MOON CO.

Glenwood Nurseries, Morrisville, Pa.

(Offer, for the SPRING OF 1897, a Complete Assortment of

EVERGREEN AND DECIDUOUS TREES.

Flowering Shrubs, Grasses, Dahlias, Climbers and Climbing Roses.

Special attention is called to the following.

Chestnuts, large varieties Numbo and Paragon.
 Asparagus Roots, strong 2-year olds, Palmetto.
 Barr's Mammoth and Conover's
 Strawberry-Raspberry, a Japanese Novelty.
 Burbank's Golden Mayberry.
 Industry Gooseberries and Fay's Prolific Currants.
 Purple-leaved Beech, 4 to 6 feet.
 Elms, American and English.
 Horse-chestnuts Lindens and Magnolias.
 Maples, Norway, Sugar, Sycamore, Ash-leaved and Silver-leaved. By the thousand, from 6 to 12 or 14 ft.
 Oaks, English, Pin, Mossy Cup, Red, Scarlet and Turkey.
 Peppars, Carolina and Balsam.

Willows and Weeping Trees, in variety.
 Hedge Plants. Evergreen and Deciduous varieties, including 300,000 California Privet, from 1 to 5 feet.
 Evergreens, Arber Vitis, dwarf and tall growing sorts.
 Nordmann's Fir, from 1 to 3 feet.
 Balsam and European Silver Fir.
 Hemlock, Colorado Blue, Norway and White Spruce.
 Retineaseras, in variety of all sizes.
 Pine, White, Scotch, Austrian and Dwarf.
 Evergreen Shrubs, including Mahonia, House and Rhododendrons.
 Deciduous Flowering Shrubs. General assortment of various sizes.

DESCRIPTIVE ILLUSTRATED CATALOGUE of 48 pages, containing prices, etc., to be had on application. Correspondence solicited.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII, NO. 120.
COMBINED SERIES VOL. LI.

NEW YORK, APRIL 10, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Birds and Insects.....	267	Exhibition Schedules...	265	Obituary:		Scale, San José, in Can-		Vegetable Garden	255
Bougainvillea glabra,		Foreign Notes.....	254	Wickens, P.....	255	ada.....	258	Violets.....	262, 266
Sander's var.....	257	Fruit Garden.....	255	Palma, Care of.....	268	Seed Sowing Table.....	256	Water Lilies from Seed.....	266
Caladium esculentum...	266	Fruits of Experience...	255	Peach Prospects.....	257	Society Reports.....	264	Weevils in Seeds.....	266
Casabanana.....	257	Gardener's Position, The	265	Planting Fruit Trees...	257	Strawberry, Best.....	266		
Chrysanthemum, Pom-		Home Plot.....	262	Poultry Notes.....	262	Strawberry Grower's		Illustrations.	
pon.....	266	Market Reports: N. Y.,		Premiums at Shows.....	259	Guide, The.....	253	Asparagus Badly Mar-	
Cineraria, Origin of.....	259	Philadelphia, Boston...	267	Private Gardeners.....	264	Sugar Beet, The.....	258	keted.....	259
English Varieties in		Marketing, Bad.....	259	Questions Answered.....	266	Tomatoes for N. H.....	263	Plot for Levelling.....	255
America.....	259	Orchards, Young.....	255	Raspberry Munger.....	255	Tuberoses.....	257	Raspberry Munger.....	253

The Strawberry Grower's Guide.

The best location for fruiting the strawberry is one elevated sufficiently to escape the spring frosts, or, in other words, where there is good land and air drainage. Nearly level ground makes the best site, especially if irrigation is to be used.

If the soil has been kept clean by having had on it a thoroughly cultivated corn, potato or other vegetable crop the previous season, a good start has been made. If I could have my selection of soil, I would choose that of a loamish nature, with a clay, or, possibly still better, that with considerable gravel mixed with the clay for a sub-soil, and a loam with a fair mixture of sand. Sandy land is the best for growing plants when economy of labor is taken into consideration.

It is not desirable to plant on muck or low land unless you have some method of counter-acting the effects of the spring frosts. Some low lands will raise an abundance of plants, if well drained and a heavy mulch—say one to two inches—is placed over them in the early part of the winter to keep the plants from heaving.

Preparation.

If the ground is cleared of vines and other litter left over from the past season's crops, then the first thing to do will be to cultivate and tear up the ground in such a manner as to leave great ridges of soil with a deep furrow between each ridge. Then the fertilizer can be applied, and

by spreading it broadcast it will fall between the ridges, where it can be worked into the soil in a most thorough manner. When it can be had, I prefer to use fine, well-rotted barnyard manure which has been under sheds where the rains have not

fallen on it, thereby causing the leaching of part of the fertilizing elements. One reason why barnyard manure would be preferred is that this upper soil which is being torn up and fined will be the under soil after plowing—the hotbed, as it were, to warm up the feeding roots and start them into immediate growth. Hen manure is also good if plenty of it can be had, but I would caution against using too much of it; generally it is best to thoroughly mix it with equal parts of rich garden soil, hoeing it over on a barn floor. Ashes are good, but will not tend to warm the lower soil as much as the other fertilizers mentioned.

Commercial fertilizers answer the purpose well if the pocketbook is full of money, and if, when emptied, it can be immediately filled again; but from my observation and practice I believe, if the first three fertilizers can be had at a reasonable cost, that, in view of the prices berries commanded the last year, the investment of money in commercial fertilizers would not be warranted.

As soon as the fertilizer is spread evenly the cultivator should be again put on and run across the first ridges at right angles, setting the teeth as deep as the horses can easily pull; follow up with the spike-toothed harrow, setting the teeth deeply. The



FIG. 74.—MUNGER RASPBERRY. Natural Size. (See page 255.)

ground should be harrowed and cross-harrowed two or three times and then floated down (see fig. 75), when all will be ready for the plow.

Many will say, Why do so much work before plowing? I answer that a layer of fine rich soil well mixed with fertilizers and thoroughly fined should be turned to the bottom of the furrow for "root pasturage," thus causing a rapid and vigorous growth of those feeding roots which are to take up the plant food and moisture from below; and the faster and deeper growth they make the more easily will they stand the drouth.

It would have been desirable to have done the above work in the fall, but if not done then, the next best time is as early in the spring as the ground gets in fit condition to cultivate, so that the spring rains will have a chance to wash some of the fertilizing elements into the soil before planting time. The ground will also be "warmed up" by the heat of the sun, thus encouraging an early growth of plant.

In turning the furrows a plow should be used which will turn the whole upper layer of soil to the bottom of the furrow. In regard to depth to plow, I generally set the plow deep enough to turn up all the lower soil, using care not to turn up any of the subsoil.

If hard and cold, the subsoil should be worked up with the subsoil plow. It is desirable to subsoil heavy soils in the fall. The subsoil needs loosening up, but it should be left where it was.

Fertilizing and Fining After Plowing.

The object of fertilizing and fining the soil the second time is to get the plant food thoroughly mixed all through the soil, that it may be near and available to all the roots, but this time I would not put on quite so much fertilizer as before, for the reason that the roots will tend to a downward growth to the rich layer of soil below.

The ground should be treated as before plowing, with the exception of using the harrow to do the work after the fertilizer is scattered over the plow or furrow ridges, using the same fertilizers as before, and even working them in more thoroughly five or six times with the harrow, every time going across the field in a different direction. An Acme harrow leaves the soil in the best shape if used for the last once or twice. If plants are ready float down or roll and then it will be ready to mark out.

Selection of Varieties.

With regard to sex in strawberries, most of the nursery catalogues explain the matter so fully that I consider it useless to take up space here except to mention that I have until the last few years set three rows of pistillate varieties to one row of perfect varieties; but after considerable experimenting I found that two of the former and one of the latter gave the best results, as the wind and bees had a better chance to carry the pollen to the imperfect blossoming varieties, thus on such varieties as Warfield's No. 2 there were less "buttons" left at the last pickings. I also tried the experiment of setting alternately rows of perfect and imperfect kinds, and the result proved most satisfactory, there being no "button" berries worth mentioning. The berries seemed a trifle larger and plants much more productive.

For clay soil I would select varieties like Bubach, Warfield, Parker Earle,

Sharpless, Lovett, Enhance, and Beder Wood. Probably Bubach did about as well as any with me last season, and I would consider Bubach and Parker Earle good kinds to grow together. I think Sharpless would be a good pollinizer if it were not for its blossoms being so tender that spring frosts often kill most of them. It is also a shy bearer, but what berries it does carry are large and fine, with the exception of being white-tipped.

Many of the new varieties do well on poor soil, but I like to let them "prove themselves" as to their merits before planting largely of them. I notice that most of the new kinds which often bring the highest price, those "eight to ten inches in circumference" berries, are inside of seven or eight years no better than some of the old standard sorts; but, notwithstanding this, it is certain that we are making rapid progress in growing some new varieties which have much merit and are superior in many respects to some kinds which were considered standard sorts ten years ago.

For sandy soil varieties like Haverland, Warfield, Improved Wilson, Beder Wood, and Michel's Early are good; in fact, Michel's Early is best on a sandy soil, and seems almost a failure on clay soil, except as a fertilizer for pistillate sorts. On sandy soils, although not so productive as some others, it fruits so early that its first pickings always bring a high price.

Beder Wood is a good pollinizer, and the fruit is nice and uniform, but it is quite badly affected by the rust.

If a sandy soil has a leachy subsoil I would recommend scattering fertilizer along the rows each side of the plants and cultivating in soon after the plants are set, and if it is in thick, matted rows left over from the old patch to fruit another year I would scatter ashes or poultry manure all over the row, no matter if the poultry manure does kill a plant once in awhile. Plenty will be left to fruit. This should be done early to receive the benefit to be derived from the spring rains. A good heavy mulch is very desirable put between the rows on sandy land to hold the moisture which will give the plant food the best chance to be taken up by the fruiting plants.

For shipping I would choose those varieties which were firmest, so they can be shipped to distant cities and from there distributed to smaller towns and arrive in good condition. Bubach, Haverland and many of the large varieties are too soft for this purpose. Warfield, Bert Seedling, Wilson and Wilson's Improved stand first with some of the newer varieties for shipping. My experience with Warfield's No. 2 is that many times the plants are allowed to grow or mat too closely together for heavy fruiting. I would not allow the plants to grow closer than four inches, so the narrow hoe can be used between every plant and also allow space to work leaves, cut straw, or corn stalks cut fine among the plants.

A good plan in the selection of varieties is to get 50 to 100 of about a dozen varieties which your neighbor growers or the plant catalogues and horticultural papers recommend as the best and test them on your own soil. Then you can find out for a certainty to which kinds your particular soil is best adapted. In the choice of perfect blossom varieties choose those which are the heaviest with pollen.

Care of Plants From Nurseries.

When you receive notice that your plants are shipped keep watch so that you can take them upon arrival and take to the grounds immediately and set out at once; but if the plants, after examining, are found to be in fresh condition it may be safe to leave them a few hours unpacked in a cool cellar or pit, but should they commence to heat (which you can easily tell by putting the hand in the center of the crate) they should be taken out in a shady place and heeled in in layers of plants and sand alternately and canvas or burlap placed in water and then thoroughly wrung out put over the tops; sphagnum moss also answers the purpose well and is to be preferred if at hand; it should be merely damp or moist, not wet.

Last spring, when we had those hot days which made it warm work for the plant setter and were death to many plants, I received a crate of the Enhance containing about 1,250 plants in the first part of May. The plants had been let go a day or so before they were noticed in the rush and hurry of planting time and had begun to heat so that they were pretty well warmed up. A few minutes after this a big shower came up; we had to go to the barn for shelter, and the thought came to me that now would be a good chance to care for those plants.

We took them out, untying the bunches, and placed them in thin layers under the eaves until the rain cooled them off nicely; the moss went through the same cooling process, and as soon as cool the water was all pressed out of it and the moss and plants were repacked in the crate, leaving the plants untied. But before packing the plants again a small bunch of them was taken up and given a shake to get all the water off them. By treating them this way about 80 per cent. of the plants lived, where they would otherwise have been almost an entire loss.

C. C. NASH, Mich.

(To be continued.)

FOREIGN CORRESPONDENCE.

Amongst the new things offered in German papers are: *Heliotropium giganteum* hybridum flower—heads said to be averaging from 12 to 16 inches in diameter and flowering plants, four months from seed, 40 inches high, stem thick as one's thumb. This is of course only one head to a plant. *Begonia hybrida cristata*, sowings, 35 per cent. true character. *Primula obconica grandiflora violacea* is very highly spoken of. *Asparagus*, Snowhead, is claimed to remain white 6 to 8 inches above the ground during hot spells; it does not lack taste or tenderness and comes in early.

What School Children May Do.—A two-year-old pomological association in Alsace, which is conducted by a school teacher, has through his older scholars accomplished most of the following: Two hundred and seventy-five fruit trees planted, 1,000 fruit trees scraped and the trunks dressed against insect attacks, 86 fruit trees re-grafted, 2,500 grafts distributed, 250 tree guards erected against attacks of rabbits, etc., 150 breeding cages hung in the trees (a common practice in Germany to encourage the birds), 220 fruit trees pruned, 6,500 pounds of May bugs gathered in 1896.

Peach Crop of New Jersey.—From indications around Bound Brook the peach crop in New Jersey will be the largest ever known. The trees are all in bloom, and unless a heavy killing frost takes place, will be loaded with fruit. Inquiry throughout the peach belt in Hunterdon, Warren, Sussex and the upper part of Somerset counties shows that the farmers are confident of big crops.

Raspberry Munger.

This berry, of which an illustration is given on page 253, is one for which great claims are made. It is being introduced by W. N. Scarff of New Carlisle, O.

The Munger black raspberry was originated in Western Ohio about the year 1890, by Timothy Munger, now of California. It was one of a large number of seedlings grown from seed of Shafer's Colossal, which were emptied from a jelly press into an old hothed. It has been under cultivation since that time, but not offered to the public, and has attracted considerable favorable comment by reason of its large size, hardness and lateness.

The berry is black, canes resemble Gregg, but healthier. Better flavored than Gregg, tougher in texture, and, therefore, a better shipper. Extra fine for canning or evaporating. Larger in size than Gregg and very productive. It is claimed to be free from disease and is, no doubt, a coming berry for main crop.

Death of a Noted Pomologist.

Philip Wickens.—Another distinguished horticulturist and pomologist has passed away in the person of Philip Wickens, of Rochester, N. Y. The deceased died at his home March 29, after an illness of only a few weeks. He was born Aug. 25, 1828, at Rotherfield, Sussex, England, coming to this country in 1851, when he at once entered the employ of Ellwanger & Barry, of Rochester, where he remained until his death. In his knowledge of pomology he greatly excelled, being the peer of the late Charles Downing, Patrick Barry or Marshall P. Wilder.

Mr. Wickens' memory was remarkable in many ways, and was phenomenal in everything that related to the flavors and characteristics of fruits. An orchard and fruit tree were his delights, and fruits his specialty, of which he was a supreme judge; but he was so modest and unassuming that only those who knew him well were aware of the extraordinary ability and qualities of the man.

Speaking of Mr. Wickens, one who had been well acquainted with him for over thirty years writes: "It was pleasant to meet him with his pleasant smile and cordial greeting. He diffused graciousness and good nature. The office of Ellwanger & Barry, where he labored assiduously for nearly four decades, will lack his sunshine; and it seems as if the nurseries, orchards and plantations of fruit must miss his cheery presence and his wonderfully observant eye."

At the last meeting of the Western New York Horticultural Society, near the close of January last, the deceased had charge of the exhibit of his firm, and was in constant demand for an opinion regarding some new fruit, or some fruit that needed to be identified.

The funeral took place Wednesday, March 31, at the beautiful Mount Hope Cemetery in the "Flower City," and was largely attended. The floral pieces were exquisite and in great profusion. Speaking with Mr. George Ellwanger, as the body was borne to the hearse, your correspondent heard that gentleman remark: "Well, we shall miss Mr. Wickens!" Every member of the firm and some members of their families and all the office companions of the deceased paid their last respects by attending the funeral.

GENESEE.

Squash.—Few squash growers or squash lovers know to what extent they are indebted to the veteran Marblehead (Mass.) seedman, Mr. James J. H. Gregory. Always an enthusiast on the squash subject, Mr. Gregory takes just pride in the fact that he has introduced more standard varieties of this delicious and useful vegetable than any other seed grower. To him is due the introduction of the long famous Hubbard and Marblehead, the widely celebrated Butman, White Chestnut, Coconut and many others.

The Fruit Garden.

Planting.—When stock is received be particular as to the unpacking that it does not lay in the sun, or where a drying wind can suck the life from the bare roots; the last is worse than the first. I have been surprised when visiting nurseries in the packing season to see how many men there are at the work who seem to have forgotten, or don't care, how the reputation of the employer stands with the buyer, or how much depends on the condition of the stock on arrival at the other end. A close watch has to be kept on the average garden laborer, who often pays more attention to the time of day than to such small items as roots. A good plan is to have a puddle (a hole or tub of thin mud) and dip the roots into it as the plants are taken from the packing, whether they are to be planted right away or heeled in. Some years ago my experience on that point with one of Boston's noted landscape men, who insisted that all stock should be puddled as unpacked, had not much weight at the time, but practice has convinced me of his wisdom. Many nursery firms puddle everything before packing, and it is a first rate plan, and the sight of it on opening makes a man feel like placing the next order, if possible, with the same firm.

Strawberries.—Don't forget the strawberry plants. A few warm days will start them growing at quite a lively rate.

All pruning should be over now, and everything in shape for the next few weeks, excepting to keep the cultivator going before the weeds appear, and attention to spraying as the proper periods arrive.

Spraying.—Have you on hand and in working order, the apparatus and the ma-



FIG. 75.—FLOAT FOR LEVELING. (See page 254.)

terial for the business? They are not elaborate or costly, compared with the gain in quality of the crops.

Young Orchards.—Why don't our farmers plant some young orchards? I passed several old ones to day. One where the trees are 25x25 feet, tightly interlaced at the top trunk with many rot holes in them and 20 feet to the first branches. These are using 6 or 8 acres for cider, and the whine is, it does not pay to plant a young orchard, for there is no money in apples nowadays, and, I would add, nor in anything else without labor and eternal vigilance.

J. HOLLOWAY.

The Vegetable Garden.

Lettuce.—Sow for succession.

Radish.—Sow in ground that is thoroughly enriched.

Seed Bed or Border.—A warm border or seed bed should now be made for sowing seeds for future transplanting.

Cabbage and Cauliflower.—Sow in seed bed for succession. In situations where subject to the club root sow dressing of bone dust or fresh slackened lime.

Broccoli may also be sown with the cauliflower, to which it is closely allied, but it is better to depend upon the latter for this crop.

Salsify.—Sow now; the mammoth Sandwich Island is the best variety. This is one of the best of winter vegetables.

Spinach.—Sow in the earliest warm border, where it quickly grows large enough for use. The thick-leaved is an excellent variety.

Leek.—Sow early, as soon as ground is in suitable condition; a few only of this is generally needed.

Melons, Cucumbers.—A succession sowing of these should now be made in heat, either on pieces of sods or in four-inch pots.

Beets.—Sow for early use outside.

Egg Plants, Pepper.—The last sowing of these should now be made in heat. Egg plant will grow vigorously at this season, and will usually succeed better than earlier sown plants, not being so subject to so much variation in heat.

Swiss Chard.—This is an excellent vegetable used as a spinach, or the mid-leaf cooked similarly to asparagus. It has also a very pretty appearance in the garden. It may now be sown in rows similar to beets, and as soon as fit is to be thinned out to four or five inches apart.

W. M. EDWARDS.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

It pays to use clean packages.

Examine those flowering bulbs.

Trimmed those grapevines yet?

A good family garden this year?

Clyde strawberry—big claims for it.

Protect the hotbeds on cold nights.

Not too many varieties for market.

To love your work, do it thoroughly.

Early Michigan potato is very desirable.

Garfield Peach—excellent yellow variety.

The tendency is to grow low headed trees.

Raise some Cannas—such beautiful flowers.

Fine Roses.—Paul Neyron and La France.

Jackmanni and Henryii Clematis will please.

The "early" potatoes are what bring the highest price.

Mount Rose still holds its own for a white peach for market.

It should be—Is your ground in a better condition than it was a year ago?

Columbian raspberry is thought by some to be not much ahead of Schaffer.

Whoever propagates and sells a diseased plant comes short of a good conscience.

It looks as though there is sometimes more in the advertisement of a tree or plant than in the fruit.

Be cautious as to where you order your nursery stock. An unhealthy tree or plant will often prove a nuisance.

The peas should be sowed early for first crop; a few days' delay in planting often is the cause of low prices.

Thinning.—A certain fruit grower in Michigan gets double the average market price for his fruit, especially pears and peaches. Why? He has built up a reputation for growing a "fancy grade." Out of hundreds of trees not one is left without severe thinning of the fruit at the proper time.

Failure.—A farmer near me made up his mind about six years ago to go into the peach business and farm at the same time. He purchased one thousand trees and set them out in the field, giving them no care, except an occasional look. He condemned them and tried to blame the nurseryman because they did not grow more thriftily; the weeds and grass thrived with the sorrel, but the trees, with the exception of twenty or thirty, died. That man is thoroughly disgusted with fruit growing. The only cause of failure was the man himself!

Tree Planting.—In the State which claims the honor of originating Arbor Day, Governor Hastings announces that 350,000 trees were planted in five years. It would be interesting and instructive to know how many of these trees still live and flourish. To plant a tree is lost labor unless that tree survives and maintains a healthy growth. On April 9 and 15, which the Governor has designated for Arbor Days in the State the duty of tree preservation could be inculcated as well as that of tree planting. It is the more important of the two, since unassisted nature will plant trees, and if a man would only guard the tender saplings from destruction by animals or fire the process of reforestation would go rapidly forward.

A Guide to the Proper Times for the Sowing of Various Seeds in the Garden or Greenhouse.

NAME OF PLANT.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Explanation of Signs Used in the Table.
Abronia	2	2	●	● To be sown in open ground without transplanting. Plants must be thinned out and given proper distance.
Adlumia, Allegheny Vine . . . . .	.	.	2	1	1	.	.	.	.	.	.	.
Alyssum, Sweet . . . . .	.	.	2	3	3	.	.	.	.	.	.	.
Amaranthus, . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Auricula, Cowslip† . . . . .	.	.	.	.	.	.	7	7	7	.	.	.
Aster . . . . .	.	.	2	2	1	.	.	.	.	.	.	.
Antirrhinum . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Balsam . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Begonia†	2	2	2	.	.	.	.	.	.	.	.	.
Browallia, Amethyst . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Calceolaria Ladies' satchel	4	4	4	4	1. Sow on seed bed in the garden and transplant thence to permanent place.
Canarybird Vine . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Canterberry Bell† . . . . .	.	.	.	.	.	.	6	5	.	.	.	.
Calendula, Pot Marigold† . . . . .	.	.	.	2	●	.	7	7	.	.	.	.
Campanula†	2	.	.	.	.	.	5	5	5	.	2	2
Candytuft . . . . .	.	.	.	3	●	.	.	.	.	.	.	.
Canna†	2	2	2	●	●	.	.	.	.	.	.	.
Cardinal Flower¶	2	.	.	.	.	.	.	5	5	.	2	2
Carnation, Marguerite†	2	2	2	2	●	.	.	.	.	.	.	.
California Poppy . . . . .	.	.	.	3	●	.	.	.	.	.	.	.
Celosia, Cockscomb . . . . .	.	.	2	2	●	.	.	.	.	.	.	.
Cineraria . . . . .	.	.	.	.	.	.	4	4	.	.	.	.
Clarkia . . . . .	.	.	2	2	●	.	.	.	.	.	.	.
Cleome, Spider Plant . . . . .	.	.	2	3	●	.	.	.	.	.	.	.
Coleus†	2	2	2	2	.	.	.	.	.	.	.	.
Columbine	2	1	1	1	2	2	2	3. Sow in open ground as soon as it can be worked.
Cobæa . . . . .	.	.	2	2	●	.	.	.	.	.	.	.
Cornflower . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Cosmos† . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Chrysanthemums†	2	2	2	1	●	.	.	.	.	.	.	.
Cyclamen, Alp Violet	4	4	.	.	.	.	4	4	.	.	.	.
Cypress Vine* . . . . .	.	.	.	3	●	.	.	.	.	.	.	.
Dahlia*	2	2	.	.	.	.	.	.	.	.	.	.
Datura, Trumpet Flower . . . . .	.	.	2	1	●	.	.	.	.	.	.	.
Delphinium . . . . .	.	.	.	.	.	.	5	5	.	.	.	.
Dianthus, Pinks . . . . .	.	.	2	1	●	.	.	.	.	.	.	.
Euphorbia . . . . .	.	.	2	1	●	.	.	.	.	.	.	.
Everlasting Flower . . . . .	.	.	.	3	●	.	.	.	.	.	.	.
Forget-me-not†¶	2	2	.	.	.	.	7	5	5	.	.	.
Gaillardia . . . . .	.	.	.	2	●	.	.	.	5	.	.	.
Geranium¶	2	2	.	.	.	.	.	5	.	.	.	.
Godetia . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Gloxinia	4	4	.	.	.	.	.	.	.	.	.	.
Heliotrope†	2	2	2	.	.	.	.	.	.	.	.	.
Helianthus¶ . . . . .	.	.	.	.	.	.	5	5	5	.	.	.
Gladioli	2	2	2	1	●	.	.	5	5	2	2	2	
Hollyhock¶ . . . . .	.	.	.	.	.	.	.	5	5	2	2	2
Horn Poppy . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Ipomœea, Morning Glory . . . . .	.	.	2	2	●	.	.	.	.	.	.	.
Japanese Hop . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Japanese Iris¶	2	2	2	1	.	.	.	5	5	.	.	.	
Larkspur . . . . .	.	.	.	2	●	.	.	.	.	.	.	.
Lobelia . . . . .	.	2	2	2	●	.	.	.	.	.	.	.

Flower Seed Sowing Table.—Continued.

NAME OF PLANT.	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	Explanation of Signs Used in the Table.
Maurandia	2	2	●	* Plants marked thus form tubers etc. in the ground. These can be taken up in fall and kept over winter in a warm dry cellar or under a bench in greenhouse. They will flower much better the following year.
Mignonette†	2	●	..	..	7	7	..	..	..
Mimulus, Monkey Flower.	2	2	●	..	..	..	..	..	..	..
Mina lobata	2	2	●	..	..	..	..	..	..	..
Marabilis, 4 O'Clock*	3	●	..	..	..	..	..	..	..
Marigold.	2	●	..	..	..	..	..	..	..
Nasturtium	2	2	●	..	..	..	..	..	..	..
Nicotiana affinis†	2	●	..	..	7	7	..	..	..
Oxalis†	2	2	2	●	..	..	..	..	..	..	..
Pansy.	2	2	..	..	..	..	..	5	5	..	2	..
Phlox Drummondii	2	●	..	..	..	..	..	..	..
Phlox¶	5	5	..	..	2	
Pentstemon¶	2	..	..	2	●	..	..	5	5	..	..	..
Perilla	2	●	..	..	..	..	..	..	..
Petunia	2	2	●	..	..	..	..	..	..	..
Pennisetum	2	●	† Plants marked thus will be excellent greenhouse plants over winter when potted before frost sets in.
Platycodon¶	2	2	2	2	●	..	..	..	..	..	..	..
Poppy	3	●	..	..	6	6	..	..	..
Portulaca	3	●	..	..	..	..	..	..	..
Polyantha Rose¶	2	2	2	2	●	..	..	..	..	..	..	..
Primula (Chinese)	4	4	4	..	..	..
Pyrethrum†	2	●	..	..	..	..	..	..	..
Ricinus, Castor Oil Bean	2	●	..	..	..	..	..	..	..
Salvia†	2	2	..	..	..	..	..	..	..	..	..	..
Sanvitalia	2	●	..	..	..	..	..	..	..
Scabiosa, Mourning Bride	2	●	¶ These plants are perennials. They will flower better the second year. If necessary to remove them, transplant carefully in October and as late as the weather permits it.
Stock†	2	2	1	●	..	7	7	..	..	..	..
Sunflower	2	1	●	..	..	..	..	..	..	..
Sweet Peas.	3	●	●	..	..	..	..	..	..	..
Sweet William¶	2	..	..	..	..	..	..	5	5	..	2	..
Torenia†	2	2	●	7	7	..	..	..	..	..
Wallflower†	2	2	..	..	..	7	7	7	7	..	..	..
Verbena	2	2	●	..	..	..	..	..	..	..
Vinca†	7	7	●	..	..	..	..	..	..	..
Zinnia	2	●	..	..	..	..	..	..	..

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Peach Prospects.—March reports from the County Vice-President of the Peninsula Horticultural Society (Delaware and Chesapeake Peninsula) indicate that the peach crop will be heavy, nearly every county reporting the condition as 100. Pears, plums and small fruits are also in excellent condition.—WESLEY WEBB, Secretary.

Vineless Sweet Potato.—In my previous note on page 207 I am made to speak of my son in Florida; it should be "India."—G. CAMERON.

Tuberoses Out of Doors.—On page 231 of "American Gardening," March 27, "S. W. G. P., Mass." asks for "right treatment for tuberoses to make them bloom in the open ground." Not claiming that the method, which has proved so satisfactory to me during the last three seasons is the "right" one, but knowing that excellent results have been derived from following it in bringing this universal favorite to maturity I submit it to "S. W. G. P." and all other readers of "American Garden-

ing." In the first place it is important that fine, large bulbs are procured if the greatest success is expected. Small bulbs often do not bloom at all, and one's labor is entirely lost. Then take boxes, about 20x12 and about 12 deep. Such a box will hold six large bulbs. After boring several holes in the bottom to allow drainage, fill it two-thirds full of a compost made up of two parts well rotted cow manure, one part rich loam, and one part leaf mould, well incorporated. Set in the bulbs and then fill to top of box with same compost, packing firmly. This should be done the last week in May or first week of June. There is no use of doing it earlier as the Tuberoses loves heat and will make no material advancement until the weather becomes warm and settled. After getting the bulbs boxed select a warm situation on the south side of a building, in which to place the boxes, where they can get the hot sun and escape cold, north winds. Throughout the season give them an abundance of water, and your efforts will be crowned with success. When blooming time comes the boxes may be put in any place for exhibition. During the past seasons I have been very successful growing this lovely flower for sale in this manner. Though not an experienced gardener or florist I never saw as fine tuberose blooms as I have succeeded in getting, and men of wide experience have told me the same.—J. B. PETTIT, Fruitland, Ont.

Bougainvillea glabra Sander's Var.—I bought a plant of this from J. L.

Childs in 1896; it was then about four inches high. In the summer when the pot was outside I had six bunches of the flower heads of a very dull color. In the fall I repotted in a six-inch pot and it grew four shoots about fifteen inches long. In December these threw out a quantity of beautiful blooms, the bracts being very bright. These bracts have remained brilliant until March 1, when they began fading, and on March 30 I took off the last. Each shoot has now grown forward fully six inches and all the new shoots are full of buds. The plant is perfectly easy to grow, and I know of nothing capable of giving so much and such long enduring color.—F. H. Williams, Connecticut.

Fruit Prospects in Delaware.—The prospects for fruit of all kinds now are excellent, and the acreage being planted is greater than ever. The season, so far, has been a good one.—CHARLES WRIGHT.

Cocoa and Bermuda Grasses.—Will some readers who have had experience in ridding fields of these please let me know how to do the work thoroughly?—E. P., New Orleans, La.

Casabanna.—I was interested in the remarks of Margaret E. C. Campbell (issue of March 16). Concerning this, she refers to a variety having small fruit. I wish she would see if she could procure some seeds of it, as I am anxious to get it.—H. S. Cook, Milledgeville, Ga.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY

A. T. DELAMARE PUBLISHING CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 36 cents per square line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Look Twice. MOST things will bear more than a superficial glance over the surface; nay, indeed, real value, ultimate merit, can only be found after a deep look. Individual observers differ, too, in this respect, for while the one will be satisfied to notice the outward appearances, another is never content until the inmost depths have been brought into light, and understandingly weighed against preconceived knowledge. So it is with works of art, with theories, with books, and equally so with newspapers.

AMERICAN GARDENING draws attention to this fact, because this present issue of the paper will be seen by very many people who as yet are not regular readers, and who therefore are not acquainted with the great range of subjects treated in these columns. The aim is by seasonable treatment of the thousand and one subjects embraced by the term horticulture, to advise, direct, instruct all who read, so that the fruits of the earth

may be enjoyed to the full capacity of skillful cultivation, whether the space concerned be but a city lot or the broad acres of the professional man.

This result is attained by attention to detail, by engaging the services of the most able cultivators, and by placing their united knowledge at the service of all, either by means of special articles, or in the form of concise replies to special questions.

A weekly paper so conducted should be of material value to all who own a garden.

Market **A**FTER the crop is grown it must be sold, and so the interest that so many of our readers have in reliable market quotations, has led us to pay special attention to the securing of reports from the three great centers—New York, Philadelphia and Boston. These reports are specially prepared for AMERICAN GARDENING, and are as reliable as it is possible to get the figures, up to time of going to press. Our purpose is rather to quote on the prices realized by the bulk of good and extra quality stock. And it cannot be too strongly impressed that there is no market for poor stock, nor for good stock badly shipped.

The more we watch the trade, the more firmly are we convinced that Air stock properly placed on the market will always realize a good figure. There is always room on the top.

San Jose Scale **A**MONG the prominent fruit-growers and nurserymen of Canada, there is at the present time a growing feeling of alarm concerning the San José scale, and if the measures recommended to the Dominion Government by some of the Fruit Growers' Associations throughout the Dominion, be carried out, it will, no doubt, cause a great decrease of trade in nursery-stock between the United States and that country.

This destructive insect has made its way into New York State, from which thousands of trees and plants are annually imported by Canadian nurserymen. It will be seen, therefore, that the alarm is not an unfounded one.

The difficulties of examination at the border lead some to go so far as to advocate the prohibition of the importation of nursery stock from the United States.

At a recent meeting of prominent fruit-growers of the Niagara Peninsula, held in the city of St. Catharines, Ontario, strong resolutions were passed, advocating that all importations of United States nursery stock be prohibited for a time, or else that such importations be not permitted to cross the border until satisfactory evidence is given by an expert entomologist—such expert to be hired by the shipper—that the stock has been examined and is free from the pest.

The resolutions passed at the meeting referred to are as follows:

"WHEREAS, authentic information has been received by this Association that the San José scale has made its appearance in the orchards and nurseries in the adjoining states of the Union, thereby seriously menacing the fruit-growing interest of the Dominion of Canada,

"Be it, therefore, resolved, that this Association respectfully memorialize the Dominion Government to take the necessary steps to prohibit all importation of fruit of kinds known to be infested, and of all fruit trees and current bushes, until such evidence is furnished as shall satisfy an expert that they are free from the San José scale.

"And, further, that the Government be memorialized to appoint an expert, or experts, to examine all such importations, with authority to have them reshipped out of the country, or destroyed, if found to be infested."

If such resolutions as these, which are being forwarded to the Government which is now in session at Ottawa, should prove of any avail, there will be a serious effect on some growers of New York State.

It would seem that the time has come for full legislation providing for the inspection of nursery stock which is to be shipped anywhere.

The Sugar Beet.

The demand for information as to the adaptability of the soil and climate of the United States to the production of sugar beets has caused the preparation and issue of Farmers' Bulletin No. 52—The Sugar Beet: Culture, Seed Development, Manufacture, and Statistics, by H. W. Wiley, Chief of the Division of Chemistry, and formerly Director of the Department Sugar Beet Experiment Station in Nebraska. In this the questions now attracting notice are discussed and much information given as to varieties, cultivation, and fertilization; cost of production, cost and methods of manufacture, etc.

One of the remarkable facts shown by the statistical tables in this bulletin is found in the information they contain, showing that the sugar beet has been able on demand to supply the remarkable deficiency in the world's sugar crop produced by the Cuban war. In three years the supply of sugar furnished by that island has fallen from 1,000,000 to about 100,000 tons, and yet there has been no appreciable deficit noticed in the total sugar production of the world.

The remarkable opportunities for the extension of profitable agricultural industries in this country, through the medium of the sugar beet, should not be suffered to pass unimproved, and the farmers of our country should not rest satisfied until they see our own fields produce the sugar which we consume. This bulletin can be had free on application to the Secretary of Agriculture at Washington, D. C.

OTHERS JUST AS GOOD.

My thanks are due to you for the very generous way in which my order for premium No. 47 was filled. To have such a generous supply of cosmos of the giant California strain from the originator is a delight.—H. H. D., Greenville, Ohio.

THIS IS GOOD NEWS!

I am much pleased with your paper, and consider it one of the best periodicals of its class. I would not be without it if subscription price were twice as much as it is.—W. H. G., Newark, N. J.

English Varieties in America.

The recent correspondence on English potatoes in America has been extremely interesting, and the general consensus of opinion appears to be that imported varieties are total failures here. For the past two years I have grown a few varieties of English potatoes which produced finer haulms than any other sort we grew, but the yield was almost nil. A neighboring friend who grows vegetables quite extensively has been experimenting with them for three years past, with but indifferent success. His seed was procured from the house of Sutton & Sons and embraced all the best kinds they catalogue. Ashleaf Kidneys were a complete failure; not only was the yield light, but the tubers when cooked were vastly inferior in flavor to the same varieties as grown in Great Britain. An early potato of superior quality is much needed in America, and if the "Bovee" of Messrs. Peter Henderson & Co. has all the desirable features of the Ashleaf Kidneys, including flavor, it is bound to become very popular. As compared with English kidney potatoes, our American varieties are very deficient in flavor—at least such is our opinion, arrived at after a month's travel in Great Britain last summer and after tasting about a dozen early and second early sorts over there. An American friend who tasted Myatt's Kidney in Glasgow for the first time in his life said: "Why, if we could raise potatoes in America to taste like these we could almost dispense with meat altogether."

Although English potatoes do so unsatisfactorily here, owing probably to climatic differences in the two countries, some American sorts, we found, were very popular in England and were quite largely grown as main crop varieties. The principal criticism we heard was that many of them tasted "soapy" or did not boil mealy.

Reference has been made to English strawberries in America. Six years ago we imported 1,000 plants of such standard sorts as President, Laxton's Noble, Vicomtesse Hericat de Thury, and La Grosse Sucree. The plants arrived in good condition and were planted out about the end of April. A large proportion of the plants was destroyed by drought the following summer, and after the succeeding winter probably not over twenty-five plants were left alive. Such fruits as these produced were small and inferior in quality to what the same sorts yielded in Europe. If such varieties as Royal Sovereign would succeed here and produce fruit of such a flavor as in England they would be immensely popular, as it is not necessary to add to them about an equal weight of sugar to make them palatable.

American strawberries are just as unsatisfactory in England as their varieties are with us. We saw a plot of our best varieties at a well-kept establishment in Oxfordshire last summer, and, with the exception of Sharpless, which was fruiting moderately, all were very unhappy looking objects. The change from the dry American climate to the moisture-laden one of England was evidently not to their liking.

Some English fruits and vegetables succeed well over here. The industry gooseberry does splendidly, while all other sorts are dismal failures. Currants generally do well, while raspberries are more doubtful. The industry gooseberry was raised on the bleak Northumberland coast by Messrs.

Fell & Co., and this may make it suitable for our climate.

Potatoes, strawberries, small fruits in variety, as well as vegetables in variety, are more likely to prove successes here if raised on the northeast coasts of England and Scotland than in the Southern counties of England.

W. N. CRAIG, Taunton, Mass.

Bad Marketing.

Very often is the blame laid on the commission man when the grower's returns are low, and sometimes, perhaps, there may be reason in it. But that such is not ever the case can be seen from the accompanying illustration of how one man sent asparagus to market.

The bundle photographed was one of six sent to New York by a North Carolina grower, and, had we not seen the shipment opened up, we could hardly have credited that such a thing as sending asparagus minus the tips



FIG. 76—HOW ONE MAN SENT ASPARAGUS TO MARKET.

could be possible. By actual count there were only eleven perfect heads in the bundle. The quality was good, only the method of marketing was bad.

It is very evident from the foregoing that there are some people who could with advantage read our remarks on packing and shipping.

ORIGIN OF THE CINERARIA.

For some time past an animated controversy has been going on in Europe respecting the origin of the florist's Cineraria. At the Cambridge Botanic Gardens numerous experiments have been made with Senecios and Cinerarias, with a view to a final settlement of this disputed point. The following extracts from an article in the Gardeners' Magazine give a fair statement of the most popular view: "Cineraria cruenta is most likely one of the parents, and some other species, *C. lanata*, or an allied form has been crossed with it. Some gardeners have shown seedlings from *C. cruenta*, presumably uncrossed by other pollen, and these seedlings have been well on the road to our present garden varieties. The fact is that *C. cruenta* had been crossed in some way by the garden forms, for I have proved that seedlings from it, if uncrossed, are in at least two generations not different from the original *C. cruenta*."

Spring Humors

Those unsightly eruptions, painful boils, annoying pimples and other affections, which appear so generally at this season, make the use of that grand Spring Medicine, Hood's Sarsaparilla, a necessity. Take Hood's Sarsaparilla now. It will do you wonderful good. It will purify your blood, give you an appetite, tone your nerves, strengthen your stomach, and cure all spring humors. Remember,

Hood's Sarsaparilla

Is the One True Blood Purifier. \$1. six for \$5.

Hood's Pills are the only pills to take with Hood's Sarsaparilla.

GLADIOLUS.

A Superfine Mixture, made up of very best named varieties and choice un-named seedlings. Fine blooming bulbs at \$1.00 per 100, \$8.00 per 1000; by express, purchaser's expense.

J. A. REED, (Gladiolus Specialist), CANTON, OHIO.

Mention American Gardening when you write.

Danish Ballhead Cabbage.

IMPORTED RELIABLE SEED.

Prices on application. Catalogue Free.

FRANK H. BATTLES, Seed Grower Rochester, N. Y.

Mention American Gardening when you write.

New, Rare and Beautiful Plants

A Large Collection of Rare Hothouse and Greenhouse Plants, Hybrid Sweetbraries, Old Garden Roses, etc. New Philadelphia, New Jersey, etc.

PRONIES.—A large collection of the finest in cultivation. Hardy Perennials, Phloxes, Japanese Iris, Roses, Clematis, etc. New and Standard Fruits, Rare and Beautiful Trees and Shrubs, Evergreens, etc. Catalogues on application.

JOHN SAUL, Washington, D. C.

Mention American Gardening when you write.

Premium American Pansy

SEEDS AND PLANTS.

Also other plants and seeds described in my catalogue, sent free to any address with "How to Grow Pansies." Over 50 varieties and mixtures of Pansy seed. Hesperian Pansies, 50c. per pkt.; selected mixed, 10c.; extra choice mixed, 10c.; trade pkts. containing triple quantity, at double price. Pansy plants in season, in bud or bloom, \$1.75 per 100. 50 plants, \$1.00. Smaller plants, by mail, prepaid, at same rates, or 50c. per doz. Many other seedling plants listed in catalogue.

WM. TOOLE Baraboo, Wis.

Mention American Gardening when you write.

ASSIGNEE'S SALE OF Hardy American Plants and Flowers

FINEST COLLECTION IN AMERICA.

40,000 Native Azaleas, five species well budded and with balls.

Entire stock of the well-known Highlands Nursery must be sold this spring. A great opportunity for Parks, Cemeteries and Owners of property contemplating large or small planting.

For lists, prices and information, address ASSIGNEE, Highlands Nursery, Kawana, N. C.

Mention American Gardening when you write.

AQUATIC GARDENING



LOTUS OF THE MILK.

WATER LILIES. Leaf-let free. Egyptian and Japan Lotus, Victoria Regia. We carry a full line of Aquatics and things needed in water gardening. Japan Irises, Bamboos, and hardy ornamental Reeds, Grasses and Perennials. Plans and estimates furnished, and selections of varieties made upon request. See annual calendar.

HENRY A. DREER, Philadelphia, Pa.

Mention American Gardening when you write.

We find that good returns come from advertising in American Gardening.

H. H. HERGER & CO.,

San Francisco, Cal., Jan. 28, 1897.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897

Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." 42 Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

PRIZE WINNING DAHLIAS

\$1.00 per doz. Catalogue Free.

LOTHROP & HIGGINS, E. Bridgewater, Mass.

Mention American Gardening when you write.

"FLOWER QUERIES" New book on floriculture 10 Chapters, written in questions and answers, discussing 500 floral topics. Price, 25 cts. The COURIER, Box A, Chatham, N. Y.
Mention American Gardening when you write.

CALIFORNIA LANDS ARE RICH

and only \$35 to \$65 per acre AT ESBONDA. Grows fine oranges, lemons, olives, grapes, apples, hay, grains, etc. Best summer and winter climate in U. S. Send stamp for illus. pamphlet to Escondido Land & Town Co. at Escondido, Los Angeles or San Diego, Cal.
Mention American Gardening when you write.

MOONLIGHT == STARLIGHT!

WALTZ SONG.

Just Published. Orchestration also.

L. DEACON, Brewster, New York.
Mention American Gardening when you write.

Cedar Oil Soap is the best all-around insecticide for house and greenhouse use. Kills scale, thrip, spider, mealy bug, fly, etc. The best preventive if used oftener as a wash keeps foliage bright and clean. Kills fleas on dogs, cats, fowl, etc.; on trees, manure. Put up in pound tins, 50 cts.; half pounds, 25 cts. each. Sold by Seedsmen and Florists. Half pound trial tin mailed on receipt of 25 cts. enough for ten gallons solution. Address the Manufacturers

AUGUST RÖLKER & SONS,
P. O. Station E. 126 W. 24th St., New York
Mention American Gardening when you write.



**SOLD BY
THE SEED
DEALERS OF
AMERICA.**
For pamphlets
address
B. HAMMOND,
Fishkill-on-
Hudson, N. Y.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price with list extra discounts. All of our pots from 7 in. and upwards have our Patent Excel sior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.
THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.
Mention American Gardening when you write.

GLASS For Greenhouses, Grap- eries, Conservatories, GLASS Hothouses and Hotbeds.

VANHORNE, GRIFFEN & CO.

Importers of French Glass.

13, 15 & 17 LAIGHT ST., AND NEW YORK.
62, 64 & 66 VARICK ST.,

Mention American Gardening when you write.

BOWKER'S FERTILIZERS

for HOUSE PLANTS,
LAWNS, GARDENS,
FARM CROPS.

Catalogue free. State for what purpose fertilizer is wanted when writing.
BOWKER FERTILIZER CO., Boston.

A book on "Window Gardening," and enough odorless fertilizer for thirty plants three months, sent by mail for **25c.**

Mention American Gardening when you write.

BLACK KNOT REMEDY

A sure cure for Black Knot on Plum Trees. Write for Catalogue. Agents wanted.

L. R. FREEMAN & SON, Charlotte Mich.
Mention American Gardening when you write.

Vegetable Gardening

A New Book for the Farmer and Market Gardener. Profusely Illustrated. 224 pages.

BY PROF. S. B. GREEN.
Horticulturist Minn. State Experiment Station.
Endorsed by leading horticulturists East and West.
Price, postpaid, \$1.25.

Address
Webb Publishing Co., St. Paul, Minn.

Mention American Gardening when you write.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.

**CYPRESS
SASH BARS**
UP TO 32 FEET IN LENGTH OR LONGER.

GREENHOUSE
AND OTHER BUILDING MATERIAL.

Send for our illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

HAMMOND'S "WHITE PAINT,"

For Outside or Inside Use on
Greenhouses or other Buildings.

For 19 years this Paint has been in use for this specific purpose, and it is as indestructible as paint can be made. Put up in 5, 10, 15, 20 and 25 Gallon Kegs, and in Barrels of 50 Gals.
S. HAMMOND, Fishkill-on-Hudson, N. Y.
Mention American Gardening when you write

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advt. and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOECH BROS., bulbs and plants, Englewood, N. J.

DAHLIAS! Prize strain of 100 named exhibition varieties, 10 for \$1. A. H. Brown, Westboro, Mass.

DAHLIAS—500 varieties. Flower or Vegetable seeds, \$1.50 per hundred packets. H. F. Burt, Taunton, Mass.

STRAWBERRY PLANTS. The best and cheapest one to buy of is George F. Wheeler, Concord, Mass. Send for catalogue.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedsmen, Rochester, N. Y.

SECOND CROP Potato Seed. 10 days earlier, 15 per cent. increase over home grown seed. Orris A. Browne, Cape Charles, Va.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York

THE "RIDGEWAY."—A new strawberry of great merit. For price of plants and free catalogue address M. H. Ridgeway, Wabash City, Ind.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

EGYPTIAN or Top Onion sets cheap; one dollar per bushel in any quantity; purchaser to pay freight. W. W. Thompson & Sons, Station D., Milwaukee, Wis.

MAULE'S THOROUGHbred Potatoes. bbl. \$3.40; bus. \$1.25; pht. 35 cts. Enormous. bbl. \$1.75; bus. 60 cts.; pht. 25 cts. Irish Delia, bus. 30 cts. Good pure seed. P. O. Thompson, Sidney, O.

THE "IRON AGE" Garden Tools are light, strong and work "just right." High steel wheels, tubular frame, malleable castings. Write for catalogue. Bateman Mfg. Co., Box 205, Grenloch, N. J.

VIOLETS.—A few thousand left, young well-rooted plants Lady Campbell, the sweetest double violet. Flowers seven months in the year, succeeds everywhere. \$1.00 per 100 postpaid. C. E. Price, Smithtown Branch, N. Y.

NEW PINK VIOLET Mrs. J. J. Astor (named by permission), very fragrant, \$2.00 per dozen. \$10 per 100. Also Marie Louise. \$1 per 100, any quantity. Orders filled in rotation. G. Saltford, Violet Specialist, Rhinebeck, N. Y.

CEDAR OIL INSECTICIDE. better and cheaper than fir-tree oil, \$2.50 the gallon; \$1.00 the quart tin. Cedar Oil Soap, pound tins, 50 cts.; half pounds 25 cts. Sold by seedsmen and florists. August Rölker & Sons, New York, P. O. Station E.

CALIFORNIA PRIVET makes the finest ornamental hedge and are perfectly hardy. Strong plants one to three dollars per hundred. Atlantic Coast Nursery, James H. Cornell, Proprietor, 605 4th Ave., Asbury Park, N. J. Reference 1st National Bank of Asbury Park.

SUCCESS, an early market berry, a seedling of the Bubach, fertilized by Michel's Early. Perfect blossom, an improvement on Bubach in size, firmness and quality. Early and productive. Dozen, 40 cts.; 100, \$1; 1,000, \$4.—Address Originator, Geo. N. Hannah, Whiggville Conn.

FOR SALE.—Forcing sash. Through a factory mistake, we have on hand 75 sash 10x14 20 ft. The outside dimensions on these are 2-8x3-3, sash 1 1/2 in. thick. We offer these glazed at \$1.25 each. F. O. B. cars at Lynn, which is half cost, cash with order. The Brookway-Smith Corporation, Manufacturers of all kinds of Sashes, Lynn, Mass.

1,000,000 Strawberry Plants of 30 well tested varieties, from \$1.50 to \$2.00 per 1,000. 100,000 Michel's Early, \$1.25 per 1,000, \$10 per 10,000. All healthy, young well rooted plants, true to name, and securely packed free. A good stock of No. 1 Peach-trees, of a few well tested reliable varieties, healthy and free from scale. Get my price list before purchasing. Any information of varieties culture etc., cheerfully given to those who want stock. Address Chas. Black, Hightstown, N. J.

Premiums at Shows.

I am very glad to see your article on this subject in the issue of April 3. Certainly anything that tends to make our horticultural exhibitions more attractive and so more educational in their influence upon the interest of the public in the cultivation of fruits and flowers, is worthy of all commendation.

But I have often thought of another mode than that to which your article refers, in which the value of these exhibitions might be greatly increased. Of course, the main design of such displays is, or ought to be, not simply to gratify the eye and kindle the admiration of the visitors, but to arouse and stimulate, as effectively as possible, their personal interest in horticulture. This is the end which the offered premiums are designed to promote. And they ought, therefore, to be so offered, to such persons and on such conditions as will make them most conducive to this result, by appealing to the largest number of competitors.

While there may very properly be premiums offered, as they now exclusively are, to the finest displays of fruits or flowers, by whomsoever and under whatever circumstances grown, there should also be another class of premiums offered to those who are not professional horticulturists nor so wealthy as to be able to employ professional gardeners, but whose exhibits have been grown under their own personal care. Such premiums would appeal to many a comparatively poor man who has nothing but a little garden patch to cultivate and would stimulate him to do his very best with the limited means at his command. They would, doubtless, greatly increase the number of exhibitors, not among that class whose interest in horticulture is already keen, but among the common people, where such an interest needs to be developed and extended. As the premiums are offered now, simply to the finest display, the cultivator of a small garden is discouraged from any attempt to compete with the man who has a skilled gardener to devote his experience of years and his entire time to the most skillful cultivation of perhaps hundreds of trees and vines from which to cull the very choicest fruits for the exhibition. He says at once: "I have no chance for success in such a contest," and so he makes no effort to succeed. But if he could know that his exhibit was to compete only with those which had been raised under similar circumstances as his own, so that he had as fair a chance as any of his competitors to secure a prize, his interest in the exhibition would be greatly increased, and thus the offered prizes would much more effectively accomplish the object they have in view.

W. H. W., Mass.

Manhattan (Kas.) Horticultural Society held no meeting during January or February. Their March meeting was held March 25 at the college. Vice-President Marlatt in the chair. Two papers were presented, one by W. H. Moore, on "Let-tuce Culture Under Glass," and the other by Professor A. S. Hitchcock on "Fungus Diseases of Garden Vegetables." He said that rotation was the best preventive for root troubles, and Bordeaux Mixture, in most cases, for fungus diseases on the leaves. In reports of standing committees F. A. Marlatt discussed the canker worm and formulas for preparing spraying material for destroying them. Small fruits and grapevines were reported to be in good condition.—T. C. W.

Maule's Seeds

LEAD ALL

Have done so for years, and are as far ahead in '97 as ever.

If you want the Best Garden you have ever had, send address on a postal TO-DAY for New 1897 Seed and Plant Book. It is a wonder. Address

WM. HENRY MAULE,
Philadelphia, Pa.

Mention American Gardening when you write.

HALL'S FAVORITE. THE COMING NEW has competition; the best introduced for years. Forty other kinds pedigree plants. Raspberries, Blackberries, Asparagus roots, etc. Headquarters for Second Crop Seed Potatoes, double crop and earlier than other seed.

Descriptive Catalogue Free.

J. W. HALL, - - Marion Station, Md.

Mention American Gardening when you write.

WINTZER'S NEW AMERICAN PEDIGREE CANNAS

1897 set—12 magnificent varieties, including Duke of Marlboro, Duchess of Marlboro, Maiden's Blush, Gloriosa, Triumph, California, Sunset, Champion, Pillar of Fire, Brilliant, Lorraine, and Golden Pearl—embracing the newest and most distinct colors and the highest types of Cannas yet produced. Descriptive List of New and Rare Cannas, with Catalog of New Roses, Plants, Flower Seeds and Garden Fruits, FREE.

ALFRED F. CONARD, Box C, West Grove, Pa.

Mention American Gardening when you write.



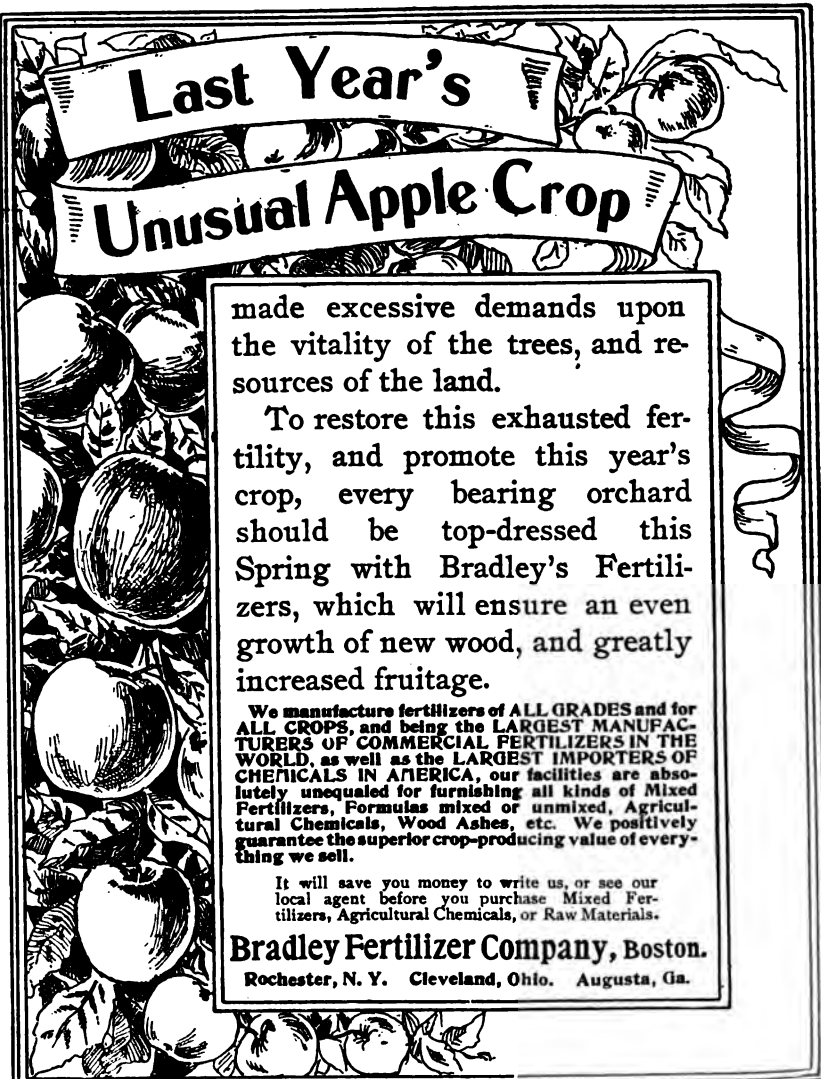
FARMERS

REDUCE the Price of Your Insurance by roofing your building with our CORRUGATED IRON AND STEEL ROOFING.

No more fires from defective flues, where the chimney passes through the roof, or from sparks falling upon the roof. Cheaper than shingles, because the first cost is no greater, while the lasting qualities are double. A GOOD CORRUGATED STEEL ROOF at 2 1/2 cts. per square foot. A building roofed with iron or steel is entitled to the same rate per thousand of insurance as one which is roofed with slate—the difference in first cost is in favor of iron and steel.

For circulars, prices and estimates, address
THE BERLIN IRON BRIDGE CO.,
EAST BERLIN, CONNECTICUT.

Mention American Gardening when you write.



Last Year's Unusual Apple Crop

made excessive demands upon the vitality of the trees, and resources of the land.

To restore this exhausted fertility, and promote this year's crop, every bearing orchard should be top-dressed this Spring with Bradley's Fertilizers, which will ensure an even growth of new wood, and greatly increased fruitage.

We manufacture fertilizers of ALL GRADES and for ALL CROPS, and being the LARGEST MANUFACTURERS OF COMMERCIAL FERTILIZERS IN THE WORLD, as well as the LARGEST IMPORTERS OF CHEMICALS IN AMERICA, our facilities are absolutely unequalled for furnishing all kinds of Mixed Fertilizers, Formulas mixed or unmixed, Agricultural Chemicals, Wood Ashes, etc. We positively guarantee the superior crop-producing value of everything we sell.

It will save you money to write us, or see our local agent before you purchase Mixed Fertilizers, Agricultural Chemicals, or Raw Materials.

Bradley Fertilizer Company, Boston.
Rochester, N. Y. Cleveland, Ohio. Augusta, Ga.

Mention American Gardening when you write.



You can get a SAFE and SURE remedy for all the ordinary ills of life as well as a SURE CURE for

**BRIGHT'S DISEASE,
URINARY DISEASES,
FEMALE COMPLAINTS
GENERAL DEBILITY,
MALARIA**

and all diseases caused by disordered kidneys and liver at the *Country Store*. . .

Safe Cure

a PURELY VEGETABLE PREPARATION that has cured thousands and will cure you. Large bottle or new style smaller bottle at your nearest store.

Mention American Gardening when you write.

INCUBATORS \$35, \$15, \$12 each. Brooders, 2 styles, \$6. Fowls, eggs. Ill. cir., 3c. J. A. Chilton, Fairmont, Md.

Mention American Gardening when you write.

POULTRY BOOKS. ABC Poultry Culture 25 cts.; 500 Questions and Answers, 25 cts.; Poultry House Plans, 25 cts.; Pigeon Queries, 25 cts.; Poultry Review 1 year, 50 cts. All \$1.00. Any 2 books, 40 cts.; 3 for 50 cts. J. DARROW, CHATHAM, NEW YORK.

Mention American Gardening when you write.



Mention American Gardening when you write.

Have you read about **THE COMET** \$2.50 to \$5.00. Beats them all. Don't buy till you see them. Send postal card for free data. A harvest for agts, write today. H. B. RUSLER, Johnstown, O.

Mention American Gardening when you write.



Mention American Gardening when you write.



of all kinds. Also material in the Flat. Write for Catalogue and Price List.

WEBSTER BASKET COMPANY, WEBSTER, Lock Box 43, Monroe Co., N. Y.

Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

MOVING SITTING HENS.

This is one of the problems of the season at all the small places that are not fitted up after modern ideas. And even though the fittings be ideal, one may still, through lack of sitters, be obliged to bring some from without. Under certain conditions, such hens can be moved with perfect satisfaction. It is uncertain business to attempt to move the flighty Mediterraneans, in whom the sitting instinct is not strong. But the quieter Plymouth Rocks, Brahmas, etc., may be safely moved, after two or three days; that is, as soon as the sitting fever is strong upon them. It is most desirable to undertake the task at night, to give the fowl nest eggs at first, and to newly domesticate her in a quiet room, if possible, where no other fowls can disturb or annoy. It may even be necessary to "turn her face to the wall."

THE BOUVARDIA.

Standing so high, as it does, for beauty, blooming freely in the winter, in clusters, and valuable for cutting, it seems strange that the Bouvardia is not better known and more popular. The colors range from white through many shades of pink to scarlet and crimson vermillion. They are both single and double, and the plants are of good habit, some of them even elegant. Add to this that the plants may be bedded out in summer, and thus give little trouble, and it would seem that the Bouvardia was just one of those plants greatly to be desired. About thirty kinds are offered for sale in this country.

SEEDLING SMILAX.

So well does Smilax suit the popular mind, that one might almost say that it is never seen without being admired. But, though it is cheap, and easily grown from seed, it very seldom appears as a window plant. Doubtless the reason is that the people at large are not familiar with the fact, as stated. Some, too, may have lost it through not knowing its habit. After some months' growth the vine withers and dies, but it may be started again in the fall, after a proper rest.

THE VIOLET CRAZE.

The popularity of the violet is shown by the numbers of women wearing this flower whom one meets at this season on the streets. Violets, real or artificial, are in evidence everywhere, and they are hardly likely to grow less popular while improvement in the flower is so manifest. The new double "pink" sort, Mrs. J. J. Astor, may delight the few who are fond of pinkish lilac tints; but the people will fall down in worshipful admiration before the new sovereign Princess of Galles (Princess of Wales). Such size, such breadth of petal, and such royal depth of purest violet color have never before been seen in this

AT IT AGAIN.

The seemingly irrepressible swindler, who has flourished for several seasons, is at his old tricks again. He represents himself as being connected with Peter Henderson & Co., the seedsmen and plantmen, and sells worthless stuff, chiefly vines, to the confiding amateur. He is usually accompanied by a confederate, who plants the shoot or roots in the garden. Let our readers be on their guard.

PLANTS FOR CERTAIN WINDOWS.

A lady whose plants do especially well, and whose window is an almost sunless north bay, with a register very near, said: "I have been keeping my eyes open a long time to find plants just suited to my needs." It goes without saying that she will succeed, for this is the common sense attitude. As this is the season for selecting the plants, it is urged upon intending buyers that they make conditions a special study before making out the list. Whether the windows are north, east or south; whether the heat is even, or very variable; whether, indeed, there is much or little heat. All these must affect the decision as



"Pretty Pill" says
Pretty Poll

She's just "poll parrotting." There's no prettiness in pills, except on the theory of "pretty is that pretty does." In that case she's right.

Ayer's Pills

do cure biliousness, constipation, and all liver troubles.

Mention American Gardening when you write.

to what plants can give satisfaction. Don't get primulas, if you have only got a hot, south window; or the sun-worshipping Buttercup oxalis, if you are confined to sunless north ones.

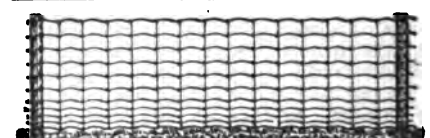
PROCURING NOVELTIES.

This insistence upon plants which suit the conditions scarcely applies to novelties, inasmuch as we do not know what conditions novelties may need, and can only test them until we find out, or are able to learn from the experience of others. It is indeed a joy to feel that good sense will not forbid the dear delight of trying all the new things, if the purse is but plenteous.

MYRA V. NORRIS.



N. L. MEAD CYCLE CO., Wabash Ave., Chicago, Ill.
Mention American Gardening when you write.

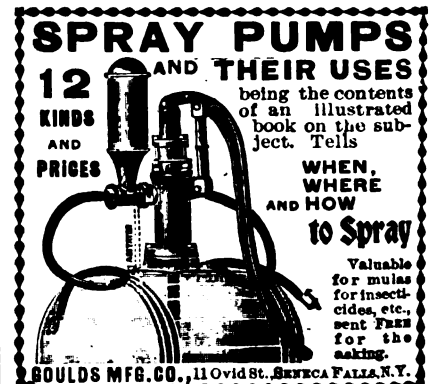


A KENTUCKY HORSEMAN.

A good customer of ours offered an unbelieving farmer \$100 to bring him a bull that could go through the Page. Says he is not "talking for money," but simply good will toward the manufacturers of such a perfect fence. Says he "would rather pay our price than have a common wire fence given him."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.



Mention American Gardening when you write.

Tomatoes for New Hampshire.

In Bulletin 42 of the New Hampshire College Agricultural Experiment Station Messrs. Rane and Hunt report the results of a test of 56 varieties of tomatoes made last year.

The soil of the tomato field was a good loam, practically level. In the spring a light coating of cow manure and a heavy application of a complete tomato fertilizer were used. The plants which were started from seed in the greenhouses, March 16, had been transplanted twice. They were transplanted into the field May 25 and 26 in rows five feet apart, the plants three feet apart in the row or at the rate of 2,904 plants to the acre.

The land was cultivated frequently until the plants were of fair size. The method of training was to tie each plant to an ordinary bean-pole sufficiently to keep it from the ground. This necessitated a slight amount of pruning to improve the conditions for ripening. The conclusions are:

The varieties best suited to New Hampshire are those having an early maturity, ripening the bulk of their fruit by September.

The following varieties we would place upon the rejected list: Early Richmond, Earliest of All, Bright and Early, Ponderosa, Early Leader, Morning Star, Wisconsin Climbing and Large Yellow. All of the Landreth crosses, together with Buckeye State and Virginia Corker, are too late for this climate.

The varieties making the best general showing were: Belmont, Early Michigan, Acme, Brinton's Best, Beauty, Red Cross, Waldorf, Fordhook's First, Stone and County Fair. These are named in order of productiveness.

The varieties making a fair showing were: Red Bird, Long-Keeper, Dwarf Aristocrat, Chenery's Early, Conference, Puritan, Autocrat, No. 105, Optimus, Perfection, Ignomus, Fortune and Dwarf Champion. Also given in order of productiveness.

Tariff.—To show how our neighbors feel about the fruit clauses in the tariff we reproduce the following from the Lower California Ensenada:

"It matters little to Mexico how much in the northern Republic downtrodden Peter is robbed to pay the scheming and opulent Paul, but odious and discriminating tariff laws directed against this country are sure to react. We graciously give up our dollars two for one, as it is the inevitable order of things, and even the practical prohibition of Mexican vessels in the ports of the United States may be overlooked, but such measures as the above will surely lead a large percentage of the trade, which that country has lately acquired in Mexico, to go elsewhere, and this country will not be slow to retaliate."

DANGER IN BURNING LEAVES.

A caretaker on the estate owned by Charles Carey of Virginia, at Grasmere, S. I., recently set on fire the dry leaves on the lawn, so as to destroy them. The fire was communicated to a greenhouse, which was also destroyed, causing a loss of \$1,500.

PEACH TREES \$2. per 100.

List Free. RELIANCE NURSERY CO., Geneva, N. Y.
Mention American Gardening when you write.

FAY'S CURRANT LARGE STOCK.

Two years old, 20 bushes for \$1, or \$2.50 per 100.
One year old, 25 bushes for \$1, or \$2.50 per 100.
FRED. H. BURDITT, Clifton, N. Y.

Mention American Gardening when you write.

CARMAN No. 3, \$1.50 per bbl. of 4 bus.
Orphan, \$1.30 per bbl. of 4 bus.
Sir William, \$1.30 per bbl. of 4 bus.
Maule's Thoroughbred, \$1.25 per bus.
Satisfaction guaranteed.

C. A. PARCELL, Wilawana, Pa.
Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan Ivy, 2 years, \$8.00 per 100.

L. S. PETERSON, Montrose, New York.
Montrose Nurseries.

Mention American Gardening when you write.

WATER LILIES

and **AQUATICS.** All sorts.

WE ARE GROWERS.

Stock fresh and reliable. Prices rock bottom. Catalogue free.

GEO. B. MOULDER, Lily Park, Smith's Grove, Ky.

Mention American Gardening when you write.

STRAW RASP BLACK GOOSE DEW

ASK WM. O. BABCOCK, BRIGMAN, MICH.,
For prices of strong **STRAWBERRY PLANTS**, dug out in solid blocks, not from between the rows, true to name. Competition Defied. **QUALITY** considered. Complete Stock of **CURRENTS AND GRAPES.** (Mention this paper.)

BERRY PLANTS

Mention American Gardening when you write.



The **TWIN COMET** (Stationary) \$5.00
The **LITTLE GIANT** (Traveler) 15.00

LAWN SPRINKLERS.

Best Sprinklers made for Florists and Nurserymen's use. Will save labor of one man, for they sprinkle 4 times greater area than any other sprinkler.

E. STEBBINS MFG. CO.

Made for **J. B. FELLOWS & CO.,** SPRINGFIELD, MASS.
40 Warren St., N. Y. City. Will send on 5 days' trial.
Agents Wanted. Can make big money.

Mention American Gardening when you write.

TREES

Strong plants of Japan Snowball, \$3 doz.

" " White Weigela, \$2.50 "

Grape Vines, bearing size, our selection \$3 "

Half-dozen at dozen rates. Write us quick for our list of Specialties.

WILEY & CO., Cayuga, N. Y.

Cayuga Nurseries established over 40 years.

Mention American Gardening when you write.

For Many Years

Well-posted buyers in all parts of the country have made our Nurseries their source of supply for

NEW AND RARE TREES, SHRUBS, RHODODENDRONS, AZALEAS, EVERGREENS, PERENNIAL PLANTS and every hardy variety of the choicer garden subjects which critical growers of taste are always looking for. Our new Catalogue, 170 pages, is full of interest to the amateur, and to every one who seeks the best for garden or grounds. In it will be found many things quite rare, and not generally offered.

Any buyer can get from us Plans and Suggestions for the arrangement and planting of grounds.

THE SHADY HILL NURSERY CO.,

102 State St., Boston, Mass.

Mention American Gardening when you write.

THE WM. H. MOON CO.

Glenwood Nurseries, Morrisville, Pa.

Offer, for the **SPRING OF 1897**, a Complete Assortment of

EVERGREEN AND DECIDUOUS TREES.

Flowering Shrubs, Grasses, Dahlias, Climbers and Climbing Roses.

Special attention is called to the following.

Chesnuts, large varieties, Numbo and Paragon.
Asparagus Roots, strong 2-year olds, Palmetto, Barr's Mammoth and Conover's.
Strawberry-Raspberry, a Japanese Novelty.
Burbank's Golden Mayberry.
Industry Gooseberries and Fay's Prolific Currants.
Purple-leaved Beech, 4 to 6 feet.
Elms, American and English.
Horse-chestnuts, Lindens and Magnolias.
Maples, Norway, Sugar, Sycamore, Ash-leaved and Silver-leaved. By the thousand, from 6 to 12 or 14 ft.
Oaks, English, Pin, Mossy Cup, Red, Scarlet and Turkey.
Peppers, Carolina and Balsam.

Willows and Weeping Trees, in variety.
Hedge Plants. Evergreen and Deciduous varieties, including 300,000 California Privet, from 1 to 5 feet.
Evergreens, Arbor Vitae, dwarf and tall growing sorts.
Nordmann's Fir, from 1 to 3 feet.
Balsam and European Silver Fir.
Hemlock, Colorado Blue, Norway and White Spruce.
Retinospermas, in variety of all sizes.
Pines, White, Scotch, Austrian and Dwarf.
Evergreen Shrubs, including Mahonias, Hollies and Rhododendrons.
Deciduous Flowering Shrubs. General assortment of various sizes.

DESCRIPTIVE ILLUSTRATED CATALOGUE of 48 pages, containing prices, etc., to be had on application. Correspondence solicited.

Mention American Gardening when you write.

SOW NOW

W. & D.'s Central Park

Lawn Grass

20 lbs. per bus. 25c. qt.; \$1.25 peck; \$4.50 bus.
W. & D.'s New York Market

Peas

25c. qt.; \$1.25 peck; \$4.50 bus.
W. & D.'s Large Flowering

Sweet Peas

10c. oz.; 50c. per lb.

Illustrated Catalogue Free.

WEBER & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, April 13, 11 A.M.

A choice assortment of Roses, in bundles of ten, in ten varieties. A large quantity of well budded Ghent Asaleas, also Hardy Rhododendrons. Spring Bulbs of all kinds will also be offered.

Friday, April 16, 11 A.M.

Roses, Nursery Stock, Gladioli, Tuberoses, Caladiums, 500 Lilium Gigantum, 500 Pancreatum Caribaeum.

At each sale will be offered a choice assortment of house plants, Ficus, Palms, etc., also quantities of plants in flower suitable for Easter.

Goods on view morning of sales. Catalogues free.

Mention American Gardening when you write.

CLEARY & CO., 60 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on

Tuesday, April 13, at 11 A.M., with a complete assortment of Irish Grown Roses, Nursery Stock, Tuberoses, Caladiums, Dahlias, Canna Roots, Gladioli, also Holland grown Roses, Rhododendrons, Asaleas, Viburnum, etc. Also flowering and bedding plants.

Sales every Tuesday and Friday hereafter. Catalogue on application.

Mention American Gardening when you write.

R. M. GARDNER & CO., 199 Fulton Street, NEW YORK.

Will sell every **TUESDAY** and **FRIDAY** at their rooms at 11 a.m., H P. and Standard Roses, a general line of Nursery Stock and Spring Bulbs.

Catalogue on application.

Mention American Gardening when you write.

EXHIBITION.

AT THE ROOMS OF THE
AMERICAN INSTITUTE,

111 to 115 W. 38th Street,

TUESDAY, APRIL 13,

A GRAND EXHIBITION OF

Forced Fruits and Vegetables.

INCLUDING

Grapes, Strawberries, Lettuce, Cucumbers, Mushrooms, Seakale, Asparagus, Radishes and Tomatoes.

Exhibits to be in place by 1 P. M. Meeting 2 P. M.

President, Dr. F. M. HEXAMER,
52 Lafayette Place.

Application for space, and notification of intending exhibits to be made to

JAMES W. WITHERS,

Superintendent of Exhibition.
Box 1607, New York City.

Mention American Gardening when you write.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1607, New York City.

PRIVATE GARDENERS.

We solicit for publication under this heading notes on the work being done by private gardeners, changes in appointment, and all matters of interest to horticulturalists generally.

Auction Sales.

Tuesday, April 13.—Hardy Roses, Standard Roses, Lilacs, Hydrangeas, Nursery Stock, Spring Bulbs, at Elliott's Rooms, New York.

Special sale of Irish Roses, General Nursery Stock, Bulbs, Rhododendrons, Azaleas, etc., at Cleary's Rooms, New York.

Dwarf H.P. and Standard Roses; Azaleas, Paeonies, and Flowering Shrubs, at Gardner's Rooms, New York.

Friday, April 16.—Sales will also be held as indicated above.

Exhibition.

Tuesday, April 13.—Comparative exhibits of tomatoes, radishes, and other forced vegetables and fruit (including grapes, and strawberries), at the American Institute, 111-115 W. 38th Street, New York.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

Mr. G. Bennett, formerly with J. D. Wing, Millbrook, N. Y., is in town looking for a situation.

Mr. R. Peitfield has gone to act as an assistant to Mr. A. Galbraith, Highland Falls, N. Y.

Mr. Max Klockow is now head gardener for Mr. Kaibelsch, Babylon, L. I.

Mr. Michael Cunningham, who was at one time an assistant at W. K. Vanderbilt's place, Islip, L. I., is now gardener at St. Joseph's Convent, Flushing, L. I.

Mr. A. McIntyre, lately gardener to F. R. Washburn, West Harwich, Mass., has been appointed gardener to Charles D. Sias, Esq., Wenham, Mass. Messrs. Lord and Burnham are at present erecting a range of greenhouses on this new estate.

Mr. Thomas Greaves, lately gardener to E. W. Gilmore, at North Easton, Mass., has been appointed head gardener to H. F. Crawford, Esq., Brockton, Mass.

Archibald McIntire has left F. H. Washburn, Esq., of West Harwich, to take charge of the estate of Charles D. Sias, Esq., who has just erected a new house at Wenham.

William Kennedy will take charge of the Gurnee estate, Bar Harbor, Me., this season. He has been at the R. C. McKerson estate at Brewster for many years.

Mr. John Wild, formerly with Mrs. Charles Pratt, Brooklyn, N. Y., has gone to take charge of the orchids of W. B. Dinmore, Staatsburg, N. Y.

James Hamilton has engaged as gardener to Mrs. Masury, Center Moriches, Long Island, N. Y.

D. C. Thompson, who has for some time been assistant to Mr. Mason at Mrs. Pines', Riverdale, New York city, is in town looking for a first assistant's position.

Madison, N. J.

At the next meeting of the Monmouth County Horticultural Society, to be held April 14, Mr. Charles Atkins will lecture on "Mimicry in Orchids." The subject will be profusely illustrated.

Oceanic, N. J.

The first April meeting of the Monmouth County Horticultural Society was held at the rooms of the society on Friday, the 2d inst. Mr. Robert Millican of Seabright read a paper of considerable merit on "The Dahlia as an Exhibition Flower." Mr. William Ewing of Seabright, one of the charter members of the society, delivered his farewell address before leaving Monmouth County. Mr. Ewing has always been one of the most popular members and his loss will be keenly felt. The next meeting will be held at Oceanic on April 16 at 7.30 P. M. G. A. STEELE, Sec.

Orange, N. J.

The Horticultural Society held its regular meeting April 5. Dr. Kitchen for the exhibition committee reported a satisfactory interview with the ladies of the Improvement Society of the Oranges, as to holding a fall show, and promised to report fully at the next regular meeting.

The lecturer of the evening, Mr. A. Herrington, president of the Morris County Society, gave a valuable and interesting talk upon "The Hardy Flowers and How They May be Utilized." The lecture was illustrated by the use of forty colored plates, which showed a succession of bloom from the very earliest spring till the cold frost of the following winter, thus proving that "grandmother's garden" or the herbaceous border has something bright and attractive during the whole of that time. The beauty of planting among the grass and the kinds best adapted thereto were also lengthily dwelt upon.

W. A. Manda of South Orange put up a very interesting and beautiful group of orchids containing 18 kinds, many of which were exceedingly well flowered; he also exhibited a flowering plant of his new double white Wichuraiana hybrid rose.

A few friends gathered together and had a pleasant time paying a high tribute of praise to Mr. Fitzwilliam and wishing him farewell upon the occasion of his leaving to assume his new charge at Rochester, N. Y.

Waltham, Mass.

A fine specimen of *Cattleya amethystoglossa* is now flowering in one of the greenhouses of the Misses Walker. The spikes carry an average of 15 flowers each. Dendrobiums, noble, Wardianum, formosum giganteum are finely flowered. A bench of Hybrid Roses in boxes was yielding a fine crop. Among Carnations, Hector (Scarlet), Nicholson, and William Scott were extra good. Lady Hume Campbell was the Violet most in evidence. It is, however, much paler in color than Marie Louise, and Farquhar. Bulbous stock is largely and finely grown here for the decoration of the Boston house on Beacon street. A house of Black Hamburg Grapes was breaking away strongly. Figs in several varieties cover the back wall. Some of the old houses here are to be pulled down and reconstructed this summer by Messrs. Hitchings & Co., and a new peach house is to be added. Mr. P. Cairns is the head gardener on this fine old estate. W. N. C.

Among Massachusetts Gardeners.

Mr. Dan White, assistant to John Barr at Mrs. B. P. Cheney's, is about to leave to take charge of a newly laid out estate in Wayland, belonging to Francis Shaw, Esq. Mr. William Martin, gardener to N. T. Kidder, Esq., will put up some new glass this summer.

Mr. George Stewart leaves Mr. Kidder and goes to General Lawrence, in Medford, as assistant to Mr. Keith.

Mr. John Falkenhelm will take charge of Miss Ellen Mason's place at Newport, R. I., this spring.

Mr. Tom Greives has left the private gardener's profession and branched out commercially as foreman for Crawford, in Brockton.

Mr. William Bunney succeeds Mr. Tom Greives at the E. W. Gilmore estate in North Easton.

Mr. James Bryden leaves Hon. John Simpkins of Yarmouthport this spring and goes to Bayard Thayer, Esq., of Lancaster. He will be succeeded by John Jeffries; and Alexander Ogg, who has been employed at Mr. J. S. Bailey's, in West Roxbury, will take the place vacated by Mr. Jeffries at Mr. Andrews' estate in Newport.

Mr. D. F. Roy, superintendent of the E. S. Converse estate in Malden, has appointed Mr. Robert Johnson foreman in the greenhouse department. They make a specialty of fancy bedding and their spring stock is now very promising, as are also the nectarine, peach, and grape houses.

Mr. Archie Wagstaff, formerly foreman for Mr. D. F. Roy on the Converse estate, takes charge of Edward Lawrence, Esq.'s, place at Wellesley.

Mr. John Thomas, at Mr. Blake's place, in Hingham, has a fine show of hybrid roses in pots.

Extensive changes have been made in the help at the F. L. Ames estate in North Easton since the death of the late William Robinson. Charles Maynard, who has been for many years with Sander's, England, succeeds Mr. Robinson, and nearly all the assistants' positions have been filled with imported help.

Mr. Kenneth Finlayson, gardener to Dr. C. G. Weld, has been quite ill with diphtheria, but is now improving.

W.

Newport, R. I.

Mr. John Allen, formerly gardener for Mr. I. T. Burdon, is now gardener for Mr. Drexel, who has bought the establishment of Mrs. Fairman Rogers.

J. J. Van Alen is building three new greenhouses near Moreton Park. These will be operated by Mr. Griffin. The houses are almost completed. He is making a specialty of Begonia Vernon for the now famed eunken garden on the place.

Commodore Gerry has purchased the place adjoining that of F. W. Vanderbilt, and is building new greenhouses and making some improvements on the grounds.

John R. Johnson, gardener for Ogden Goelet, has his houses in fine shape. The new range is completed. Particularly noticeable were the vineries, the canes last year (the first year of planting) made a growth of some twenty feet; he pruned them back to eight feet, and then, being so strong and vigorous, he will take a crop of grapes off them this year. His peach, nectarine, and fig houses are also in magnificent condition. All will carry a light crop of fruit the first year after planting. The plant houses are also in first rate shape, his tree ferns being very fine.

James Hill, gardener on the Brooks estate, as usual, has his houses in elegant condition, the orchids, stove and greenhouse plants being grand. The fruit houses show every appearance of bearing a heavy crop of choice fruit. Mr. Hill looks as hale and hearty as ever.

TROY.

The Private Gardener's Position.

Along with the rest, I have read with much interest, Mr. Patrick O'Mara's excellent paper on the "Gardener's Mission in Horticulture," also the letters from various correspondents on the subject since its publication.

Timber Topper's statement, on page 227, would apparently imply that the professional gardener was a veritable dog in the manger. In these times of reduction and economy in private establishments it would seem that a conservative policy is the best for the gardener to follow, keeping a careful eye as to which side the bread is buttered. Nevertheless he is not selfish; if his brother gardener is "out of a job" he is at once on the alert in his behalf, and, if necessary, even his purse and his house are open for use.

The private gardener is a chap that reads his paper carefully and is ever ready for a discussion on the questionable privilege of having to haul ashes out of the boiler pit, run errands, mow the lawn, beat carpets, and at the same time supply choice roses, etc., from the greenhouse (as so many have to do in this country). These and all other subjects, I contend, he is every ready to discourse on privately, but when it comes to airing his views in print, well, for obvious reasons, that is another story. John's employer may read the horticultural papers, or some kind friend bringing to his notice John's literary aspirations, these same might be taken as a personal matter, ending in disaster to John himself. It may be argued that a nom de plume be used, but to my mind this practice is not commendable. While I would not wish to imply that Mr. O'Mara's name, illustrious as it is, added any practical value to his paper, yet I insist that it would not have been read with such widespread interest had it been signed "Timber Topper" or by any other such name.

If I am not mistaken, it is for the reason above specified that the private gardener holds aloof from discussions concerning the relations between himself and his employer, or what might be construed as such.

Considering the precarious nature of his position and the slim chance, if once out,

of securing another suitable situation, is it any wonder that he is willing to let well enough alone? C. BARSON.

Exhibition Schedules, Etc., Received.

Chicago Flower Show.—The premium list for the fall show, to be held Nov. 9 to 13 next, is now before us. An important feature in the schedule is the scale of points by which the judges are to work is given so that their work is much facilitated and competitors know what they are working against. Some of the chief items are interstate competition in chrysanthemums, with the winners in each State to compete against each other again for \$50. For a collection of cut blooms of orchids \$40 are offered, and for twelve blooms of a new rose never before exhibited in this country, a silver cup.

Annapolis Rose Show.—This vigorous institution will hold its tenth exhibition on June 16 and 17. Prizes are offered for the best kept gardens and for a garden of "old-fashioned" flowers. M. P. O'Mara will give an address on garden roses.

New York.—Under the United German Societies of New York a spring fair will be held May 9 to 16 at New Haarlem River Park. This will be a veritable "Folk-fest."

Massachusetts Horticultural Society.—Boston has issued its list of exhibitions for the year as follows:

Rhododendrons, June 8 and 4; Rose and Strawberry, June 22 and 23; Plants and Flowers, Sept. 1 and 2; Fruits and Vegetables, Sept. 30 and Oct. 1; Chrysanthemums, Nov. 2, 3, 4 and 5. Other prize exhibitions yet to come are May 22, June 12, Sept. 11, Sept. 18, Oct. 16, Nov. 20 and every Saturday from June 26 to Aug. 21 inclusive.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c. per bottle. Sold by all Druggists. Testimonials free.

You may be one of those men who do not believe much in farm papers. If so, just send your name and address on a postal card to the *The Rural New Yorker*, New York, for a free sample. You will change your mind about farm papers when you read it. We will send it and AMERICAN GARDENING, both one year for \$1.80 and your money back for *The Rural* if you want it.

Situations Wanted.

SITUATION wanted, gardener, married, no children, age 37, first-class place. John Fraser, 886 Myrtle Ave., Brooklyn, N. Y.

FLORIST and gardener, German-American, small family, wishes care of gentleman's place, understands the growing of vegetables and cut flowers. A. B. C., Flatbush, Brooklyn, N. Y.

HEAD GARDENERS.—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of grapevines, greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 35 & 37 Cortlandt St., New York.

SITUATION wanted by a gardener and grower, 23 years' experience, conversant in all branches of business, especially grapes, roses, miscellaneous cut flowers, palms, orchids, mushrooms, ornamental bedding; would like position where neatness and accuracy are required, can furnish proof. H. N. Birth, care American Gardening.

GARDENERS, farmers, etc.—Employers desiring the services of reliable men to fill positions as above, are invited to correspond with us. On our Register are the names of excellent men whom we have known for a long time. No fee charged to any one.—R. & J. Farquhar & Co. Seedsmen, 16 and 19 South Market St., Boston, Mass.

More Potash

in the fertilizers applied on the farm means larger and better yields of crops, permanent improvement of the soil and

More Money

in the farmer's pocket.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.

HENRI BEAULIEU, Seedman and Florist, Woodhaven, N. Y. Price list free. Mention American Gardening when you write.

THOROUGHbred POULTRY.

Light and Dark Brahmas, Buff Partridge White and Black Cochins, Black Plymouth Rock, White Plymouth Rock, Silver Laced and White Wyandotte, Bronze Turkeys. Send for a large catalogue.

L. B. FREEMAN, Charlotte, Mich.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.



FLORA of JAPAN & CALIFORNIA

Chinese Narcissus, over 100 varieties of Lily Bulbs, Camellias, Palms, etc. HARDY PLANTS, Japan Maples, Iris K., Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan.

Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above.

H. H. SINGER & CO., San Francisco, Cal. (ESTABLISHED 1878).

Mention American Gardening when you write.

100 BEST EVERGREEN SEEDLINGS

delivered free by mail, only \$1. 100 best evergreens 2 to 5 ft. delivered east of Rocky Mts. only \$10. Write for free catalogue and price list a 50 big bargains, selections from complete nursery stock. Cash paid for getting up clubs or to salesmen with or without experience. Address



D. HILL
EVERGREEN SPECIALIST, DUNDEE, ILL.

Mention American Gardening when you write.

ROSES

\$2.00 per doz.; \$20.00 per 100.

Large 3 year old, field-grown plants of Hybrid Perpetual, Hybrid Tea, Moss and Climbing Roses. All the best varieties true to name. Write for catalogue. W. E. WALLACE, Nurseryman, Hartford, Conn.

Mention American Gardening when you write.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*. We cannot undertake to reply by mail.

PLANTS FOR NAME.

(To Palm Beach, Fla.)—2, *Punctatum Aureum*; 3, *Spirale*; 4, *Viridis*; 5, *Irregularis*; 6, *Prince of Wales*; 7, *Hooker's*; 8, *Triumphans*; 9, *Volutum*; 10, *Aucubae-folium*; 11, *Princess of Wales*; 12, possibly *Undulatum*; 14, *Jameai*; 15, *Pictum*; 16, *Challenger*; 18, *Chelsoni*; 19, *Variegatum*; 21, *Parvifolium*; 23, *Diarselli*; 25, *Queen Victoria*; 24, *Trilobum*; 26, *Interruptum*; 27, *Chrysophyllum*; 28, *Eburneum*. The others we do not recognize.

(To Fairmount)—The "bulb" (tuber) is that of *Amorphophallus Rivierei*, the offsets should be removed before planting, but would not cut out any side eyes, as it might injure the bulb. They will probably not throw up stems but form offsets like the one sent. The roots grow from the top of the bulb; the new bulb is formed above them, absorbing the old bulb, thus requiring rather deeper planting than those amateurs indulge in.

(To Hartford)—*Centradenia rosea*, native of Mexico.

VIOLETS FOR FLOWER NEXT WINTER.

(I have violets in a cold frame; how shall I manage them during the summer to have them flower next winter?—J. C.)

—Make cuttings now, and grow the young plants on, and plant in the fall.

MANURE ASHES.

(Are fresh manure ashes of any value as a fertilizer?—W. B., Neb.)

—Certainly manure ash has some fertilizing value. It contains a little potash and phosphoric acid, but of course the nitrogen has been lost. Thus it would not be of great use as a "forcing" manure for green crops.

THE BEST STRAWBERRY.

(What is the best strawberry—either early or late—for private use and preserving. I do not care about size, but want good quality. It is to be grown near Philadelphia. If it be pitillate, state best pollenizer for it.—M. ROBINSON.)

—To select only one strawberry is rather a difficult matter. We would prefer to recommend three. Certainly try the new varieties, *Bismarck* and *Clyde*, and among the old ones, *Sharpless*. All three have perfect flowers. If your soil is rich and deep *Parker Earle* is a grand strawberry, and may be substituted for *Sharpless*, unless time is an object, the last-named being a late variety. In fact, neither of those named are early kinds. On heavy soil *Leader* is a wonder in earliness.

CHRYSANTHEMUMS.

(To M. Robinson.)—*Pompon Chrysanthemums* may be pinched back several times between now and July, so as to induce a branching habit. The chief beauty of the *pompon* is in the cluster, not in the individual bloom. Plants will bloom outside until severe frost sets in.

PREMIUM COSMOS.

(To M. R., Alken, S. C.)—Our premiums are offered only for new subscriptions, as announced, and we cannot supply them on any other terms. If you desire to get the seeds or plants otherwise you must purchase direct from those offering such. See advertising columns.

PRUNING GRAPE VINES.

(Is it now too late to prune grape vines?—REV. M. H. B.)

—The time as to when it is safe or not to prune grape vines, depends entirely on the condition of growth and the flow of sap. Generally speaking, it is now dangerously late to do the pruning.

OUR SCHEME FOR 1897.

(To Rev. M. H. B.)—In reply to your question, we think if you compare the numbers of this year with those of the corresponding period of last year, you will see that fruits and vegetables are receiving considerably more attention now. At all events, it is our intention that they should.

WEEVILS IN SEEDS.

(Would Peas and Beans which are full of weevils grow if planted in the usual way?—REV. M. H. B.)

—No doubt a certain proportion of the seed would germinate, but results would be very uncertain, and plants of diminished vigor would come up. The whole matter rests on just how badly the seeds have been damaged. We should advise the purchase of new seed; it is cheap enough.

CARING FOR PALMS.

(Will you kindly tell me how to make palms grow; whether they require a rich soil and very much sun; how often should they be watered?—X.)

—Palms require but little soil, a moderate amount of water, a warm position, but not

exposed to full sunshine, for a subdued light makes a better color on the leaves.

CULTIVATING FIELD CORN.

(Should field corn be cultivated by a cultivator, or by a double shovel plow? Are there any stages of field corn growth where you would use a double shovel plow?—H. C. W.)

—We prefer to use the cultivator for this crop. At the last cultivating, or just before the corn is too large to go through, the double plow may be used with advantage.

TO GROW CALADIUM ESCULENTUM.

(What treatment of *Caladium esculentum* will insure the largest leaves; kind of soil; depth of planting; situation, whether in full sunlight or partial shade. Would it aid to remove the new side shoots; and if so, how can it be done without injury to the bulb? Is there any danger of one watering? If not, instead of planting in the border would anything be gained by sinking a tub or barrel and filling with soil and planting in that and keeping it saturated with water?—INQUIRE.)

—*Caladium esculentum* revels in a rich light soil in an exposed sunny position, but is accommodating enough to do fairly well in less favored positions. It makes but little difference whether the side shoots be removed or not, if the main tuber is healthy and strong. Plant moderately deep; water copiously from time to time. Nothing would be gained by tubbing or potting to sink in the border; sometimes this is done to sink in the lawn.

DATURAS.

(How should *Daturas* be treated.—C. P., Ohio.)

—*Daturas* may be planted in any rich garden soil; they like lots of water and sunshine.

ARMSTRONG & McKELVY
Pittsburgh.
BEYMER-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR
Cincinnati.
KOKSTEIN
ATLANTIC
BRADLEY
BROOKLYN
JEWETT
ULSTER
UNION
SOUTHERN
SHIPMAN
COLLIER
MISSOURI
RED SEAL
SOUTHERN
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALEM
Salem, Mass.
CORNELL
Buffalo.
KENTUCKY
Louisville.

WHITE LEAD is like a great many other articles offered for sale; some good, some bad. (See list of the brands which are genuine, or good.) They are made by the "old Dutch" process of slow corrosion. Avoid getting the other sort by making sure of the brand.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write

LORD & BURNHAM CO., HORTICULTURAL ARCHITECTS AND BUILDERS STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York
Mention paper

WHOLESALE MARKET REPORT

New York.

The general tone of the fruit and vegetable market is excellent; stock of all kinds, especially vegetables, is abundant, but clears out freely at fairly remunerative prices.

Hothouse strawberries are falling in price a little owing to the full supply of Southern berries now in, prices this week are down to \$3 per quart for No. 1, and 40c. for No. 2.

Cucumbers are moving very freely at figures varying from 90c. per dozen to \$1.12 for No. 1. Mushrooms are selling much better than they were; prices this week run from 30c. to 50c. per lb.

Hothouse tomatoes 30c. per lb.

Radishes \$1.50 to \$2.50 per 100 bundles.

Hothouse lettuce are hardly as stiff this week as before reported, 75c. per dozen being the average top figure for fancy unless for a few very special heads.

Asparagus is stiffening, sales being made for special stock from \$3.50 to \$5.00 per dozen bunches.

Bermuda parsley per box, \$1.00 to \$1.25. Romaine, \$1.25 per 24 heads; onions, No. 1, per box, \$2.35 to \$2.50. No. 2, \$2.00.

Apples.
Baldwin, w'n N. Y. gd to fcy, per bbl. 1 62 1 75
Russet, State, per barrel..... 1 50 1 75
Greening, w'n N. Y., prime, per bbl. 1 50 1 50
—W'n N. Y., usual lots..... 1 12 1 25
Strawberries.

Fla., refrigerator fght, fcy, per quart 25 30
Fla., ice boxes, pme to fcy, per quart 25 28
Fla., ice boxes, common to fair..... 15 16
Vegetables.

Asparagus, choice, per doz. bunches..... 05 00

—Fair to prime, per doz. bunches..... 00 04 00

Beets, Fla., new, per bush. crate..... 75 01 00

—Charleston, per 100 bunches..... 4 00 06 00

Cabbages, Charleston, per bbl. crate..... 1 75 02 25

—Florida, per barrel crate..... 1 50 02 00

—L. I., per 100..... 2 00 04 00

Celery, California, per dozen stalks..... 50 01 00

—Fla., large to extra, doz. stalks..... 1 00 01 25

Cucumbers, Eastern, per dozen..... 1 00 01 12

Kale, Norfolk Scotch, per bbl..... 50 02 60

—Norfolk Sprouts, per barrel..... 50 02 60

Lettuce, Fla., prime, per 1/2 bbl. basket..... 2 50 01 50

—Charleston, per bush. basket..... 1 25 01 50

—N. C., per barrel..... 3 00 04 00

—Eastern, per dozen..... 75 01 27

Onions, Eastern white, per bbl..... 6 00 03 00

—Eastern red, per bbl..... 4 50 05 00

—Eastern, yellow, per bbl..... 4 50 05 00

Peppers, Florida, per carrier..... 3 00 04 00

Peas, Ga., per bush. crate or basket..... 2 50 02 00

—Charleston, per basket..... 3 00 02 50

Radishes, Norfolk, per basket..... 1 00 01 50

Spinach, Norfolk, per bbl..... 75 02 00

Squash, Florida, per bushel crate..... 1 25 01 75

Tomatoes, Fla., pme to fcy, per crier..... 4 00 05 00

—Key West, per carrier..... 1 50 03 00

Turnips, Canada, Russia, per bbl..... 60 02 65

Philadelphia.

All kinds of both fruit and vegetables have been cleaned up better this past week, buyers having been more plentiful.

Pansy plants are now being received from the Jersey growers, and are selling at \$4.00 per 100.

Apples have sold much better, and prices have advanced over those of last week.

Baldwins, fancy, per bbl..... 1 65 01 75

—Fair, per bbl..... 1 25 01 50

Ben Davis, fancy, per bbl..... 1 75 02 00

Strawberries, Florida, are more plentiful, but not of improved quality; now selling 25c. per qt.

Lettuce has been very scarce, and was held at \$5.00 to \$6.00 per bbl. on Monday.

Egg plant, Fla., has also been held firm at \$3.50 per crate, finding few buyers at this price.

New cabbage has improved, and is much more in demand than it was last week; the quality is also better.

Onions are much firmer, but owing to advanced prices sales have dropped off the last few days.

Tomatoes are scarce and have been in demand; prices firm.

Mushrooms are also becoming scarcer; prices have advanced to 35c to 40c. per lb., and all stock has been sold out at this figure.

Asparagus, per doz bunches..... 3 00 04 00

Beets, Fla., per bush. basket..... 75 01 00

—Charleston, per 100 bunches..... 3 50 02 00

Cabbages, Fla., per bbl. crate..... 1 75 02 00

—Charleston, per bbl. crate..... 1 80 02 25

Celery, Fla., per doz. stalks..... 35 02 45

—New Orleans, per doz. stalks..... 50 02 75

Kale, Norfolk, per bbl..... 45 02 60

Lettuce, Fla., 1/2 bbl. basket..... 2 00 03 00

—Fla., fair to good..... 1 25 01 50

—N. C., per bbl..... 4 50 05 00

Onions, Eastern white, per bbl..... 6 00 03 00

—Eastern, yellow, per bbl..... 4 50 05 00

—Eastern, red, per bbl..... 4 50 05 00

Peas, Fla., per bushel box..... 1 25 01 50

Radishes, Charleston, red per 100 bchs..... 50 02 00

—Charleston, white, per 100 bunches..... 3 00 02 50

String Beans, Fla., per crate..... 1 50 01 75

Spinach, Norfolk, per bbl..... 1 00 01 25

Tomatoes, Fla., prime, per crate..... 3 25 04 00

—Fla., fair, per crate..... 2 75 03 00

—Hothouse, per lb..... 25 02 40

Boston, Mass.

There was a very good demand for hothouse cucumbers all last week at \$3@10 per hundred; a little quieter at time of writing, but that is not considered of any importance. Hothouse lettuce finds a quick sale at \$1 per dozen. Mushrooms are a little slow, moving at 75c. per pound.

New beets are quick at \$2.25@2.50 per dozen bunches.

Florida cabbage \$1.50@2.00 per crate, with old stock moving freely at 65c. per bbl., or about \$15 per ton; red cabbage \$1.75 per bbl. Hubbard squash, nearby, limited demand, \$45@50 per ton.

Massachusetts onions already cornered, \$6.50 per bbl.; estimated about 500 bbls. still in the "Corner"; Bermuda onions, \$2.50 per crate. Romaine finds slow sale at \$1@1.25 a dozen heads.

Celery—Some Florida stock here; fine stock quick sale at \$6 a dozen; home stock all gone.

Virginia spinach \$1 per bbl.; kale 50c. Old carrots or beets \$1.50 per bbl; turnips \$1@1.25 a bbl.; parsnips \$1 a bushel.

White or red radishes, new, 50c. a dozen.

Bermuda potatoes, little scarce, \$10 a bbl; Havana, \$8; choice Maine, 40c. a bushel; readers will see that the demand for new potatoes must be somewhat limited.

Dandelion greens, \$1 per bushel; beet greens, \$1.25; Boston likes greens, or what is sometimes known as salads; mint, 75c. per dozen bunches.

Rhubarb pies are not sought after with apples so plenty, therefore hothouse stock is easier, 8@9c. a lb., with Western little firmer, at 6@6c. a lb.

Asparagus, light receipts, much better demand, \$4.50@6 a dozen.

Leeks, 75c. a dozen bunches; artichokes, \$1.50 @2.00 a bushel; oyster plant, \$1 a dozen bunches; green limes, \$1.00@1.50 a hundred; Florida beans, \$2.50@3.00 a bushel, with quite good sale; egg plant about gone, some ordinary stock offering \$1.50 a dozen.

Home-grown horse radish, large roots, 8@10c. a lb.; Western, 5c. a lb.; parsley, \$1 a bushel. Florida strawberries, 35c to 40c. a quart; much better stock offered this week, more even in quality and also lighter supply.

No blackberries here; none wanted. Hothouse tomatoes, 35c. a lb.; choice Florida stock, \$4.00@5.00 six basket carrier.

Choice repacked Baldwins or Russets, \$1.25 @1.50; choice Spies, \$1.75@2.00, with some gilt-edge double extra assorted Spies, \$3.00@4.00 a barrel.

BIRDS AND INSECTS.

At a recent meeting of the Horticultural Society in Springfield (Mass.), W. W. Colburn spoke of several phases of bird life. Birds are the protection of our farms and gardens, and there are different forms of insect life on which they feed. Robins, sparrows and thrushes work on the ground. The woodpecker family works in the trees and the little nut-hatch works in the bark. With his little creepers the nut-hatch runs around the tree and up and down it at a lively rate. The chickadee works on the twigs and leaves and so all over the tree the insects are eaten. The flycatchers and the king bird take the adult insect on the wing. Asked why the bluebird was so much more rare than it used to be Mr. Colburn replied that it was because of the cold winter down South two years ago, which killed off a great number. Birds were killed by flying against electric wires, lighthouses and window glass. The aspect is serious as threatening the reducing the numbers of birds, and they are also driven from civilization by the cutting down of bushes and groves near the outskirts of towns.

A CHAPTER ON COLDS

SIMPLE PRECAUTIONS THAT MAY PREVENT SERIOUS CONSEQUENCES.

The Danger of Neglecting a "Common Cold." Serious and Often Fatal Maladies may Result from Carelessness.

From the News, Harrisonburg, La.

In most instances colds are the result of imprudence or a lack of forethought. Even in cases where a sudden change in the weather or an unavoidable exposure is responsible for the first slight cold, fresh and more severe colds may be avoided by observing a little care. But "a mere cold" is such a common thing and causes so little inconvenience that notwithstanding all previous experiences we neglect to take the most simple precautions, in the way of wearing suitable clothing, the avoidance of draughts, etc.

One should always bear in mind the necessity of exercising a constant vigilance to avoid catching cold. When the temperature in the house is higher than that out of doors, never go out without putting on an additional wrap. Never sit in a cold room even though you do not feel chilly. And it is better to suffer a little discomfort from wearing heavy underclothing than to run the risk of a chill.

The following letter from a lady in Sicily Island, La., graphically illustrates the distressing consequences that are liable to follow a simple cold.

"In February, 1896, I had a severe cold which settled on my lungs, resulting in a serious cough. My appetite failed, and I became so weak that I was scarcely able to walk across the room. I weighed only ninety-four pounds, and had given up all hope of recovery when I happened to read an article in a newspaper describing some

cures effected by Dr. Williams' Pink Pills and concluded to try them.

"I commenced using them, and before I had taken half a box I felt like a new creature. My appetite was restored, my cough grew less, and I was able to sleep soundly at night, which I had been unable to do for months before.

"After taking two boxes of the pills I was weighed again and to my astonishment my weight was 113 pounds, a gain of 19 pounds. Previous to taking the pills, I had suffered with cold hands and feet, but now have no trouble whatever from that source.

"I can truly say I am now in better health than I have been for years. The effect of the Pink Pills is wonderful, and I can recommend them in all cases of debility and weakness.

MRS. A. L. STAFFORD."

Dr. Williams' Pink Pills contain, in a condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effect of la grippe, palpitation of the heart, pale and swollen complexions, all forms of weakness either in male or female. Pink Pills are sold by all dealers, or will be sent post paid on receipt of price, 50 cents a box or six boxes for \$2.50, by addressing Dr. Williams' Medicine Company, Schenectady, N. Y.

OUR PREMIUMS ARE OFFERED with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

LORD PENZANCE'S NEW HYBRID SWEET BRIARS.

Quite a New Feature in Roses.

The foliage of every one of them is as sweetly scented as the old-fashioned Sweet Briar that grew in our grand-mothers' gardens.

The Sweet Briar or Egiantine, is acknowledged by all to possess one of the sweetest perfumes that nature has provided and its delicious scent is the object for which it is usually cultivated. These new varieties, now for the first time placed in commerce, are vast improvements upon the old sorts. They are hybrids (obtained by the Right Hon. Lord Penzance) between the common Sweet Briar and various old-fashioned garden Roses and are possessed of many advantages.

The flowers are borne in wondrous profusion, and vary in color from white, through several shades of pink, to very dark red or crimson.

The plants are perfectly hardy even in very bleak and exposed positions.

For vigor of growth there is scarcely anything in the rose world to equal them. Plants three years old have now many shoots on them that rise to the height of twelve feet. These, with a slightly outward bend, and clothed with flowers of exquisite tints, produce a gorgeous effect.

The buds are the most graceful, sweet and delicate objects imaginable.

The flowers are single or semi-double, and this adds lightness and elegance to their beauty.

After the flowers are over, they are followed by bright scarlet seed pods or "hips" in great numbers, which, nestling among the deep green, scented foliage, make the plant delightfully ornamental till quite late in the autumn.

No garden will be esteemed complete which does not possess a group of Hybrid Sweet Briars. They are so sweetly scented, so beautiful in color, so hardy and free from disease and the attacks of insects, as to make them eagerly sought after by all the knowing ones.

This is Our Offer. For one NEW subscription to American Gardening at \$1.00, we will forward you, all charges prepaid, your choice of two of the three following varieties:
Meg Merrilies, Red.
Anne of Geierstein, Pink.
Brenda, Blush White.

The above to be well-established plants out of 2½ inch pots.

The collection of Three above Plants for one NEW SUBSCRIPTION to American Gardening at \$1.25.

These plants will be forwarded to our subscribers direct from the growers, eminently responsible people, who guarantee them to be true to name and color.

Plants ready for shipment May 1. Orders booked now, however, owing to the expected enormous demand.

OUR GREATEST 1897 PREMIUM

The Wonderful New Climbing Rose

Yellow Rambler (Aglaia)

A worthy COMPANION to the well-known Crimson Rambler.
The Hardest Yellow Climbing Rose Ever Introduced.

Yellow Rambler bears its flowers in immense clusters, often as many as one hundred and fifty blossoms in a bunch, the trusses being of handsome pyramidal shape.



YELLOW RAMBLER AS A CLIMBER.

Yellow Rambler holds its blooms from three to four weeks without fading; a large bush in full bloom is one of the most beautiful sights imaginable.

Yellow Rambler is a clear decided yellow, in marked contrast to many roses so described, but which have really only a yellow tinge.

Yellow Rambler is very vigorous; well-established plants often making shoots eight to ten feet in height in a single season.

Yellow Rambler represents the triumph of the century in the hybridizing art, and is the most valuable introduction in recent years.

Yellow Rambler is very sweetly scented.

Yellow Rambler combines the climbing habit and decided yellow color with hardiness.

Yellow Rambler will withstand, without protection, a zero temperature; with protection it will thrive where any other rose will.

Yellow Rambler is thus adapted to successful culture in nearly all of the northern parts of the United States.

Yellow Rambler is absolutely NEW on the market and will prove the sensation of 1897!

Yellow Rambler premiums will be shipped direct to our subscribers from the introducers, one of the largest and most reliable firms of nurserymen in the country.

All stock is guaranteed pure and will be shipped in good condition.

DON'T YOU WANT A YELLOW RAMBLER ROSE?

You Can Earn One in Ten Minutes!

READ OUR OFFER. We will forward, all charges prepaid, one well-established plant of **Yellow Rambler Rose**, from 2½ inch pot, for ONE NEW SUBSCRIPTION to American Gardening at \$1.00, or six plants for five NEW subscriptions at \$1.00 each.

The same plant will not be sold in 1897 for less than 50 cents. Plants will be shipped on and after March 15th. It is expected that the demand for this New Rose will be phenomenal, and we advise those of our readers who want a plant to be early with their order.

Offer No. 45.

COLLECTION OF ROSES.

From Maryland. Strong 2-inch pot grown



plants. Delivery on and after April 1, postpaid.

One Crimson Rambler

One Perle
One Safrano
One Mme. Camille
One Marie Guillot
One Iphigene
One Nridesmaid

One Meteor
One Papa Gentier
One Hermosa
One La France
One Bride

Surely the good things of this earth are open to everyone who exhibits a little energy. Realize you can obtain the above set of Twelve Magnificent Roses as a premium for one new subscription to AMERICAN GARDENING, and that it will not take you more than a few minutes' work to accomplish this, then send and get your reward.

Offer No. 41.

GREENVILLE APPLE.

(Downing's Winter Maiden Blush).

For one new subscription we will send by express, receiver to pay charges, Four 3-Year-Old Plants.



Read the description: This fine apple was produced from seed of the Fall Maiden Blush by Jason Downing, in Darke County, O., in the Spring of 1774. It made a vigorous growth, and at the age of 7 years it bore some excellent fruit, from which time it has produced fruit annually. The originator states that in 1888, at the age of 14 years from seed, it yielded 15 bushels of picked apples. Grower has been noticing the behavior of this apple for the past 10 years, growing it both in nursery and orchard, and from the weight of testimony in its favor, has decided to grow it in quantities to supply the increased demand. Description: Fruit large, irregular, sometimes flattened, and at other times slightly elongated, inclining to conic; generally angular, skin light waxen yellow, with a bright red cheek in the sun; stock short, usually projecting half as high as cavity, though in a few specimens it projects to its surface and beyond, inserted in a deep cavity, often surrounded with russet; calyx small, basin of moderate depth, flesh yellowish, crisp, tender, juicy, with a very pleasant, mild, sub-acid flavor. It has a fragrant odor; quality very good. Season, December to April. Tree a good grower and bearer.

Offer No. 53.

HARDY EVERGREENS.



Your choice of any one of the below offers of Hardy Evergreens for one NEW subscription. This is a great big offer for the money, and invaluable to any one wishing to set out a young plantation. Plants from Illinois.

- A-50 Scotch Pine, 6 inches.
- B-50 White Pine, 4 inches.
- C-50 Norway Spruce, 3 to 4 inches.
- D-50 American Arbor Vitae, 4 inches.
- E-25 Red Cedar, 4 inches.
- F-25 Hemlock Spruce, 4 inches.
- G-15 Blue Spruce, 4 inches.
- H-25 Douglas Spruce, 4 inches.
- J-15 Picea Concolor, 4 inches.

Offer No. 58.

CHRYSANTHEMUMS

This collection comprises a very fine assortment of eleven standard large flowering varieties, from 2 1/2-inch pots, good plants, and will be sent, postpaid, for one new subscription; plants grown in Maryland. Ready for delivery on and after April 15. These plants will do well outdoors in mild climate, whilst in more exposed sections to bring them to full maturity in the fall they should have partial shelter.

Mdme. F. Bergmann.—The earliest of all large varieties; color white, of great excellence.
Ivory.—A popular favorite; very dwarf and free flowering.
Miss Minnie Wanamaker.—Pure white Japanese; one of the standard varieties.
Golden Wedding.—The most exquisite yellow Japanese extant.
Eugene Dailedouze.—Monster flowers; yellow Japanese.
W. H. Lincoln.—The champion late flowering yellow; a grand variety.
Col. W. B. Smith.—Japanese incurved bronze.
Mrs. J. G. Whilldin.—Earliest of the Japanese yellows. In flower same time as Mdme. F. Bergmann, Oct. 4 to 7.
V. H. Hallock.—Color rosy pearl; Japanese.
Maud Dean.—The most charming pink Japanese ever introduced; a good market variety.
Cullingfordii.—A reflexed variety of good reputation; color deepest crimson.

Offer No. 61.

COLLECTION OF VEGETABLE SEEDS.



true to name, and assured the grower will fill this order to your very complete satisfaction.

- | | |
|-----------------------|----------------------|
| Beet, Eclipse. | Parasip. Long |
| Bean, Bush Refugee. | Smooth. |
| Cabbage. Premium | Peas, Alaska. |
| Flat Dutch. | Radish, White Tipped |
| Carrot, Henderson's | Turnip. |
| Intermediate. | Spinach, Thick |
| Celery, Henderson's | Leaved. |
| 1/2 Dwarf. | Squash, Bush Crook |
| Corn, Crosby. | Neck, Yellow. |
| Cucumber, White | Squash, Boston Mar- |
| Spine. | row. |
| Lettuce, Tennis Ball. | Tomato, Early Ruby. |
| Musk Melon, New | Burpee's Bush |
| Hackensack. | Lima. |

Offer No. 46.

THE CELEBRATED

GREEN MOUNTAIN GRAPE

One 2 or 3 year vine and one 1 year vine; two vines in all. Sent, postpaid, for one new subscription.



The Celebrated Green Mountain Grape is fast coming to the front and is bound to stay. It is acknowledged to be the earliest good grape on the market. It is the most delicate and delicious grape grown out of doors. It is a strong-growing, healthy vine, an enormous and early bearer, with well shouldered and handsome bunches.

No one grape possesses so many merits as the Green Mountain. The firm making this offer are headquarters for this vine and have over an acre out as a vineyard.

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE

CHRYSANTHEMUMS

NEWEST, EARLIEST, BEST.

In Splendid Assortment of Varieties,



Forms, Substance and Color.

Mrs. Higginbotham. Best of all Ostrich Plumes.
Gloriana. The pretty twisted petalled yellow.
Marie Louise. A grand white.
Pitcher and Mauda. A variety of two colors.
Kate Brown. Earliest and best for the garden.
Pres. Smith. A robust pink.
Silver Cloud. Pale salmon.
G. W. Childs. Finest of the reds.
Major Bonaffon. The best yellow.
Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

OUR PREMIUMS ARE OFFERED

with a view to interesting present subscribers to obtain them to obtain the new subscriber and retain the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. New names sent in direct are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

Offer No. 1.

STRAWBERRIES

Your choice of 50 plants in any two varieties below mentioned, 25 of each. Sent postpaid for one new subscription. Plants guaranteed to arrive in good condition. Plants grown in New York. Order by Offer No. and Letter.

A Beder Wood (B)	J Jessie (B)
B Bubach (P)	K Haverland (P)
C Crescent (P)	L Michel's Early (B)
D Chas. Downing (B)	M Lovett (B)
E Cumberland (B)	O Sharpless (B)
F Eureka (P)	P Warfield (P)
G Gandy (B)	R Wilson (B)

H Greenville (P)

Grower states: "I only grow the varieties I find the best for all purposes; many hundreds offer no improvement on the standard sorts now in use. Two of the finest varieties for family use are Greenville and Beder Wood, or Bubach and Beder Wood."

Offer No. 3.

STRAWBERRIES

Plants raised in Ohio. This was one of our most taking offers in 1896, and we hope to see its success duplicated this year.

No. A—50 Brandywine (B)
No. B—50 Staples (B)
No. C—50 Cyclone (B)
No. D—50 Marshall (B)
No. E—50 Greenville (P)
No. F—12 plants each of Brandywine, Staples, Cyclone, Marshall and Greenville. In all 60 plants.

For one new subscription, your selection of any one of the above offers will be sent postpaid. Order by Offer No. and Letter.

If the plants are ordered by express, receiver to pay charges, the grower will DOUBLE the number of plants above offered.

A book on transplanting and caring for all kinds of plants, free with each order.

Offer No. 4.

STRAWBERRIES

Grown in Michigan. Any one of these three collections will be sent postpaid for one new subscription:

Collection A.

12 Clyde (B) 6 Glen Mary (B)
12 Wm Belt (B) 12 Enormous (P)

Collection B.

12 Brandywine (B) 12 Mary (P)
12 Satisfaction 12 Marshall (B)

Collection C.



One hundred (100) plants of the following varieties, not less than 25 plants of one kind: Brandywine, Beder Wood, Blisel, Barton's Eclipse, Cyclone, Crescent, Columbian, Eleanor, Gandy, Greenville, Gov. Hoard, Haverland, Iowa Beauty, Jessie, Lovett, Muskingum, Michel's Early, Parker Earle, Princeton Chief, Princess, Staples, Sherman, Saunders, Smelter's Early, Tennessee Prolific, Van Deman, Warfield, Wilton and Woolverton.

Plants will be large, well rooted, true to name, and guaranteed to reach their destination in good growing condition. Orders filled soon as spring opens up.

Offer No. 6.

STRAWBERRIES

15 Plants Marshall (B) and
15 " Brandywine (B)

By mail, postpaid, for One New subscription. This collection can be implicitly relied upon as being true to name and of the very best grade of stock. Raised in New York.

Offer No. 7.

STRAWBERRIES

12 Ima (P) New.....50c.
(A new seedling of great promise.)
12 Cumberland (B).....35c.
12 Dayton (B).....35c.
12 Gandy (B).....35c.

This entire collection of 48 plants, valued at \$1.25, will be sent, postpaid, for one NEW subscription to AMERICAN GARDENING. Plants raised in Ohio.

Introducer's Description of Ima.—"A seedling of great merit, and a berry which, having carefully watched for the past four years, we are now convinced deserves to be enrolled among the worthy members of the strawberry family. In ripening it is about midway between the early and late varieties. It is a long pointed berry. It will ripen quickly and perfectly all over. In color, a beautiful bright red, and in size equals the Crescent or Warfield. It is a strong grower and as large a producer as any variety we have ever fruited. To sum up its meritorious points, it is perfect in color, shape, and flavor; a good shipping berry of large size and very fruitful. A profitable berry for the fruit grower to raise."



and very fruitful. A profitable berry for the fruit grower to raise."

Offer No. 16.

STRAWBERRIES

75 Plants Greenville (P)

Raised in Ohio. Mailed, postpaid, to any address for One New Subscription.

Berries of large size, good quality, medium texture, very productive, season medium to late, color very even and fine, flowers pistillate, plants very vigorous and free from rust. A first-class market berry and good enough for home use.

Offer No. 18.

COLLECTION OF 125 STRAWBERRIES

Good plants and named. Delivery postpaid, on and after April 1. Plants raised in Maryland.

Meek's Early (B.)
Baltimore.
Sharpless (B.)
Levanth.
Kentucky Late.

Grower says: Kentucky Late is a berry that is largely grown here for market and shipping purposes, coming in after the glut of other varieties is over; it is a very late berry, extending the season sometimes two weeks.

Levanth, very large, vigorous grower, suitable for family use where an extra-sized berry is looked for; fruit rather tender.

Offer No. 44.

LOUDON RED RASPBERRY.

Five (5) Plants for one new subscription at \$1.00.

This Red Raspberry is pronounced by Mr. Thayer and other leading horticulturists as the best of all reds for the East and West. It was originated by F. W. Loudon, of Wisconsin, originator of Jessie Strawberry.

Offer No. 5.

STRAWBERRIES

Your choice of fifty (50) plants, in two varieties, 25 of each; or 50 of any one variety. Free by mail for one NEW subscription.

A.—25 Brandywine	H.—25 Tennessee
B.—25 Murray's Extra Early (P)	Prolific (B)
C.—25 Michel's Early	I.—25 Cyclone (B)
D.—25 Lovett (B)	J.—25 Blisel (P)
E.—25 Isabella (B)	K.—25 Greenville
F.—25 Rio (B)	(P)
G.—25 Lady Thompson (B)	L.—25 Sunnyside (P)
	M.—25 Weston (P)
	N.—25 Staples (B)

Order by Offer No. and Letter.

The above collection is a good one, and are all standard sorts, embracing the earliest and latest varieties. All nice plants and true to name. Raised in Virginia.

Rio is a fancy berry for early, and one of the best shippers; planted beside Blisel they make a splendid variety to ship together.

Offer No. 15.

STRAWBERRIES

25 Brandywine (B)
25 Staples (B)

This collection will be sent postpaid to any address in the United States for one new subscription. Guaranteed to reach customers in good condition. Plants are extra rooted, and positively true to name. Will be mailed at any time after April 10. Plants raised in Ohio.

Offer No. 13.

STRAWBERRIES

Below mentioned collection of 36 Fine Plants will be sent, postpaid, for one new subscription. Grown in Maine.

New Seedling No. 4, 12 plants.
12 plants of the celebrated Brandywine,

And your choice of 12 plants of any one of the following most popular standards: Bubach, Haverland, Warfield, Beverly, Parker Earle, Lovett, Princeton Chief.

Off Seedling No. 4, grower says: This is of exceedingly fine quality—the best of anything I have ever tasted, and so say they all who have sampled it. Good form, medium size, very productive, and a most remarkably strong and healthy grower. An A family berry, and a grand one for a nearby fancy market that appreciates quality. It has a pistillate blossom. Those who avail themselves of the present opportunity to procure this grand berry will be among the wise as, in the course of two years' time, it is likely to be introduced under name at \$2 per dozen.



Grower offers 36 plants in all, in three varieties packed in the best manner, for delivery in April or May, and says: These plants of standard varieties must not be confounded with the common commercial article, but comprise carefully selected stock that has been built up by an attentive selection of the best individual plants each year, for five consecutive years, by one of the most noted growers of fancy strawberries in the Eastern States.

These offers will not appear again this season.

Offer No. 21.

STRAWBERRIES

Your choice of twenty-four (24) plants in two varieties, twelve (12) of each, or 25 of any one. Free by mail for one NEW subscription. Raised in Virginia.

12 Mary (P)	12 Aroma (B)
12 Edith (P)	12 Pride of Cumberland (B)
12 Splendid (B)	12 H. W. Beecher (B)
12 Enormous (P)	
12 Wm. Belt (B)	

The above comprise some of the largest berries in cultivation, particularly Edith. These are all nice plants and true to name.

Offer No. 26.

STRAWBERRIES

Raised in Pennsylvania. Subscriber's choice of any one of these varieties sent postpaid for one new subscription. Order by Offer No. and Letter.

A-15 Glen Mary (P)	I-20 Ideal (B)
B-15 Clyde (B)	J-20 Oriole (P)
C-25 Michigan (B)	K-20 Howell's No. 2
D-25 Wm. Belt (B)	L-10 Plow City (B)
E-25 Champion of England (B)	M-60 Brandywine
F-25 Equinox	N-60 Enormous (P)
G-25 Sparta (B)	O-60 Bisel (P)
H-25 Murray	P-60 Staples (B)
	Q-35 Gertrude

All plants to be freshly dug and well packed in moss; all inferior plants discarded and only the best sent.

Offer No. 9.

STRAWBERRIES

For One New Subscription at \$1.00. Plants raised in Indiana. Order by Offer No. and Letter.

A.—Postpaid, six plants Ridgeway.

B.—Postpaid, three plants Ridgeway, three plants Tennyson, three plants No. 1000, six plants Parker Earle.

C.—Postpaid, three plants Ridgeway and one dozen plants, one variety. Your selection from this list: Brandywine, Clyde, Annie Laurie, Jersey Queen, Aroma, Moore's Prolific, Mary, Premium, Berlin, Tubbs, Parker Earle, Holland, Gen. Putnam, Dew, Columbian, Tennessee Prolific, Lady Thompson.

D.—Postpaid, three dozen plants, not less than one dozen of a kind, any variety named in C, the Ridgeway excepted.

E.—By express, at purchaser's expense, three plants Ridgeway, and 100 plants, not more than two varieties. Your selection from this list: Brandywine, Clyde, Dew, Holland, Gen. Putnam, Jersey Queen, Columbian, Lady Thompson, Tennessee Prolific, Annie Laurie, Staples, Parker Earle, Splendid or Isabella.

This is the first season the Ridgeway will be placed on the market, consequently our readers are given an opportunity to be among the first in the cultivation of the promising berry. Description is as follows:

Ridgeway.—Plant large and stocky, possessing the ability to make a large number of strong, healthy plants. Leaf large, broad, heavy and dark green in color. Blossom perfect, a good pollinizer for pistillate varieties, as it remains in bloom for a long time, an ideal plant.

Berry large to very large, the typical form nearly round, largest specimens broadly ovate, but always smooth. Color, as it grows at Recky Glen, bright glossy crimson, with golden seeds. Firm for so large a berry, and will stand shipping to distant market, except in a very wet time. Quality as good as the best, an almost ideal berry, one that will command fancy prices on any market or suit the most exacting grower, who wishes the very best for his own use and pleasure.

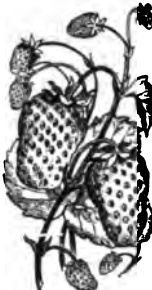


Orders will be filled as early in the spring as conditions are favorable for shipping.

Offer No. 22.

STRAWBERRIES

50 Plants Fountain Strawberry. Raised in Michigan. Sent, postpaid, for one new subscription.



One of the later introductions that is receiving much praise. The Fountain is described as large and handsome, of a deep, glossy, red color, flesh red and solid to the center. Firm and productive. Plant large, vigorous, healthy and hardy, with a perfect blossom. The grower who offers this variety states that it is one of the best all around good berries in his collection of over 100 varieties, and one that is likely to be in great demand in the near future as a choice shipping variety.

Offer No. 23.

STRAWBERRIES

Grown in Michigan. The following collections are offered, postpaid, for one new subscription:

Collection A.

12 Beder Wood (P)	12 Greenville (P)
12 Lovette (B)	12 Haverland (P)
	12 Woolverton (B)

This collection will be sent as advertised, or will give subscriber the choice of 75 of any one of the above varieties.

Collection B.

25 plants Gold Standard (B).

Grower says This is a strong growing variety, large round leaves, free from rust, one plant weighs as much as two common plants. The fruits averages from one to one-and-a-half inches, light red in color, and the sweetest berry we ever tasted. Season late. Strongly staminate.

Offer No. 27.

STRAWBERRIES

Your choice of any one of the below mentioned collections, postpaid, for one new subscription. Raised in Ohio.

A-25 Greenville and 15 Lovett.
B-40 Lovett or 40 Dayton Earle.
C-20 Bubach No. 5 and 20 Jessie.
D-40 Warfield and 20 Cumberland.
E-20 Haverland, 10 Dayton, 10 Parker Earle.

In the above collections when one is a pistillate sort the other is a perfect bloomer, so that they can be planted together perfectly.

Offer No. 28.

STRAWBERRIES

This collection will be sent for one new subscription. Plants raised in Wisconsin.

25 Plants Sparta.

6 " Thayer's No. 5.

The Sparta is Wisconsin's premium berry (staminate), very large, beautiful in color, and a great favorite with M. A. Thayer, who introduced it. Thayer's No. 5 is a new seedling, originated on the Thayer Fruit Farms, and this year for the first time sent to any one.

Offer No. 29.

STRAWBERRIES

Sent postpaid for one new subscription. Plants raised in Michigan. Strictly first-class plants, mailed same day they are dug, put up in sphagnum moss, wrapped in oiled paper to retain moisture. Your choice of two kinds, 13 of each; or 25 plants, one kind, good count. No orders filled after April 15th. I offer the following varieties:

Brandywine (B)	Splendid (P)
Greenville (P)	Bisel (P)
Bubach No. 5 (B)	Lovett (B)
Parker Earle (P)	Jessie (B)
Haverland (B)	

Offer No. 24.

STRAWBERRIES

A-50 Plants Brandywine (B)
B-12 " Bismarck (B)
C-24 " Wm. Belt (B)

Order by Offer No. and Letter. Subscriber's choice of any one of these three varieties for one new subscription. All first-class and new varieties. Grown in Michigan.

Offer No. 25.

STRAWBERRIES

We will send Twelve (12) plants, two each of the following varieties: 2 Carrie; 2 Earliest, the earliest berry yet introduced; 2 Equinox, the latest; 2 Clyde, one of the earliest, will do better where land is not too rich; 2 Belle; 2 Evans. One dozen in all of these choice novelties. Select plants and guaranteed true to name. Raised in Virginia. Sent, postpaid, for one NEW subscription.

Offer No. 30.

STRAWBERRIES

Your choice of any one of the following offers, postpaid, for one new subscription. Order by offer No. and Letter. Plants raised in Maryland.

A-4 Hall's Favorite (new).	F-30 Tenn. Prolific.
B-25 Brandywine.	G-35 Warfield, No. 2.
C-30 Haverland.	H-30 Tubbs.
D-35 Hoffman's.	J-15 Ideal.
E-35 Lady Thompson.	K-25 Bubach, No. 5.

Two plants of Hall's Favorite are included in every offer from B. to K.

Grower describes Hall's Favorite as follows: The coming new strawberry. It defies competition. Better than Bubach No. 5.

Offer No. 31.

STRAWBERRIES

Plants raised in Iowa. The below collection will be sent, postpaid, for one new subscription.

One hundred plants of either Haverland, Enhance, Greenville, Beder Wood or Tennessee Prolific, or twenty of each of the above five varieties.

Offer No. 2.

Strawberries and Raspberries.

Your choice of either one of these collections for one new subscription at \$1.00. Sent postpaid. Plants raised in Delaware. Order by Offer No. and Letter.

A-100 Strawberry Plants, two choice varieties.

B-12 Miller Raspberry Plants. The best early Red Raspberry that has been thoroughly tested.

Offer No. 8.

STRAWBERRIES

Your choice of any one of the following collections, prepaid, for one new subscription. Order by Offer No. and Letter.

A.—Four plants Kyle (B)

B.—Your choice of 12 plants, three each of any four of the following kinds: Bisel, Splendid, Brandywine, Van Deman, Plow City (large, late), Gertrude (early), Kyle, Wm. Belt.

C.—25 plants Splendid. "Correctly named," says J. L. Hartwell, President No. III. Hort. Society.

D.—12 plants Splendid, 12 plants Van Deman (fine early).

This gives a succession.

Kyle is productive, fair size, rich acid flavor, firm and of a shiny, rich carmine color; quite attractive in appearance. It is a vigorous, healthy grower; makes runners freely, and so far has not developed a single defect. It is smooth and uniform in shape; stands heat and cold well. Its season is medium early. It is self-fertilizing, but not strongly so. A decided acquisition.

Orders can be filled until about the first of May.

Andorra Nurseries

Specialties: Large specimen ORNAMENTAL TREES,
large hardy RHODODENDRONS and AZALEAS.

2500 Norway Maples, 12 to 16 ft.; 2 to 3 in. caliper.
3000 Sugar Maples, 12 to 16 ft.; 1 1/2 to 2 1/2 inches caliper.
800 Schwedler Purple-leaved Maple, 12 to 16 ft.; 2 to 3 inches caliper.
800 Sycamore Maple, 10 to 12 ft.; 1 1/2 to 2 1/2 inches caliper.
750 Weirs Cut-leaved Maple, 12 to 16 ft.; 1 1/2 to 2 inches caliper.
500 White Flowering Horse Chestnut, 10 to 12 ft.; 1 1/2 to 2 1/2 inches caliper.
150 Purple Birch, 10 to 12 ft.; 1 1/2 to 2 1/2 in. caliper.

200 Golden Catalpa, 12 to 16 ft.; 1 1/2 to 2 1/2 inches caliper.
1200 Western Catalpa, 16 to 14 ft.; 1 1/2 to 2 1/2 inches caliper.
75 Weeping Beech, 8 to 12 ft.; 2 in. caliper.
500 Purple Beech, 8 to 12 ft.; 1 1/2 to 2 in. caliper.
1000 Oriental Plane, 12 to 16 ft.; 1 1/2 to 2 1/2 inches caliper.
50 Belleanna Poplar, 16 to 18 ft.; 2 1/2 to 3 1/2 inches caliper.
1500 European Linden, 10 to 12 ft.; 2 to 3 inches caliper.

WILLIAM WARNER HARPER, Manager, Chestnut Hill, PHILA., PA.
Mention American Gardening when you write.

\$1.00 THE CHAMPION OFFER \$1.00
OF THIS M. WATSON.
ELLIOTT'S \$1.00 OFFER
AS FOLLOWS:

Eighteen Full Packets Choice Flower Seeds, value \$1.50

And, by special arrangement with the publishers,

Am. Gardening, one year, NEW names only, " 1.00

Total value, - **\$2.50**

\$1.00 under the terms of this offer, therefore, gives you AMERICAN GARDENING, the brightest gardening paper issued, one year, and sufficient seed to start a goodly sized garden with some to spare for your friends. We look for thousands of responses to this the greatest bargain of the season.

THE SEEDS OFFERED

are not of the cheap varieties which one finds advertised and described in glowing terms in all the papers at this time, but are full-sized packets, of the most reliable sorts, such as we put up for the Trade. There is not one cent of profit to us in this offer; in fact we lose money on every order we fill, but in these days it is necessary to make some sacrifices to promote business. We want to obtain new patrons to whom to send our 1897 catalogue, and take this method as the most direct means to accomplish same.

THE FOLLOWING IS A LIST OF THE PACKETS:

Alyssum, Sweet. Good border plants.	Cosmos, mixed. The pride of the Fall in the open garden.	Petunias, in superb mixture.
Asters, fine mixed. Select strains.	Larkspur. Fine for mass planting, the herbaceous border, or a rock garden.	Phlox Drummondii, choicest strain, elegant for bedding.
Balsam, Lady's Slipper. Finest double mixed.	Marigold, French varieties.	Poppy, Elliott's mixture, double flowering.
Calendula. Needed in every garden.	Mignonette, most fragrant of all plants.	Sweet Peas, in mixture, including all the standard varieties.
Candytuft, mixed.	Nasturtium, assorted colors.	Ricinus, Castor Oil Plant. For sub-tropical effect, very showy.
Carnation Marguerite, Mixed. A genuine novelty for the garden.	Pansies, Giant strain, assorted colors.	
Batchelor's Button. The German Emperor's favorite flower.		

The above collection is all of choice, fresh seed, in full packets, such as retail at Ten Cents each, and is not made up of cheap, unreliable or worthless stock. Our reputation in the seed trade for the past Fifty years is our voucher.

If you are already a subscriber to AMERICAN GARDENING, but want the above collection, it will not take you ten minutes to obtain the subscription of some one interested in gardening. Send in this new name, together with \$1.00, money order preferred. Orders filled without delay. Paper and seeds sent to separate addresses when so requested. Address

WM. ELLIOTT & SONS, SEEDSMEN, 54 Dey St., New York.
Est. 1846.

ALL THE LATEST NOVELTIES
AND PLANTS THAT CAN'T BE HAD ANYWHERE.
Ornamentals, Italian and Austrian, at \$1 each.
New Roses, New Fruits, New Shrubs, New Bulbs.
10 Cents for \$1.-5 for 50 cts. Book on Cacti 10 pages, 10 cts, 10 cts. Catalogue of New and Rare Plants, Cacti and Bulbs free.
A. BLANC & CO., Philadelphia.

Mention American Gardening when you write.

POSTPAID 20 Strong GRAPE VINES for \$1.

4 Worden for \$1.; 4 Niagara, \$1.; 4 Moore's Early, \$1.; 4 Brighton, \$1.; or the whole 20 as above for \$1. Also Apple, Pear and other trees cheap. 1000 Strawberry plants, \$3 per 1000. Raspberry plants, \$2 to \$3 per 1000, by freight or express. Everything guaranteed healthy and true to name.

F. L. WRIGHT, Plainfield, N.J.

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.

Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.



We have the largest and best Collection of PALMS, ORCHIDS, FERN and FOLIAGE PLANTS for Conservatories. Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting Places and Furnishing sent (free).

SIEBRECHT & SONS,

Rose Hill Nurseries, New Rochelle, N.Y.

Mention American Gardening when you write.

SWEET POTATO PLANTS

SPECIAL DESCRIPTIVE CIRCULAR and PRICE LIST for our Northern customers, with full instructions for growing the crop, now ready. Send for it.

Our SWEET POTATO PLANTS go to New England, and as far West as Montana.

HOLLY, MAGNOLIA and TULIP TREES.

STRAWBERRY PLANTS of leading varieties.

P. C. SQUIRES, Berlin, Md.

Mention American Gardening when you write.

Berberry, California Privet and Japan Quince For Ornamental

HEDGES.

HARDY ROSES ON OWN ROOTS.

Write for Prices to

FAIR OAKS NURSERY, OAK PARK, ILL.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO.
Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 121.
COMBINED SERIES VOL. LI.

NEW YORK, APRIL 17, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Am. Pomological Socy.. 279	Commission Business, to 278	Philadelphia, Boston.. 286	Iana..... 273	Sweet Corn..... 274
Apiary..... 281	Regulate..... 278	Mushrooms Off Color... 287	Questions Answered... 287	Vegetable Garden..... 274
Azaleas, Raising..... 287	Fruit Garden..... 274	Natural Beauty, Pre- 283	Raspberries..... 287	Window Gardening..... 284
Bouvardias..... 285	Gooseberry, The Pearl.. 279	serving..... 283	Rhododendrons, Dress- 287	
Cabbage and Cauliflower 274	Herbaceous Plants..... 280	Nymphæas, Tropical... 284	ing for..... 287	
Carnations, Select..... 285	Home Plot..... 284	Peas..... 274	Soils and Potting..... 282	
Catalogues Received..... 275	Insects Destructive IV. 284	Potatoes..... 274	Spiræas, Garden..... 281	
Chickens, Best Breed of 275	Peach Borer..... 275	Poultry Notes..... 284	Spraying Calendar..... 277	
Chrysanthemums..... 274	Marketing..... 279	Private Gardeners..... 282	Spraying Formulæ..... 276	
Cinerarias..... 281	Market Reports: N. Y.. 279	Pteris Tremula Smith- 282	Spraying Operations... 274	
				Illustrations.
				Fern Spore, Germina- 274
				tion of..... 274
				Peach Borer, The..... 275
				Pteris Tremula Smith- 273
				Iana..... 273

Pteris Tremula Smithiana.

This handsome Fern is by no means new, having been in commerce since 1891, and it seems strange that it is not more frequently met with, for it certainly merits more extensive cultivation than it at present enjoys.

The fact that the plants do not readily adapt themselves to increase by division may have something to do with this case, but that is counterbalanced by the fact that it is one of the easiest of greenhouse Ferns to raise from spores; these, however, are seldom produced before the second year, but quite freely after that.

Raising from Spores.

The fertile fronds should be gathered when the spores are ripe, wrapped in paper and laid in some dry warm place for at least two weeks before the spores are sown.

This drying loosens the spores and allows them to be easily shaken off.

The proper time to gather the fronds may be a stumbling block to those who are unacquainted with fern cultivation; the safest plan is to watch rather closely and cut the fronds just as soon as the spores begin

to fall on the frond being shaken. Pans are preferable to pots for sowing in. In preparing these fill about one-third with crocks, having those on the top finely broken; just cover these with moss and over this place enough ordinary potting-soil to fill the pan to within about an inch and a half of the top; then cover the whole with half an inch of soil which has been subjected to a baking process sufficiently long to kill all the vegetation in it; this to insure against the growth of moss. After the soil has had a good soaking of water, sow the spores thinly on the surface and cover the pan with a sheet of glass, which should be turned frequently to prevent the moisture from dripping.

Place the pan in a saucer of water which must be always kept full, so as to keep the soil moist, as water must not be applied from the top; this is a very important point.

Transplanting.

When the little fronds begin to appear above the prothallus (see fig. 78 and description) it will be necessary to transplant the young Ferns into flats filled with a free sandy compost. The transplanting process is accomplished by lifting in small clumps on the end of a label which has been rounded and thinned down for the purpose; the back of the label is then slightly pressed into the new soil and then withdrawn, leaving the

little clump in the cavity just made. No pressing down should be done as the prothallus is very easily injured; sprinkle lightly with tepid water and again cover with glass. Great care must be exercised that the plants are never allowed to become dry, slight bottom heat and shade from strong sunlight is necessary all along. The temperature of an ordinary propagating house is most suitable.

When the plants begin to get crowded, potting up should be done, using the smaller

sized pots at first and giving shifts into larger ones as required.

Insects.

The most troublesome insect enemy is scale, which increases very rapidly and is almost impossible to eradicate if allowed to get a footing. To prevent this the plants should be frequently examined and any scale that may appear removed at once. Syringing may also be employed as a preventive.

The original Pteris tremula Smithiana in figure 77 and the larger plant of the more compact form are from the same batch of spores, sown November 1895; the smaller plant is from a later sowing. Whether the compact forms will come

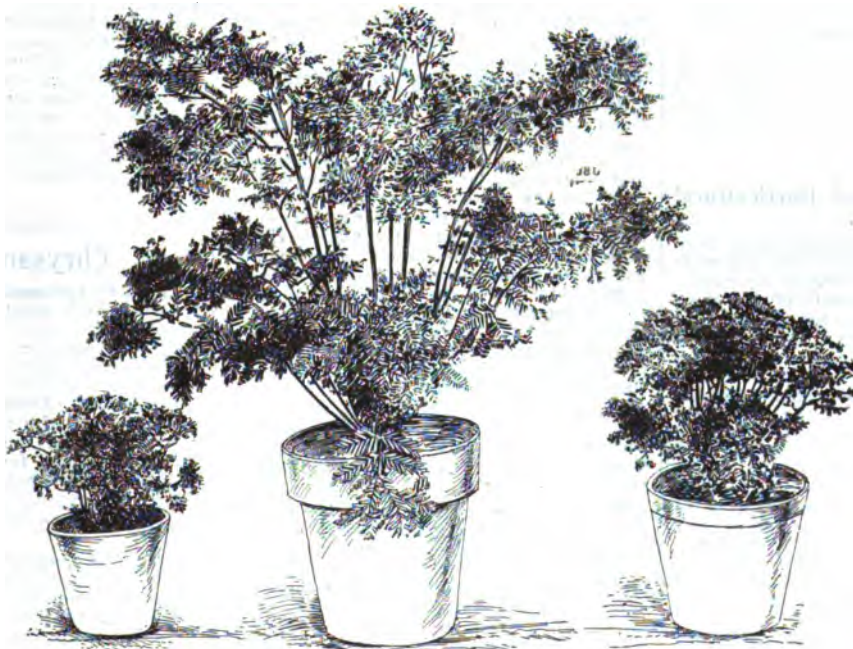


FIG. 77.—PTERIS TREMULA SMITHIANA AND VARIETIES.

true from spores or not, I am unable to say, not having as yet procured any from them, but I see no reason why they should not and trust they will, for they certainly make very useful little plants, where neatness and compactness of habit are desired. Wm. Scott, N. Y.

[For the better information of those of our readers who have not already had experience in the raising of Ferns from spores, we present the accompanying sketches of a Maiden Hair Fern in various stages of growth. At 1 is shown the spore very greatly magnified. This on germinating, does not at once produce a true Fern plant, but a "prothallus," as shown at 2 and 3. This growth is a very delicate one, and consists of what may be called a plate of cells, and on the lower side of this are developed the organs which

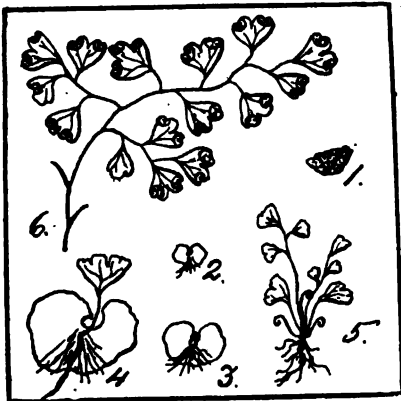


FIG. 78.—GERMINATION OF THE FERN SPORE.

take part in the production of the new individual, these are: The "antheridium" (answering to the pollen bearing stamen of flowering plants), and the "archegonium," which corresponds to the pistil and ovary of the higher plants. After the necessary fertilization has taken place the true fern plant begins to develop and ultimately shows itself, as at 4. A later stage of growth is seen at 5. A portion of a fertile frond is shown at 6, with the spore cases on the margins of the pinnæ.—Ed.]

Catalogue of Selected Horticultural Books.

The publishers of this paper have compiled and issued what is perhaps the most complete and unique catalogue of useful books, suitable to the needs of all their patrons, that has ever been brought to their attention. The catalogues of the book publishers in our own country as well as those of English publishers (who were seen personally on the subject) have been carefully gone through, and the cream of the publications selected. There are books for every one who is interested in horticultural and kindred pursuits, for the lover of plants and flowers, the student of botany, entomology and ornithology; books of instruction to those who study nature and are dependent upon her, either as a means of livelihood or as a recreation.

All the works catalogued are modern and up to date, and on that account are all the more valuable.

The publishers will send a copy of this catalogue to every subscriber applying for same and enclosing stamp (2c.) to cover postage.

Influence of One Wood on Another.—Some species of wood are credited with peculiar destructive influences on others with which they are put into contact. Thus white cypress, walnut and cedar are durable alone; cypress and walnut, or cypress and cedar become weak at the points of contact, and their resistance is renewed so soon as separated. The paper *Sempervirens* remarks that the action is analogous to that of some metals which thus produce electricity.

The Vegetable Garden.

Prepare Ground.—Take advantage of fine weather to plow, dig and to thoroughly pulverize all ground intended for seed sowing. Seeds do better on thoroughly prepared ground.

Set Cabbage and Cauliflower.—Plant out as soon as the weather is settled, thoroughly hardening them previous to planting out, by subjecting to all possible exposure and ventilation. The practice of setting these out 20 to 24 inches apart in the rows, and at the same time dropping about five seeds alternately with the plants, to be gradually thinned out to the strongest one, will not only insure a succession, but will also allow deeper rooting and thus give a better crop in a hot or dry season. This is the best method of growing for exhibition, if the ground is richly manured.

Give Air to Half Hardy Plants.—The hotbeds and cold frames must receive constant attention. The sun is now strong, and when it is shining the weather is warm, and plants must not be allowed to suffer for want of water. Air must be admitted according to the nature of the plants growing in the frames. Such plants as lettuce, radish, spinach, cabbage, etc., will need the sashes to be taken off entirely every warm day, with enough air admitted to such as tomatoes, egg plants and peppers, to keep them from being drawn; short stocky plants will give best results; allow sufficient room for them to spread, by not growing them close together.

Salsify.—Sow now, it is an excellent winter vegetable; the Mammoth Sandwich Island is the best variety.

Brussels Sprouts and Kale.—Seeds of these may now be sown for fall crops, sow in seed bed, to be transplanted later.

Parsley and Herbs.—All sorts of herbs should now be sown; such as parsley, thyme, sage, summer savory, angelica, fennel, pot marjoram.

Potatoes.—As soon as the ground is workable, they may be planted. Early Norther, and Puritan are good early sorts. One of the best of recent introductions is the new Sir Walter Raleigh, it is unquestionably a valuable potato, and no one will make any mistake in giving this a trial; it has a fine appearance, is a heavy cropper of uniform size, and is a model potato in every way.

Sweet Corn, Beans.—In favorable situations it is a good plan to make a sowing of Early Cory corn now; if the spring proves an early one, an early crop may be assured, and in case of a late frost, the loss will be trivial, seeds are cheap enough. A sowing of extra Early Valentine, or any other early bean may also be similarly made. Every planter should know his own locality, and use his own judgment accordingly, as no hard and fast rules can be made applicable to all localities. In early plantings of these, especially in heavy or wet soil, it is a good plan to sow on the level ground, and in covering the seeds, to hill up the rows sufficiently for the purpose, so that the seeds when planted are slightly elevated from the general surface, this will allow the free escape of any surplus water during rains, thus drying quickly, and preventing rotting of the seed.

Peas.—It is now time to make a good sowing of peas for general early crops, if two or three suitable varieties are sown at the same time, they will come in successively. Nott's Excelsior and Station are early and productive. This may be followed by some later sorts, such as Horsford's Market Garden, Filbasket, or Champion of England. Drills six inches in depth should be opened for them, the seeds to be covered up only with about one inch of soil, after germinating, they may be gradually hoed up with the remainder of the soil. A mulch of fine ashes over the rows is good for peas, and is a preventive against insects. By deep planting they withstand any drought or hot weather much better than when planted shallow, and, of course, better crops result. W. M. EDWARDS, N. Y.

Starkey, N. Y.—A meeting of the fruit growers of the district was held here March 25, when market matters were discussed.

The Fruit Garden.

Insecticides.—Lay in a stock of London purple, which can be bought by the drum for about 13 cents per pound; or, if you prefer it, some other of the insecticides.

Bordeaux Mixture.—This is familiar to the majority of the readers of AMERICAN GARDENING, and it is to my mind the most useful of the fungicides and can be readily made by anyone. The materials: copper sulphate, lime, and 5 cents worth of potassium ferrocyanide. Utensils: a good force pump, rubber hose with nozzle, and two or more kerosene barrels, according to the amount of work to be done. The best way is to make a stock solution, so as to be able to turn your attention directly to spraying at the most favorable moments. That is, when there is no wind and the trees are in the right stage. The copper takes some time to dissolve in cold water, and hot water is not always available in summer weather, at such short notice as the wind sometimes gives. Therefore, dissolve the copper in one of the barrels, at the rate of two pounds to one gallon of hot water, and keep covered. Next, take the same weight of lime and make a thin white-wash. When cold, stir up and strain through a fine wire sieve or coarse cloth (not bagging). Then, in a small bottle of water, dissolve the potassium ferrocyanide. Now wait and watch for the opportunity, and get in the first spraying of Bordeaux when the buds have burst, but before the flowers open.

Spraying Operation.—Stir up, thoroughly, the copper stock, and in 44 gallons of water put two gallons from the copper stock, stir thoroughly while adding from the lime wash, until a few drops from the potassium bottle do not change to a brown color, as they strike the mixture. Add a little more lime wash afterwards, to be on the safe side. Have weighed $\frac{1}{4}$ pound of London purple, and, in an old can, mix it with enough of the lime-wash to make a thin paste, and pour this into the barrel of Bordeaux mixture. This is for chewing insects, such as the caterpillar of the bud moth and canker worms, which make their presence known about that time by eating into the young leaves. It is very important that the copper be all dissolved and the mixture stirred thoroughly when testing with the potassium ferrocyanide, and also when the mixture is being applied to the trees. This is only to be used on apple and pear trees. I have gone somewhat at length into details, because I remember it was that part of the process that was not clear to me at the time when the use of Bordeaux mixture was in its infancy, and the results from it were not always what was expected. J. HOLLOWAY, L. I.

Chrysanthemums.

Plants for specimens should be potted on as they require it, soil to consist of good rotted fibrous loam, with just a suggestion of bone meal, thoroughly mixed with it. I consider it a great mistake to mix humus with the soil. It has a tendency to sour the loam before the roots of the plants can make much headway, and the good properties are exhausted before they can be used. The 'mum is a gross feeder, but the time to feed is when the pot is full of roots. Plants should be kept closely pinched, as the more breaks that can be got, from now on, the better.

Keep all fire heat away from plants now, in whatever stage they may be. Give all the air possible on bright days, and plenty of syringing, particularly in the afternoon. This will keep away insects and keep the plants booming.

The cold frame at this season is just the thing for young plants; care, of course, being exercised to guard against frost. Coolness, from now on, is the watchword.

C. TOTTY, Madison, N. J.

The Olive Industry in California is growing apace. It seems that there will be a thorough clearance of all pickled stock before the next crop comes in. The public is awakening to the value of the olive, the oil is highly nutritious, as good as cod liver oil and decidedly more pleasant.

Destructive Insects and Methods for Controlling Them.—IV.

PROF. W. G. JOHNSON.

The Peach Tree Borer.

The peach tree borer is a common pest throughout the peach growing districts of the United States; it is a native American insect, and undoubtedly the wild plum was its original food plant, which might explain its present wide distribution. Besides attacking the peach and plum, it is not an unusual pest of cherry trees. Its presence is usually characterized by gummy exudations at the base of the trees.

Life History.

The worm or larva which burrows into the tree is a familiar creature to all growers of the stone fruits, but the adult moth which lays the egg that produces the worm is not so well known. The parent insect, although a moth, resembles a wasp in general appearance, the wasplike mimicry being more conspicuous in the male than in the female, as shown by the accompanying excellent drawing, after Mr. C. L. Marlatt, first assistant to Dr. L. O. Howard, the United States Entomologist. The general color of the moth is dark blue. The hind wings of the female and both pairs in the male are transparent, while the fore wings of the female are thickly covered with scales. The abdomen of the female is also marked with a broad, orange colored band. The female is the larger and has a wing expanse of about an inch and a half.

There is but one generation annually, but worms varying greatly in size can be found in the fall in almost any locality. This is due to the fact that the moths do not all emerge at the same time; consequently the eggs are deposited at different periods. In Maryland the moths begin to appear as early as May, while in New York belated individuals do not emerge until October. The time of emergence covering the largest area seems to be from the middle of June to the middle of July.

The very minute, oval, yellowish-brown eggs are deposited by the females on the trunks of the trees, usually near the ground. After a short period of incubation the worm bursts open the egg case and burrows into the tree, entering at some crack or going just below the surface of the ground, where the bark is tender. After perforating the bark it works its way to the sapwood, feeding the rest of the summer and late into the fall.

It is during this feeding period of the larva that the great damage is done. Oftentimes trees are completely girdled and killed. The gummy exudation from the holes made by the worms is a constant drain upon the vitality of the tree. The larvae remain in the trees during the winter, resuming their feeding early in the spring, attaining a length of about an inch. Shortly afterward they transform into the dormant or chrysalis state, in which condition they remain a few days before the adult moth emerges and is ready for another cycle. As a rule the males appear a few days earlier than the females.

Remedies.

There have been many methods suggested for combating and controlling this pest, from the mechanical standpoint and also by use of poisons and washes. The best mechanical protec-

tion, perhaps, is the one suggested by Dr. Harris as early as 1826. It consists in removing a little of the earth from around the base of the tree and wrapping the trunk with a strip of thick paper eight or nine inches wide. The paper should be tied in place and the earth pulled up around it to a depth of about two inches. The same may be accomplished by the use of fine wire netting, or even straw.

Of late years many experiments have been tried with washes and other substances that might act as repelling agents. "Dendrolene" was used and recommended for this purpose; but it has been shown that this material has a tendency to stop the growth of the tree. For the present, at least, we would not recommend its use on peach trees.

Very good results have been obtained by some of the New England peach growers by painting the trees with a thin paste made by combining two quarts of common soft soap, half a pint of crude carbolic acid and two ounces of Paris green to a bucketful

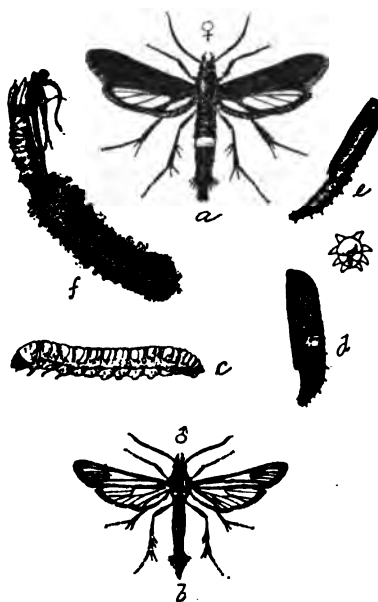


FIG. 79.—PEACH TREE BORER.
(For references see text.)

of water, with enough lime and clay to make a good paste.

Larvae already in the trees can be dug out with a knife and destroyed. A good way to accomplish this is to draw the earth away from the trees late in the fall, and, after two or three rather slight freezes, begin the hand work. The location of the worms can usually be ascertained by the gummy masses, made conspicuous by excrement and pieces of bark. If the cavities about the bases of the trees are not too deep they could be left over winter in this condition, but care should be taken for fear water might freeze in the basin and thus injure the tree. A second worming should be made in the spring, early in April. The dirt should then be drawn up around the tree four or five inches above the original surface; then with the point of a hoe or with the hand make a rim about three inches deep close to the tree and fill this with hard wood ashes and cover slightly with earth. Many an orchard could be saved if these methods were adopted. It means work, of course! It also means a better orchard and better fruit.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

CLARKE BROS., Portland, Ore.—Catalogue of Roses, etc.

WALDO ROHNERT, Gilroy, Cal.—List of Sweet Peas, etc.

J. STROUP, Boston, Mass.—Circular regarding Wood Ashes.

MRS. MAUD M. BRIGGS, El Paso, Texas.—Catalogue of Cacti.

JOHN R. & WM. PARRY, Parry, N. J.—Catalogue of Pomona Nurseries.

W. & T. SMITH, Geneva, N. Y.—Wholesale Price List of Nursery Stock.

WEBSTER BROS., Hamilton, Ont.—Wholesale Price List of Florists' Stock.

I. L. PILLSBURY, Galesburg, Ill.—Price List of Plants and Rooted Cuttings.

A. TILTON & SON, Cleveland, O.—Annual Illustrated Catalogue of Seeds.

PARSONS & SONS CO., Flushing, N. Y.—Select List of Hardy Trees and Shrubs.

HENRI BEAULIEU, Woodhaven, N. Y.—Price List of Seeds for Market Gardeners.

J. A. SIMMERS, Toronto, Ont.—General Annual Seed Catalogue, fully illustrated.

HARRISON'S NURSERIES, Berlin, Md.—Strawberries, Asparagus, Grapes, Apples, Peas, trce.

LEWIS ROESCH, Fredonia, N. Y.—Catalogue of Fruit and Deciduous Trees, Shrubs, Plants, etc.

BENJ. HAMMOND, Fishkill-on-Hudson, N. Y.—Catalogue regarding "Slug Shot" and its Uses.

WALTER A. POTTER, Providence, R. I.—Catalogue of Garden, Field and Flower Seeds, Implements, etc.

E. H. KRELAGE & SON, Haarlem, Holland.—Catalogue of Novelties, Perennials, and Florists' Flowers.

L. L. WOODFORD, Berwyn, N. Y.—Illustrated Descriptive Catalogue of Fruit and Ornamental Trees.

ROSS BROTHERS, Worcester, Mass.—Illustrated Descriptive Catalogue of Vegetable, Grass and Flower Seeds.

THE MITCHELL HEATER COMPANY, Poughkeepsie, N. Y.—Illustrated Descriptive Catalogue of Hot Water Heaters.

C. H. JOOSTEN, New York.—Special Trade List of Spring and Summer Flowering Bulbs, Roots and Plants, Seeds, etc.

SEAWANHAKA GREENHOUSES, W. L. Swan, proprietor, Oyster Bay, N. Y.—Illustrated Catalogue of Plants, Seeds and Bulbs.

THE DEMING CO., Salem, O.—Illustrated Catalogue of Spray Pumps and Nozzles; with hints of formulae for insecticides, etc.

GEORGE B. MOULDER, Smith's Grove, Ky.—Illustrated Descriptive Catalogue of Water Lilies, Aquatics, Greenhouse Plants and Ornamental Shrubbery.

STEPHEN HOYT'S SONS, New Canaan, Conn.—Descriptive Catalogue of Fruit and Ornamental Trees, Grape Vines, Small Fruits, Shrubs, Roses, etc.

THOMAS MEEHAN & SONS, Germantown, Pa.—Wholesale Trade List of Nursery Stock; a most complete list of hardy ornamentals. Japan Snowball a specialty; handsomely illustrated.

THE BEST BREED OF CHICKENS.

That is for all purposes, especially for the farm; after years of experimenting with different broods of chickens, pure and crossed, I have at last hit on my ideal chickens, large egg production and good, heavy carcass, early maturity and many other good qualities. For the last two years I had raised the Rose Comb Brown Leghorn, which for egg production is unsurpassed. These I crossed with the Golden Wyandottes, which are somewhat similar in plumage and shape, have rose combs (the first necessity for winter layers); at the same time they are heavier, hens weighing from seven to nine pounds. Now I have a breed of chickens that is purely American; no Asiatic strain in it; is all business from the word go; shells out eggs in all seasons of the year; feather and mature quickly; very tame; good foragers, and if I want to kill one once in a while there is something in it. Breeders, of course, may scoff at my idea of crossing two pure breeds and call them mongrels, but that does not matter to me, as long as I get an abundance of eggs in all seasons and have what I have been trying to get for the last ten years, my ideal all-around best chicken.—G. Camerer, Madison, Jefferson County, Ind.

Bordeaux Mixture.

Copper Sulphate.....	4 lbs.
Fresh Lime.....	4 "
Water.....	40 gals.

This is the standard remedy for all fungous diseases. It is comparatively inexpensive, does not injure the most tender foliage if properly prepared, remains for a long time upon the plants and in fungicidal powers has few if any superiors.

If a large quantity is to be used it is well to prepare a considerable amount of the materials so that they will only need to be mixed before using. The copper sulphate will dissolve readily if suspended in a barrel of water in a coarse sack or basket. By thus dissolving 24 pounds, in say, 36 gallons of water, we shall have enough for six barrels of 40 gallons each. The lime should be slaked slowly, adding water only as fast as it is taken up. 24 pounds is all that is needed for the above amount of copper sulphate, but if it will be required within a week or two the entire barrel may be slaked at once. It will not deteriorate if kept covered with water.

When 24 pounds of copper sulphate have been dissolved in 36 gallons of water, and 24 of lime have been slaked, for 40 gallons of the mixture take one-sixth of the lime and add to it enough water to make 20 gallons, and to six gallons of the copper sulphate solution add 14 gallons of water. Str up the lime and strain it into the barrel of copper sulphate solution, stirring it briskly. Prepared in this way it will remain in suspension much better than when the dilution is made after they are mixed. If the lime is fresh and is properly slaked, and the above proportions are used, there is no danger of injury to the plants unless the applications are made very frequently, but as it is the free acid of the copper sulphate that causes the injury, its presence can be detected by adding a few drops of ferrocyanide of potassium (yellow prussiate of potassium). If no change is observed the amount of lime is generally sufficient, but if deficient a deep brown spot will appear and more lime should be added. A small excess of lime is always desirable and it is well to add a little of it even after the test shows the acid to be neutralized.

The above formula is adapted for use with most crops but it may be slightly modified. Thus for the second spraying of grapes the amount of water should be reduced to 30 gallons, and for most other crops it may be increased to 50 gallons after the second application, especially if they are made at frequent intervals.

One admirable feature about this fungicide is that the arsenites can be used with it. Not only does this cheapen the cost of application but the lime of the Bordeaux mixture neutralizes any free acid in the arsenic and prevents injury to the foliage from that cause.

Ammoniacal Copper Carbonate and Modified Eau Celeste.

Copper Carbonate.....	1 oz.
Ammonia, enough to dissolve the copper.	
Water.....	12 gals.

Dissolve the copper carbonate in the ammonia, and dilute before using. The undiluted solution can be kept in glass-stoppered bottles for some time. The strength of ammonia water generally found at drug stores is 20° Baumé. This will answer as well as the 22° or 26°, which are generally recommended, but more of it will be required to dissolve the copper, about one pint being necessary for each ounce of the carbonate.

From the fact that copper carbonate as sold on the market is rather costly, it will be better to manufacture it, if much is to be used. For this take

Copper Sulphate.....	2 lbs.
Soda Carbonate (sal soda).....	2½ lbs.

Dissolve these separately in about two gallons of water, pour together and stir thoroughly. A precipitate of copper carbonate will form, and sulphate of soda will remain in solution. The water can be poured off, and the precipitate dried and kept indefinitely. From the above quantity of copper sulphate and soda carbonate, about one pound of dried carbonate of copper will be obtained. It is often used without drying, however, by adding enough ammonia water to dissolve the copper carbonate, and diluting to forty gallons. It is then known as *modified eau celeste*. If preferred, the above may be used where weak copper sulphate solution is given in the calendar.

Potassium Sulphide.

Potassium Sulphide (liver of sulphur).....	3 oz.
Water.....	10 gals.

This solution is valuable to use for gooseberry mildew, as it in no way discolours the fruit, and it is quite harmless.

Copper Sulphate.

STANDARD SOLUTION.

Copper Sulphate.....	1 lb.
Water.....	25 gals.

For use before the buds open; the above solution is easy to prepare and to apply. *It should not be applied to any plant after the leaves burst, as it will burn the foliage.*

(b) WEAK SOLUTION.

Copper Sulphate.....	1 lb.
Water.....	150 to 200 gals.

(c) VERY WEAK SOLUTION.

Copper Sulphate.....	1 lb.
Water.....	250 to 300 gals.

The above weak solutions of copper sulphate may be used late in the season, when Bordeaux mixture would spot the fruit. The former (b) can be used with safety upon nearly all crops, but for a few, such as the peach and bean, formula (c) will be safer.

Its action is equal to Bordeaux mixture, but, as it is more readily washed from the foliage than Bordeaux mixture, its effect is not as lasting. Like Bordeaux mixture, these last three preparations are for the destruction of fungous diseases, and they should not be relied upon to destroy insects.

Paris Green.

Paris Green.....	1 lb.
Water.....	200 to 250 gals.

Upon most plants this can be used without injury to the foliage, up to July 1. Late in the season, or if the spraying is repeated frequently, one pound of lime should be added to neutralize the free acid. Lime should always be used when Paris green is applied to peaches, and it is safer to use it when plums, cherries, grapes, pears, and, in fact, all kinds of plants are sprayed. It is best to combine the Paris green, whenever practicable, with Bordeaux mixture, as all caustic action will be prevented, and the effects of neither material will be lessened, but, on the contrary, increased; while the two applications can be made at once without extra labor. If this combination is made, add one ounce of Paris green to each fifteen gallons of Bordeaux mixture. Paris green is less likely to burn the foliage than London purple, and hence is preferable. Either may be applied in a powder form, combined with plaster, at the rate of one pound to one hundred pounds of plaster. It is also of some value as a fungicide. *Used to destroy insects that bite and chew the foliage or fruit.*

Hellebore.

Fresh White Hellebore.....	1 oz.
Water.....	5 gals.

Dissolve and apply for insects that chew; particularly the currant worm and the cabbage worm.

Pyrethrum or Buhach.

Pure Fresh Pyrethrum.....	1 oz.
Water.....	5 gals.

Apply the same as hellebore. It can also be applied dry with a bellows, and is efficient against many sucking insects, such as plant lice.

Kerosene Emulsion.

Soft Soap (or sour milk).....	1 qt.
Kerosene.....	1 pt.
Water.....	6 to 11 qts.

Warm the soap until it becomes liquified, remove from near the fire, add the kerosene and agitate rapidly with a force pump, for five to ten minutes, until it becomes a homogeneous creamy mass, from which the kerosene will not separate on standing. Dilute with water so that the kerosene will be one-fifteenth to one-twenty-fifth of the entire mixture. If properly prepared, it can be used with safety upon nearly all plants, except squashes, melons, cucumbers and others of the squash family. *A remedy for all sucking insects, and for others with soft bodies, with which it can be brought in contact.* A hard soap emulsion can be made by dissolving two ounces of hard soap in boiling water, and using it instead of the soft soap.

Whale Oil Soap.

This is a valuable insecticide, particularly against the San José scale, for which it should be dissolved in hot water at the rate of 1½ pounds to a gallon.

For the San José scale a good emulsion can be made from 1 gal. kerosene and 1 lb. of whale oil soap dissolved in a gallon of hot water. Before using add 1 gallon of water.

CAUTIONS.—Do not mix the copper preparations in iron or tin, always use wood, brass or earthen vessels. The valves, cylinders piston, etc., of the pumps should also be of brass.

Do not add Paris green to compounds containing ammonia or sulphate of copper solutions; always use lime or Bordeaux.

Never spray with arsenites while the trees are in blossom, as the bees will be poisoned; they are necessary to fertilize the flowers.

Never leave any of the poisons where children or animals of any kind can get hold of them. Label them distinctly and put them away carefully as soon as through using them.

Study carefully the nature of the insect or disease, and select the remedy that is most likely to destroy it without danger of injuring the plants. Do not spray with arsenites or copper compounds within three weeks of the time the sprayed portions are to be eaten. While there would be little danger of fatal effects resulting, it is best not to run any risk. Bordeaux mixture and other lime compounds should not be used upon rough or full grown fruits, even as late as that time. Not only does the lime disfigure the fruit, but the amount of copper is large.

The foregoing brief directions for the spraying of fruits and vegetables have been compiled as the result of several years' experimenting with different materials, and it is believed that they can be followed without danger to the crops and with profit to the owner.

They do not differ materially from those issued in previous years, the principal change being in the use of a weak solution of copper sulphate instead of ammoniacal solution of copper carbonate; the former is preferred as it is cheaper, easier to prepare, and is even more efficient. While it might take the place of Bordeaux mixture, the latter is recommended as being less likely to be washed from the trees by the spring rains, and because it is an excellent material with which to apply Paris green.

Much depends upon the thoroughness with which the work is done, and to be effective of the best results—to say nothing of the economy in making the applications—the material should be thrown in the form of a fine mist-like spray, and it should cover every part of the plants, the spraying being kept up until they begin to drip.

While for most crops three or four applications will generally suffice, it sometimes happens that five or six are required with some varieties and in seasons that are favorable to the development of fungi.

It will pay to spray all fruit plants early in the spring with copper sulphate solution, and the second and third applications, as given in the calendar, can generally be made with profit. The conditions that prevail will so modify the results that each will have to judge for himself as to the number of applications that are required.

HOW AND WHEN TO SPRAY.

ARRANGED BY PROF. L. R. TAFT, OF THE MICHIGAN AGRICULTURAL EXPERIMENT STATION, HORTICULTURAL DEPARTMENT.

PLANT.	1st Application.	2d Application.	3d Application.	4th Application.	5th Application.
Apple —(Canker worm, codlin moth, bud moth, tent caterpillar, scab). [2, 3, 4.]	Spray before buds start, using copper sulphate solution.	After the blossoms have formed, but before they open, Bordeaux and Paris green.*	Within a week after blossoms have fallen, Bordeaux and Paris green.	10 to 14 days later, repeat.	10 to 14 days later, Bordeaux, or weak copper sulphate δ .
Bean —(Anthracnose). [1, 2.]	When blossoms appear, spray with Bordeaux.	10 days later, repeat.	10 to 14 days later, weak copper sulphate solution c .	Repeat last, if necessary.	
Cabbage —(Worms, aphids). [1, 2, 3.]	When worms first appear, Paris green.	If worms or aphides are present, repeat if plants are not heading, using emulsion for aphids.	If aphides persist, or if worms reappear, use kerosene emulsion, if plants are not heading.	After heads form, use saltpetre for worms, a teaspoonful to a gallon of water, emulsion for aphides.	Repeat, if necessary.
Carnation —(Rust and other fungous diseases). [1, 2, 3.]	When planted out, dip in Potassium sulphide solution.	7 to 12 days later, spray plants with copper sulphate δ lb. in 125 gallons.	Repeat at intervals of a week or ten days until blossoms open.	While in bloom spray every week with copper sulphate solution.	Ventilate thoroughly. In Winter do not syringe except on bright mornings.
Cherry —(Rot, aphid, curculio and slug). [1, 2, 3.]	Before buds start, use copper sulphate solution. For aphid, kerosene emulsion.	When fruit has set, Bordeaux and Paris green.*	10 to 12 days later, if signs of rot appear, repeat.	10 to 12 days later, copper sulphate solution, weak δ .	Repeat, if necessary.
Current —(Worms, mildew). [1, 2.]	As soon as worms are seen, Paris green.	If they reappear, repeat, adding Bordeaux for mildew. \dagger	If worms still trouble, pyrethrum or hellebore. \dagger		
Gooseberry —(Mildew, worms). [1, 2, 3.]	As leaves open, Bordeaux and Paris green.	In 10 to 14 days, repeat with both.	10 to 14 days later, sulphide of potassium on English varieties.	10 to 14 days later, repeat if necessary.	If mildew persists after crop is gathered, Bordeaux.
Grape —(Flea-beetle, fungous diseases). [1, 2, 3, 4.]	Before buds burst, copper sulphate solution and Paris green.	When first leaves are half grown, Bordeaux and Paris green.	As soon as fruit has set, repeat.*	10 to 14 days later, Bordeaux mixture, if disease is present.	If necessary, very weak copper sulphate solution c .
Nursery Stock —(Fungous diseases). [1, 2.]	When buds burst, Bordeaux.	Repeat at intervals of 10 to 14 days.			
Peach, Apricot —(Leaf-curl, curculio, mildew and rot). [1, 2, 3.]	Before buds swell, copper sulphate solution.	As soon as fruit has set, Bordeaux and Paris green.*	10 to 12 days later, repeat.	10 to 12 days later, repeat for rot.	If rot persists, use very weak copper sulphate solution c every 5 to 7 days. \dagger
Pear —(Leaf-blight, scab, psylla and codlin moth). [1, 2, 3, 4.]	Before buds start, copper sulphate solution.	Within a week after blossoms fall, Bordeaux and Paris green.	10 to 12 days later, repeat.	10 to 16 days later, Bordeaux.	10 to 16 days later, Bordeaux. \dagger
Plum —(Black Knot, rot and all fungous diseases, curculio). [1, 2, 3, 4.]	As buds start, copper sulphate solution. Cut out knots and burn.	When fruit has set, Bordeaux and Paris green.*	10 to 12 days later, repeat. Look for Black Knot	10 to 20 days later, Bordeaux and Paris green.	Weak copper sulphate solution δ , as is necessary.
Potato —(Colorado Beetles, Flea Beetles, scab, blight). [1, 2, 3, 4.]	For scab, soak seed in corrosive sublimate solution (2 oz. in 16 gallons of water for 90 minutes).	When Colorado beetles or their larvae appear, Paris green (1 pound to 100 pounds of plaster).	Repeat, whenever necessary.	If blight or flea beetle appear, Bordeaux and Paris green.	Repeat, if necessary.
Quince —(Leaf and fruit spot, rot). [1, 2, 3, 4.]	Before buds start, copper sulphate solution.	When fruit has set, Bordeaux and Paris green.*	10 to 12 days later, repeat.	10 to 20 days later, Bordeaux.	Bordeaux or copper sulphate solution δ , as is necessary.
Raspberry } (Anthracnose, rust). [1, 2, 3, 4.]	Cut out badly diseased canes. Spray with copper sulphate solution before growth starts.	When new canes are one foot high, spray with Bordeaux mixture.	10 to 14 days later, weak copper sulphate solution δ .	When crops gathered, remove old canes, thin new ones and spray with Bordeaux mixture.	If red rust appears the entire stools affected should be cut out and burned.
Rose —(Mildew, black spot, red spider, aphid).	Mildew: Keep heating pipes painted with equal parts lime and sulphur mixed with water to a paste.	Black spot: Spray plants once a week with weak copper sulphate δ .	Red spider: Kerosene emulsion to under side of foliage; syringe and keep the air moist.	Aphis: Kerosene emulsion.	SPECIAL NOTES. For BLACK KNOT on cherries and plums cut out and destroy by burning the diseased parts as soon as discovered. For APHIS and scale insects on all plants use kerosene emulsion. For SAN JOSÉ SCALE dig out and burn the trees when only a few are attacked. In case of small trees cut back branches and spray with whale oil soap solution or kerosene emulsion with same.
Strawberry —(Rust). [1, 2, 3, 4.]	Just before blossoms open, Bordeaux and Paris green.	When fruit has set, Bordeaux* or weak copper sulphate solution δ .	As soon as berries are harvested, Bordeaux (if to be kept longer).	Young strawberry plants should be sprayed with Bordeaux mixture at the time of the first and third application to bearing plants.	
Tomato —(Rot and blight, worms). [1, 2.]	When first fruits have set, Bordeaux.	If disease appears, repeat or use weak copper sulphate solution δ .	If necessary, spray with weak copper sulphate solution δ .		
Violet —(Blight, red spider). [1, 2.]	When blight is first seen, weak copper sulphate δ . Kerosene emulsion for insects.	Repeat at intervals of 10 to 20 days, as necessary, for blight.	NOTE.—Use kerosene emulsion very weak.		

EXPLANATION.—Whenever an asterisk (*) is used it cautions against spraying with poisons while the plants are in blossom; a dagger (\dagger) indicates that there is danger of making an application within three weeks of the time the fruit is to be used as food. The figures in the left-hand column indicate the applications that are deemed most valuable. While the number of applications recommended will be found desirable in seasons when the fungi are particularly troublesome, a smaller number may often suffice. δ , c . These refer to the varying strengths of solution as shown on the next page.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY
A. T. DE LA MARE PTG. & PUB. CO. LTD.
ROSE AND DUANE BYS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.

Publishers' Announcements.

Checks, Money Orders, etc., must be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed **AMERICAN GARDENING, P. O. Box 1697, New York.** Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 15 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

** * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.*

Proposal to
Regulate Commission
Business.

A MATTER of very great importance to the growers in all parts of the country is brought forward in a very practical way by the Ottawa Co. Fruit and Vegetable Growers' Association, in the form of certain resolutions adopted at a meeting held at Grand Haven, Mich., on January 16th last. It is to the effect that some proper control of the commission business should be put into operation, a matter of vital interest to the producer, who is forced to consign on commission, and at the same time, one of no less weight with the reliable honest commission man, for no one more earnestly deprecates the bad methods sometimes prevalent, than does he who has labored to a reputation.

He cannot do better than present the full text of the circular issued by the association above referred to, and at the same time add our wish that some such

scheme be put into force at once. Why, many of our readers will know from sad experience:

WHEREAS, the greater portion of the farm products of the United States necessarily have to be shipped to and sold in large cities; and

WHEREAS, producers, especially the poorer class, are, by circumstances, compelled to consign their produce to persons who make a business of selling farm products on commission; and

WHEREAS, owing to the fact that it requires no capital to enlist in the commission business; many unscrupulous persons, who have neither trade nor facilities to care for or dispose of to advantage, such products as they, through the U. S. mails and otherwise solicit; and

WHEREAS, it frequently happens that shippers and their commission men are many hundred miles apart, thus giving the latter an opportunity to test the elasticity of their conscience by making such returns as they please, regardless of quantity, quality or amount received for consignment; and

WHEREAS, many farmers, especially fruit and vegetable growers, depend entirely for means of support on the avails of their crops, and

WHEREAS, dishonest commission men take advantage of the fact that shippers are non-residents and that suits at law either in state or federal courts would entail so much trouble and expense as to render it practically impossible for poor farmers to get redress; thus feeling safe; they return on a sliding scale, of from market price to nothing; and

WHEREAS, we believe farm products necessarily entrusted to men to be sold on commission, are as much entitled to fostering care of our government as money entrusted to the care of bankers; now, therefore, in view of the circumstances and grievances set forth in the above preamble, be it

Resolved, 1. That we, the farmers, fruit and vegetable growers of Ottawa County, through our congressman, Hon. William Alden Smith, petition congress, praying that in the interest of justice and honesty, they pass a bill regulating the farm produce commission business of the United States.

2. That we believe all persons, companies or corporations doing such farm produce commission business should be licensed by the government, and that such license should be based on responsibility, integrity and general good character, and that whenever the conditions of such license or the law regulating the farm produce commission business is violated, then such license should be revoked, never again to be granted to such offenders and that such other punishment be inflicted as the case may merit.

3. That an official appointed by and under the direction of the Secretary of Agriculture should be located in cities or district proportionate to the amount of farm produce commission business done in said cities or districts whose duty it shall be to look into and examine the farm produce commission business, with the same care and object in view that bank examiners have in their respective districts, under the direction of the comptroller of the currency.

A Reverie. **T**HERE is always a ready public to take hold of a novelty and test it upon its merits, but perhaps there is no section of these ready purchasers more ready to experiment than the men who grow fruit for profit, and especially small fruits. The records of novelties of strawberries, for example, during the last few years show some very remarkable, not to say surprising facts, in this respect; hosts of varieties have been offered, hosts of growers have tried them—and the places thereof know them no more.

Yet, for all that, it is not to be said that progress is not made; quite the contrary, progress goes on apace, but of

the thousands of subjects offered—new and distinct though they may be, yet do they fail to prove superior in some one essential characteristic, while not falling behind in any other. Nature is not lavish in the production of marvellous departures from the normal type—freaks are unusual to her, and it is only a freak, so to speak, that can show any wide divergence from well-established lines.

Nature and man are striving to two totally different ends: Nature has in view the perpetuation of the species by progeny of the individual, and her best efforts are directed towards the one end of perfecting seed. Man, on the other hand, in his demands, more frequently than not, strives to "develop" some special part of an organ to a monstrous extent, and this will be done at the expense of some other part of the plant, say in constitution or size.

That plants so grown through a long series of generations do lack constitutional vitality, would seem to have an abundant proof in the proneness of certain high-bred types to succumb to disease. In the event of the forcing and directing hand of man being withdrawn, Nature again steps in, and in a surprisingly short period of generations she will have brought the object of man's neglect into harmony once more with the multitude around; energy will be now directed to the perfecting of the seed, and all the luscious parts so valued by man, reduced to the extent that the necessities for their distribution will allow. In the meantime, vigor and health are regained.

When man sets out to run in the face of natural law he has a hard time, and so it is that the raiser of novelties is so often doomed to failure, for Nature has the first pull, is ever present, ever ready to grab hold of the least advantage given. Nature is persistent—man is erratic.

Samples. **A** NEW paper, or rather the first copy seen of one that is not familiar, can hardly be called a fair sample of what a year's issues will contain. It is therefore asked that those to whom the present issue is the first number of **AMERICAN GARDENING**, into which they have had the opportunity of looking, that they give more than a cursory glance. This issue is largely devoted to the spraying of crops, but the space thus devoted to that one subject in this issue is filled by other valuable matter in other numbers.

The object aimed at is to treat seasonably, all the various topics in which a cultivator or grower has special interest, to help him to better results and by sound advice on all topics to improve the horticultural condition of all.

Above Expectations.

I wish to thank you for the premium Rose Bushes, they are beautiful, being far in advance of my expectations.—L. F. BREWSTER, N. Y.

The Pearl Gooseberry.

Several readers have addressed letters to us concerning our illustration of this new gooseberry, as given on page 237 of the issue for April 13, while speaking highly of the variety they ask why the representation was given upside down? We do not think it was reversed; true, the photographer had done his work the wrong way up so as to show the berries to advantage, and we turned it again, hence the state of affairs.

American Pomological Society.

The following notice has just been issued:

In response to an invitation of the Ohio State Horticultural Society, the Twenty-fifth Biennial Session of the American Pomological Society will be held in the city of Columbus, Ohio, on September 1, 2 and 3, 1897.

Every effort will be made to obtain the most favorable rate over all roads and connecting lines leading into Columbus, for all attendants, and most hospitable entertainments have been promised by the Ohio Pomologists.

The proceedings of the session will be of great practical value to the pomological interests of the Nation, and your attendance and assistance is most cordially invited, and especially are you requested to secure as large an attendance from your state as possible.

A circular program of proceedings will be issued in proper time also, announcing railroad rates and hotel fare for the session.

For further information address the Secretary's office at Lawrence, Kans., or the President at Augusta, Ga.
G. C. BRACKETT, Secretary,
P. J. BERCKMANS, President.

Marketing.*

I know of no business where there are such inducements offered to the unscrupulous man as in the produce commission business; and so little reward offered for the just, fair dealing, long experienced commission merchant. It should be the first act of the producer to thoroughly know the commission merchant, and then to stick to him by all the support possible on his part. Not to call him everything but a gentleman if anything is unsatisfactory, but to first investigate and find out where the fault is, and perhaps the blame will lie with yourself. Now, don't misunderstand me. I do not pretend to say there are no unscrupulous or dishonest commission merchants in the business; my only wonder is that there are not more. But, at the same time, I will not say every producer is honest. I think I have fairly demonstrated that during the past two years there have been too many commission merchants. Two years ago I undertook to establish a price for wine grapes at the station. That year there were in New York and Brooklyn four buyers and five commission merchants. I bought 165 carloads (62 cars at Marlboro and 103 in the West), furnished by own boxes and the profit was 11 per cent. In 1896, in the cities of New York and Brooklyn, there were four buyers and eighty-seven commission merchants handling wine grapes, with less grapes on the market than there were in 1896. I bought 87 carloads (8 at Marlboro, 59 in the West), that cost nearly \$6 a ton less, and the farmer furnished his own boxes; the net profit was only about 7 per cent. I had to give up entirely buying on the Hudson River, for the commission merchants could undersell me, or, in other words, your own goods drove me out of the market by their own competition. The Italian patrons, that hardly understand our

language, would say "Can buy cheaper. You buy your grapes. Others get them on commission and will sell cheaper." I had one man that came in for a number of mornings and would ask the price and then go out. I asked him one morning why he came there. He said a commission merchant had told him no matter what the price was, he would sell him for \$1 a ton less than I did. And so they kept cutting the price down so that with a light crop the price was reduced from \$5 to \$6 a ton, and next year it will be even less. Two of my best customers have already told me they expect to go into the country and get fruit on commission, so that they cannot be undersold as they were last year.

Now, you are certainly not growing fruit for your health, and if any organization will assist you, it is your duty to organize. There is a Mr. Hale, the largest peach grower in the United States, who has formulated a plan of his own in marketing the fruit. This I have watched very closely, and think it is a success. In the first place, he has selected one of the best firms in the city of New York, one of long experience and of thorough knowledge of the business, to sell "all" his goods in, both New York and Brooklyn, so if one wants a crate of Hale's peaches in either city it can only be bought from this firm. Hale's crates are full and honestly packed, every one like the other of its grade. I asked an old customer last year, from Providence, why I could not sell him Georgia peaches. His reply was: "I only handle Hale's. Can always get them, and one firm sells them all, and none of my competitors can get them any cheaper than I, and cannot sell them for any less. They suit my trade, and, in fact, they will have no other and will pay more for them than any other peaches in the market." I have heard this story from a number of different dealers, and it is my opinion that Mr. Hale has received fully 25 per cent. more for his crop than he would have received if several parties had handled it in New York and Brooklyn. And what this gentleman has accomplished alone can certainly be done by united effort of you all.

I have sold grapes for the Niagara Grape Market Company for a number of years, and wrote them to give me the results of their organization, and it would seem that it has been satisfactory from the letter, which I will read to you.

Lockport, N. Y. Feb. 22, 1897.

Replying to your letter of inquiry as to the benefits to be received from an organization of grape shippers, would say, that the points are very simple. We attribute our success to the observance of every one of the following points: We put it in this way because we consider that the success which we have attained is due to our observing each one of them at all times, and we do not regard any one point more important than another, but we do regard it as essential to success that every one should be regarded.

We have a man in each large market to whom our consignments are made and who distributes them according to the following rules:

First—Give up the idea that every commission merchant is a natural enemy of the producer.

Second—To give due weight to the fact that the retail trade can best be supplied by commission houses who have had years of experience in building up a trade.

Third—Remember that each commission house has its trade or buyers of a certain quality of grapes; to illustrate, one house can get the very highest market prices for grapes of the best quality, but have no trade whatever for grapes which are inferior in quality or appearance. Another house can handle a medium or inferior grade of grapes to the very best advantage, but cannot handle a large quantity of the very best to as good advantage.

Fourth—Very often a commission house has more grapes consigned to it than its trade will take, while other houses in the same market and with equally as good facilities for distribution have not enough to supply their trade.

Fifth—There are a large number of unreliable and irresponsible commission houses who have the names of shippers and are continually sending out quotations above the market prices. They thereby destroy the confidence of the shippers in other well-known responsible consignees who make every effort to secure the best prices and maintain them. These dishonest concerns induce the shippers to make large consignments which are sold regardless of any effort to maintain prices with the effect of weakening the market and breaking down the prices which reliable houses are seeking to establish and maintain.

Sixth—It is essential to have in every large market a reliable and experienced man to whom all consignments may be made and who shall have the authority to place these consignments in the proper hands and in proper quantities.

Seventh—It is entirely possible through such an organization to give each commission house the consignments of such members of the organization as they have been in the habit of handling for years, so as to maintain the best trade relations.

Eighth—Such an organization affords the means of determining according to the state of the weather, the condition of the goods on arrival and the condition of the market what should be done with each consignment with a degree of accuracy which can be done in no other way.

(Signed.)

G. G. LANSING,
General Agent.

As Mr. Lansing says we want to get rid of the idea that the honorable commission merchant is the growers' enemy. I often hear the producer say: "I am not a-going to take so much trouble and raise fruit for nothing for those Yorkers. They get now all they pay for." I think this is a mistaken idea. I think any one that supports a family in a large city will say that he pays enough for the fruit he consumes to give the grower a good profit. The trouble is not with the consumer. It is with our bad method of reaching him. It has been my experience to have a store full of goods and have good customers come in and want first class stock, but could not give it to them; this fact of lumbering up the market with unripe, badly packed goods depresses the whole market.

Some one will say "Why don't the commission men do something?" It is not in their power. You growers have the lever in your own hands to effect this change by owning the goods, and having the right to give them to whom you will, and how you will; and no one can dispute that right. Hence, it is for you to say how they shall be distributed. As you will remember, you took the wine grape business of 1895 out of nine men's hands, the men that gave you the best system you ever had to dispose of your surplus stock, and in 1896 put it in ninety-one men's hands and received from five to six dollars per ton less for your stock—a nice profit in itself and that with fully twenty-five per cent. less grapes than there were in 1895. It is no trouble to cut the price with the other fellow's goods to meet any competitor and get the profit from the producer.

This is no theory, but actual fact. It is my opinion that the large increase of competition caused by inexperienced and unscrupulous commission merchants accounts more for the low prices than all other things combined; and it strikes me that when we go to our four million patrons and offer them the most attractive fruit, the best fruit, the freshest fruit, honestly packed, full weight and measure, and regain their confidence as we once had it, then we will begin to see the return of the old-time profits, and not until then. And when the last day comes, and we are summoned before the bar of a just God to receive a just sentence for eternity we will not find ourselves in the position of the Irishman I once heard of, that was summoned before a Judge. He was very much excited. The Judge says: "Pat, be calm; this is a just court and you will get justice here." "Ah," was Pat's reply, "that's what I am afraid of!"

Peach Prospects.—G. H. Hale, who has just returned from a trip to his Georgia orchards, reports that at the present moment there is promise of a great crop; the trees, apparently, never were in better condition.

Fertilizer Tests in Rhode Island.—At the State Experiment Station soil tests of fertilizers show that best results are had from the use of a complete fertilizer. At first it looked as if the potash was what the soil chiefly needed, but the second and each succeeding year potash and nitrogen have fallen far behind, and where phosphoric acid has been used alone it has shown itself in a wonderful way. Where all the three elements have been used, however, the best results have been obtained. It was found that the first thing the soil needed was phosphoric acid; second, potash, and third, nitrogen.

*Second portion of the paper "Packing and Marketing" read by D. M. Wygant, before the Eastern New York Hort. Society and continued from page 219.

Herbaceous Plants.*

Having been asked by your secretary to prepare a few notes to be read before you to-night, it has given me great pleasure to accede to his request. Though left to my own pleasure, the topic suggested was "Herbaceous Plants," and I at once decided to adopt it for, from this class of plants, I am sure, I have derived more pleasure than from any other. The herbaceous plants of our woods and fields are in great variety, and although there are many most beautiful kinds almost exterminated, speaking of the vicinity of this city, there are hundreds of sorts yet to be found, the looking for and finding the names of which would afford great gratification.

Referring to these, as well as to the herbaceous plants of other countries, there is a deal of satisfaction to be derived from their cultivation. While for the sake of masses of color, bedding plants will always be in demand, they will never occupy the place in the affections of the people that herbaceous plants do. The veronicas, the hollyhocks, the larkspurs and the columbines which grew in the garden of our boyhood, we never forget. We got to know them then, to know the spot they occupied, and we were wont to eagerly watch for their appearance as for that of some loved friend. It is this reappearance, after their winter's absence, that makes them so welcome to all.

Transplanting Can Be Successfully Accomplished.

It is common to hear persons say, when viewing some woodland beauty, "How I would like to transplant it to my garden." While it is true that but few succeed in getting such plants to flourish in their gardens, it is nearly always from lack of knowing how to make them feel at home. Let me mention the trailing arbutus, *Epigaea repens*, as an illustration. It is the common belief that this lovely flower cannot be transplanted, and more than once I have corrected writers who have asserted this in public print. I have transplanted it successfully, so have many others. Two summers ago, when in England, I saw a nice patch of it in the Bagshot nurseries; and many other large nursery firms there offer it for sale. It is not a native there, so that it follows that at some time or other the plants were safely transported from here, seedlings of it being rare. This plant likes shade and moisture and to be undisturbed. It would not thrive in the open garden, but if small, bushy plants with a good ball of earth, be taken and set in a woodland where the required conditions exist they will live and flourish.

With native plants, a little care should be taken to provide for them situations as alike as possible to those they have been accustomed to. There are shade-loving plants, and those that grow in open places. It often happens that a partly shady border is at command, where those that demand it can be placed. It does not always follow that a wild plant is found growing in the best possible place for it. Take, for example, the scarlet Columbine, found on damp rocks along the Wissahickon. I have seen better specimens of it in open places in gardens than ever I have seen wild, no doubt because the garden afforded better food than its native rocks.

Mulching Is Necessary.

To those who have not tried it, it would be a great surprise to find how much better plants grow when the ground about them is well mulched. It makes the plants feel more nearly at home than anything else that could be done, save the giving of shade to some of them. Plants in the woods have shade above them and decaying leaves about them, and those in fields have grass or other plants about them, so that in both places the roots are cool. This is what mulching of the garden plants does, this and the preservation of moisture. Another thing rarely thought of is this: The wild plants in the woods are so covered with forest leaves that frost does not get to their roots. I am sure that all plants, hardy or not, are the better for this protection, and I would mulch afresh

in fall, that the roots may have a winter covering. As herbaceous plants will repay good food given them, I would mulch with manure in the fall. Let it be long manure, the better to protect the plants; the straw portion can be raked off in the spring, the remainder can be left undisturbed; it will be loose, and often it will be sufficient mulching for the summer.

Next to mulching there is nothing like a constant stirring of the soil. Let me say here that I have found many workmen in gardens totally unacquainted with the principles of hoeing. The hoe is drawn over a surface already hard, cutting off the weeds close to the ground. Then the weeds are raked off, leaving the ground in really worse condition than before, for the weeds shaded the surface if they did rob the ground. Hoeing should be fully as much to loosen the soil as to destroy weeds. Every stroke of the hoe should loosen up an inch or more of soil, and this loose soil should not be raked down too fine, or the first heavy rain will beat it down very hard. One would hardly believe what a help constant cultivation of this kind is to herbaceous and all other plants. And when rains come, the water is all taken up where it falls. Good mulching preserves the looseness of the soil in the same way. I am sure that very many more of our lovely native flowers could be successfully grown if mulching or hoeing would be made a feature of cultivation.

How to Propagate.

The propagation of herbaceous plants is mostly by division of the root or by sowing seeds, though when greenhouse facilities are at hand many sorts can be increased by cuttings. A little practice will suggest the best mode. Those that can be divided will show it after a year or two's growth, by the clump-like appearance displayed. There is no set time for dividing the plants. Very early spring is an excellent time; so is early fall. If done late in spring, the summer's heat comes on to them too soon, before well rooted, and in late fall frosts behave in the same way. The sowing of seeds is an interesting as well as a successful way: this work should be done early in the spring, out of doors, just as soon as the season will permit. There are some kinds, such as our wild aster, which are the better for being sown in the fall. Just before the ground freezes up will do. The seedlings will appear early in the spring, and, what is more, they will flower the same season, in the fall. It was my intention to name some fifty kinds of herbaceous plants, giving the months in which certain ones flower, but as the catalogues of nurserymen contain this information it seems hardly an advantage to do it here. I will but say that, commencing with April and ending with November, something can be had for every month of the term.

A Few Words About Ferns.

Instead of saying more about these plants I will diverge a little and speak of ferns. I believe that all of us who possess a garden, be it ever so small, have a place for a few ferns. What they require above all else is shade. It may be the eastern or northern side of a dwelling, on a wall, or any other situation where the afternoon sun does not reach them, and it will do. Under trees is not suitable as a rule. The roots of the trees exhaust the soil of moisture, and the branches shed big streams on the fronds, both to the injury of the plants. My own collection of native sorts is planted on the eastern side of a neighbor's house, which forms a division line. The sun shines on them until noon, but not later. They flourish in the best possible way. Among the twenty-five sorts collectable about our city some half dozen of them are evergreens, and these should certainly be planted. The time to collect ferns is toward late summer. All the kinds can be seen then, and their fronds being fully matured the height to which they attain is shown, and the proper place for them in the garden can be determined. Take a good ball of earth with them, if possible, though as it is easy to get all their roots they are not difficult to transplant without this.

The Royal Gardens, Kew.

During the trip to England, already referred to, it was my privilege to visit many

Almost Blind

Was my little girl, owing to scrofula trouble. She was treated by physicians and sent to a hospital without being cured. We resorted to Hood's Sarsaparilla, and in a week we could see a change. We continued giving her this medicine, and to-day her eyes are perfectly well; there is not a blemish on her skin, and she is the picture of health. B. C. ALLEN, 221 West 61st Street, New York City.

Hood's Sarsaparilla

Is sold by all druggists. Price \$1, six for \$6

Hood's Pills are prompt, efficient and easy in effect. 25 cents.

PEACH TREES \$2. per 100.

List Free. RELIANCE NURSERY CO., Geneva, N.Y. Mention American Gardening when you write.

FAY'S CURRANT LARGE STOCK.

Two years old, 25 bushes for \$1. or \$2.50 per 100. One year old, 25 bushes for \$1. or \$2.50 per 100. FRANK H. BURDETT, Clifton, N.Y. Mention American Gardening when you write.

GLADIOLUS.

A Superfine Mixture, made up of very best named varieties and choice un-named seedlings. Fine blooming bulbs at \$1.00 per 100, \$8.00 per 1000; by express, purchaser's expense. J. A. REED, (Gladiolus Specialist), CANTON, OHIO.

Mention American Gardening when you write.

Danish Ballhead Cabbage.

IMPORTED RELIABLE SEED.

Prices on application. Catalogue Free. FRANK H. BATTLES, Seed Grower Rochester, N.Y. Mention American Gardening when you write.

HALL'S FAVORITE. THE COMING NEW

Does competition; the best introduced for years. Forty other kinds pedigree plants. Raspberries, Blackberries, Asparagus roots, etc. Headquarters for Second Crop Seed Potatoes, double crop and earlier than other seed.

Descriptive Catalogue Free. J. W. HALL, - - Marion Station, Md. Mention American Gardening when you write.

GRAPE VINES

Small Fruits. All old and new varieties. Extra quality. Arranged true. Lowest rates. Descriptive Catalogue Free. T. S. HUBBARD CO., FREEDONIA, N.Y. Mention American Gardening when you write.

Berberis, California Privet and Japan Quince

For Ornamental

HEDGES.

HARDY ROSES ON OWN ROOTS.

Write for Prices to FAIR OAKS NURSERY, OAK PARK, ILL. Mention American Gardening when you write.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 665, ALBANY, N. Y. Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 20 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America. A printed list sent on application. Sales made at reasonable prices.

E. CORNING. Mention American Gardening when you write.



We have the largest and finest Collection of PALMS, ORCHIDS, FERNS and FOLIAGE PLANTS for Conservatories, Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting Places and furnishing stock (free).

SIEBRECHT & SON'S,

Rose Hill Nurseries, - - New Rochelle, N.Y. Mention American Gardening when you write.

*Paper read before Pennsylvania Horticultural Society, Feb. 16, 1897, by Joseph Meehan.

large private grounds, and though the climate of that country is thought particularly favorable to the cultivation of herbaceous plants, I cannot say that I saw any evidence of more interest in them there than is displayed here. But let any one who wishes to see them in perfection visit the Royal Gardens, Kew. The department for these plants is supposed to contain everything hardy, and to have every plant correctly named. And as far as possible to every plant has been given a position it prefers. There are swamps, bogs, dry rocks and damp rocks, shady nooks and open places, all filled with flourishing plants. With notebook in hand, after two visits, I did not nearly make record of all I would have wished to have done. In the woods and fields visited I did not find nearly as many wild plants as similar situations here afford. No doubt it is there as it is here near large cities, those who see pretty flowers are apt to dig or pull them up, and so they disappear. On reaching these shores again, after my travels abroad, I could not but feel a pride in the beautiful scene presented on each side of the track as the cars sped on from New York to Philadelphia. It was the month of August, and, while full of recollection of the never-to-be-forgotten kindnesses shown to me by the good friends I had parted with in England, it seemed to me the picture before me could not be presented on any other shore. Crossing the Delaware at Trenton and once more entering Pennsylvania, my feelings can be expressed by quoting these lines from Byron:

Yet are thy skies as blue, thy crags as wild:
Sweet are thy groves and verdant are thy fields.

For look wherever I would, cultivated fields,
The trees of the forests, and the wild flowers
Of the roadside, seemed to me never to
Have looked so beautiful.

Garden Spiræas.

No plants are more desirable for the garden than the herbaceous Spiræas, but so far they have not been given the attention they deserve. Being mostly natives of the temperate and sub-frigid regions of the northern hemisphere, they are adapted to stand our winters here in the North with little or no protection. Most of the species require a moist situation to bring them to perfection, although they thrive fairly well in almost any place.

One of the most showy is *S. Aruncus*, commonly known as Goat's Beard, growing to the height of four feet, and producing long, feathery panicles of whitish flowers.

Spiræa astilboides, much like the last named but dwarfier in habit and more graceful in character, is a native of Japan and easily grown. A recent introduction, *Spiræa astilboides floribunda*, is said to be an improvement on the type.

Another strong growing species is *Spiræa venusta*, with soft rose colored flowers hanging in feathery plumes from stems, sometimes attaining the height of six feet; this is one of our natives.

Spiræa palmata, one of the best, has flowers of a brilliant crimson; these, with its palmate cut foliage, make it a very attractive plant for the border. *Spiræa palmata alba* differs from the last in its white flowers and light green foliage.

Spiræa ulmaria, the common "meadow sweet" of Great Britain, has pretty double whitish yellow flowers, and grows from two to four feet high, flowering from June to August; it is fine for cutting.

Spiræa filipendula is quite distinct from the others, being tuberous rooted, with low growing, fern-like foliage. There is also a double flowering form of this.

Besides the foregoing, there are many other beautiful species and varieties, some with variegated foliage, all of which are worthy of a place in our gardens.

JOHN H. COOK.

Onions are popularly supposed to have a decided effect in preventing scarlatina and diphtheria, besides being generally healthful, inducing sleep and keeping away worms. It would really seem that the fragrance of the fruit should have power in at least a few of these directions.—Medical Record.

The Apiary.

On bad days during spring, when nothing else presses for immediate attention outdoors, I overhaul all my empty hives, put the sections together and insert the foundation and fix up the section cases all ready for the hives when the rush comes. Swarming time is always such an awful rushing time—the vegetables, the berries and the field crop all want attention at once.

If supplies be needed, look up the advertising columns of this paper. You can depend on getting what you order from advertisers in "American Gardening," as not one snide adv. can be found in its columns.

Foundation, etc.—In ordering foundation for surplus this year try the new process Weed foundation. You will find it has some advantages over the old style. The extra light flat bottom gives the least "fishbone" still, but the new Weed is rather better I think. It pays best to use the whitest sections, as it shows off the honey to better advantage. Appearances go a great way in selling comb honey.

Do all in your power to have strong colonies when the honey flow begins in earnest. Localities differ, and one should know when the flow is likely to be large enough to produce surplus. In fruit-growing localities the fruit blossom at times pays. I had some years ago a fine lot of fruit-blossom honey. This last winter I saw a very fine pear blossom honey. The locust is a big honey producer in my part of Pennsylvania. It comes right after fruit blossom. Then next is the white clover, the main honey plant over a very large territory. After we have our colonies strong, we must keep them strong. Don't allow them to swarm themselves into weakness, leaving you a whole lot of weak colonies to build up during the big honey flow, and at the end have no surplus except of bees, which must be fed next winter.

Swarming.—We cannot "prevent" swarming, of course, as long as the edict, "multiply and increase," remains in force; but we can control and direct it. My method of controlling swarming, so as to have a very moderate increase and lots of surplus honey, is thus: I have all the queens clipped, and when a swarm issues, remove the hive, replacing it by an empty hive while the bees are in the air. The queen is picked up and caged. Soon, the bees, coming back to look for the queen, will have themselves in the empty hive. I then liberate the queen, and let her run in too. The brood nest of the empty hive is filled with empty frames, not combs, with foundation guides or whole sheets of foundation. The surplus section case I remove from the old hive and place it on the new one. I now examine the old hive, and if I find it contains more bees than are absolutely needed to cover the brood that is uncapped, I shake them off the combs in front of the new hive. Result—A very strong new swarm full of energy, as new swarms always are, all ready to start storing surplus right along, while they build comb for the brood nest, which the queen fills about as fast as it is built, and all the nice honey goes in the sections if room be given. Later in the season, when the dark, full honey comes, the brood nest will be completed and filled for winter. By this management I had as much as twenty-three pounds of nectar stored in one day. The old hive needs very little attention, they generally don't store any surplus, but make a good colony for winter. Sometimes, during a long honey flow or a good fall flow, they will store surplus, but not as a rule. I practiced this method for ten or more years, with better results and more profit and less work than any other I ever tried. If I start with a dozen strong colonies, I can work a dozen strong colonies the whole season through and a dozen strong colonies are worth more than a hundred or a thousand weak ones. About 80 per cent. of the elements of success in honey production lies in strong colonies. Strong colonies make a surplus even in the old box hive, leaning against the garden fence.

L. W. LIGHTLY, East Berlin, Pa.



IN THE COUNTRY HOME
you need constantly on hand a safe, sure and effectual remedy for the ordinary ills of life; one which will meet the requirements of all emergency cases and work a permanent cure.

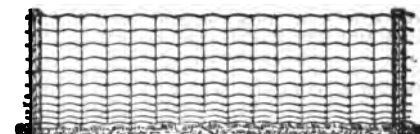
Warranted Safe Cure
has done this for many years on four continents.

CURES....
Bright's Disease,
Urinary Troubles,
Female Complaints,
General Debility,
Malaria,
and all diseases arising from disordered Kidneys and Liver.
Ever ready to hand.
Large bottle or new style smaller bottle at your nearest store. Be honest with yourself and try a bottle.



SOLD BY THE SEED DEALERS OF AMERICA.
For pamphlets address
B. HAMMOND,
Fishkill-on-Hudson, N. Y.

Mention American Gardening when you write.



850 Rods—5 Years—No Repairs.

That is the Page fence experience of a prominent land owner in Michigan, and it's the real secret of our success with all classes. When an individual or a Company adopt the Page, it settles the fence question with them for at least one generation. Why not investigate? Send for evidence.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

SOW NOW

W. & D.'s Central Park

Lawn Grass20 lbs. per bus. 25c. qt.; \$1.25 peck; \$4.50 bus.
W. & D.'s New York Market**Peas**25c. qt.; \$1.25 peck; \$4.50 bus.
W. & D.'s Large Flowering**Sweet Peas**

10c. oz.; 50c. per lb.

Illustrated Catalogue Free.

WEBER & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.**William Elliott & Sons**

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, April 20, 11 A.M.

A choice assortment of Roses, in bundles of ten, in ten varieties. A large quantity of well budded Ghent Azaleas, also Hardy Rhododendrons. Spring Bulbs of all kinds will also be offered.

Friday, April 23, 11 A.M.

Roses, Nursery Stock, Gladioli, Tuberoses, Caladiums, 500 Lilium Gigantum, 500 Pancratium Caribaeum.

At each sale will be offered a choice assortment of house plants, Ficus, Palms, etc., and a full line of Bedding stock.

Goods on view morning of sales. Catalogues free.

Mention American Gardening when you write.

CLEARY & CO., 60 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on

Tuesday, April 20, at 11 A.M., with a complete assortment of Irish Grown Roses, Nursery Stock, Tuberoses, Caladiums, Dahlias, Canna Roots, Gladioli, also Holland grown Roses, Rhododendrons, Azaleas, Viburnum, etc. Also flowering and bedding plants.

Thursday, April 22, at 11 A.M. great spring sale of Orchids from Sander & Co. Sales every Tuesday and Friday hereafter. Catalogue on application.

Mention American Gardening when you write.

R. M. GARDNER & CO.,
199 Fulton Street, NEW YORK.

Will sell every TUESDAY and FRIDAY at their rooms at 11 a.m., H. P. and Standard Roses, a general line of Nursery Stock and Spring Bulbs and Bedding plants. Catalogue on application.

Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan Ivy, 2 years, \$8.00 per 100.

E. S. PETERSON, Montrose, New York.
Montrose Nurseries.

Mention American Gardening when you write.

INCUBATORS \$25, \$15, \$12 each.
Brooders, 8 styles, \$6.

Kowls, eggs. Ill. dir., 3c. J. A. Chelton, Fairmont, Md.

Mention American Gardening when you write.

CALIFORNIA LANDS ARE RICH

and only \$25 to \$50 per acre AT ESCROW. Grows fine oranges, lemons, olives, prunes, apples, hay, grains, etc. Best summer and winter climate in U. S. Send stamp for illus. pamphlet to Escrow Land & Town Co. at Escrow, Los Angeles or San Diego, Cal.

Mention American Gardening when you write.

THOROUGHBRED POULTRY.

Light and Dark Brahmas, Buff Partridge White and Black Cochins, Black Plymouth Rock, White Plymouth Rock, Silver Loe and White Wyandotte, Bronze Turkeys. Send for a large catalogue.

L. R. FREEMAN, Charlotte, Mich.

Mention American Gardening when you write.

PRIVATE GARDENERS.

We solicit for publication under this heading notes on the work being done by private gardeners, changes in appointment, and all matters of interest to horticulturists generally.

Auction Sales.

Tuesday, April 20.—Hardy Roses, Standard Roses, Lilacs, Hydrangeas, Nursery Stock, Spring Bulbs and Bedding plants, at Elliott's Rooms, New York.

Special sale of Irish Roses, General Nursery Stock, Bulbs, Rhododendrons, Azaleas, and Bedding plants, at Cleary's Rooms, New York. Dwarf H. P. and Standard Roses; Azaleas, Paeonies, and Flowering Shrubs, and Bedding plants, at Gardner's Rooms, New York.

Thursday, April 22.—Orchids at Cleary's Rooms.

Friday, April 23.—Sales will also be held as indicated above.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Mr. Thos. J. Kempton, for some time in charge of the greenhouses and gardens with Mr. Bottomley, at Biltmore, N.C., the country seat of G. W. Vanderbilt, Esq., has accepted a similar position at "Elmcourt," the country seat of W. D. Sloane, Esq., at Lenox, Mass., where Mr. William Griffin is superintendent.

Mr. W. M. Edwards, formerly of Peace Dale, R. I., and a regular correspondent of AMERICAN GARDENING, is now at 110 Prospect ave., Mount Vernon, N. Y.

Mr. W. F. McAra, who has been over fourteen years head gardener to the Charlemagne family, at Waterville, N. Y., is now out of his engagement consequent upon the appointment of his late employer as ambassador to Austria. Mr. McAra is a very capable gardener, and is now in New York City seeking another place.

Edward T. Bean, formerly with the Bool Co., Ithaca, N. Y., has been engaged to take charge of the greenhouses and grounds of the Hon. Henry W. Sage, of that city.

F. R. Piorkovsky, formerly gardener to the late Mrs. W. H. Vanderbilt, Staten Island, is now gardener to Mrs. Reynal, White Plains, N. Y.

W. Falbush, late with Mrs. Trevers, Yonkers, N. Y., is now in town seeking a position. Mr. Nicol, one of the assistant gardeners, succeeds Mr. Falbush as gardener to Mrs. Trevers.

Otto Busseck has been appointed to succeed the late Henry McCrowe, as superintendent of Parks at Paterson, N. J. Mr. Busseck has been for some time with Messrs. Siebrecht & Son.

Mr. Alexander McKay, whose violets and hybrid roses have made him famous, has a new house at the David Nevins estate in South Framingham. It is probable that the exhibitions of the Massachusetts Horticultural Society will now be treated to a greater variety of the products of his skill and we should not be surprised to see him among the strong competitors at the Chrysanthemum Show.

Mr. W. M. Edwards, whose name is familiar to our readers as a contributor, has resigned from Peacedale, R. I., and is in New York seeking a head place.

A Lady Landscape Gardener.

Miss Beatrice Jones, at E. 11th street, New York, has secured the appointment to lay out the new pleasure grounds, etc., of Trainor L. Park, Purchase, N. Y. The grounds cover over 30 acres.

American Judges to Go Abroad.

Julius Roehrs, Carlton Hill, N. J., and W. A. Manda, S. Orange, N. J., will officiate as judges at the great International Exhibition, to be held at Hamburg this summer. James Dean, Bay Ridge, N. Y., had to decline the honor for business reasons, having to move his plant this season.

New York.

The regular monthly meeting of the Gardeners' Society was held Saturday, April 10. President John Shore in the chair. Twenty-four members and others attended. R. Aisley and O. G. Owen were elected to membership; C. Weeber to associate membership. Four new names were placed in nomination.

In order to promote a larger exhibit of flowers, plants, etc., at the regular meetings, and to keep up the interest in them, it was decided to hold occasional competitive exhibits. The subjects are: For the gardener making the best exhibit of bulbous stock (first-class certificate). A similar award is offered for flowering shrubs, etc. At the June meeting herbaceous plants are to receive attention. A permanent committee of eight judges is to be elected. Three members were selected to draw up rules for judging, also to select others to act with them as judges. A. Welsing, A. J. Wenger and J. M. Hunter being elected with J. I. Donlan to assist in forming schedule, etc.

R. Angus, gardener to Major Hopkins, Tarrytown, N. Y., read an admirable paper upon the culture and care of Cinerarias, which was well received (considerable discussion followed).

The Exhibits.These were not quite as numerous as usual. Charles Weeber, gardener to Mrs. J. Hood Wright, Fort Washington, N. Y., exhibited garden Hybrids of Clivia miniata. These had remarkably large and handsome heads of bloom of considerable brilliancy. The same exhibitor also staged several trusses of *Luculia gratissima*. John Marshall, gardener to T. L. Park, Purchase, N. Y., exhibited *Blanche Ferry*, and Emily Henderson Sweet Peas. A Welsing, gardener to Mrs. C. F. Erhart, Brooklyn, placed on the table a well-grown *Solanaceous* plant of considerable merit as a decorative subject for summer, sub-tropical bedding. Seeds had been received from California, but as yet the name of the plant had not been determined.

As we go to press, a very successful meeting of the American Institute Farmers' Club is in progress. In the absence, through sickness, of Dr. F. M. Hexamer, the chair was taken by C. L. Allen.

The exhibition of forced fruits and vegetables was extremely interesting. Mr. Herrington's pot plants of Sharpless strawberries were wonderful examples. Archdeacon & Co. made a display of forced strawberries and vegetables, as they come to the market. W. Anderson showed Telegraph and Sutton's Progress cucumbers, large specimens; also mustard and cress in flats.

Radishes, Telegraph cucumbers, lettuces and beans were from A. L. Don. From the Arlington greenhouses of W. Rawson, came White Spire cucumber. J. Horrocks, of Poughkeepsie, sent an extensive collection of vegetables. Some tubers of imported Scotch Magnum Benuum potatoes were seen.

Soils and Potting.

Before the Massachusetts Horticultural Society, Saturday, March 20, T. D. Hatfield, of Wellesley, read an interesting paper upon the above subject, of which the following is an abstract:

"The subject is most important both from the gardener's and the farmer's point of view. Gardeners seldom agree, fully about the proper soil for any crop. Soil may be heavy or light, land high or low, with much variation of exposure. We often wonder at our neighbor's success under conditions where we should consider failure certain. An acquaintance of mine, a gardener of Cape Ann, told me that the only potting soil he could find was turf from what had once been a salt marsh. After it had been broken up and exposed to frost and air, he found he could grow almost anything in it.

"Sometimes we have a lot of soil spring that it cannot be cultivated until late in the season, and again a soil so dry that we must irrigate for all but early crops. A dry soil is easy worked, but holds sustenance poorly, and therefore needs frequent manuring. A heavy soil is probably best and holds manure better. By autumn

plowing and cultivating the ground in plots, one can bring it into good friable condition.

"We gardeners believe in 'leaving well enough alone,' and there are methods which we continue because it is the custom, though we cannot explain why. Much must be learned by experience.

"We read in old books, 'one-third of turfy loam, one-third of leaf-soil, and one-third of sand,' or it may be fourths, including rotted manure, or fifths, with peat added. This accurate measuring, however, is slow, and but few mixtures of soil are in use today. Leaf-soil, one of the best ingredients in any compost, is seldom used except in private gardens. Well-rotted manure is a good substitute. However, the soil should be light for potted plants and there is less danger from over-watering with the hose. Rose growers always find means of meeting the wants of the soil. They may add clay, but can generally do without it.

"With azaleas it used to be considered necessary to use English peat, and 90 per cent. of these plants are still so grown in England. But look at the azaleas grown by Mr. Sanders, gardener to Professor Sargent of Brookline, and you will see that azaleas can be grown in soil almost wholly lacking peat.

"There are other considerations almost as important as the soil and its consistency. For gloxinias I tried various kinds of soil, all to little advantage. With these plants much depends on caring for the tubers during the so-called resting season, though they are never absolutely at rest, and it is a mistake to remove them and store in dry sand. They should never become thoroughly dry, for living shoots will always be found which require some nourishment. Start with sound, healthy roots, withholding water until some leafgrowth is made, and keep near the light, and then gloxinias will succeed in almost any soil.

"I have but one compost heap. Good turfy loam is not plentiful, and some of us have found how to get along without it. Old country carnation growers are extremely careful in mixing their potting soil, but the American grower prepares his in the field without a foot of turf. The best method is to cultivate the area for strippling, growing thereon a crop of clover with no other object beyond turning the best of what is put into the soil as manure, into plant food of the kind which the carnation most needs. The American grower raises the better carnations, though it is true he has better light during winter time, has made a specialty of the work, and has originated a new type of carnations. This shows that the importance of a prescribed composition for soil is overestimated. I have grown chrysanthemums in soil from the common compost heap which were just as good as those grown in special soil.

"In the spring there is generally turf trimming to be done and I used to get enough in this way for a season's use; but now if I get a half-dozen cart loads of turf, I mix it with two loads of the best manure—sheep manure is preferred, as it is richer, so that less is required. This I put in layers alternately with pure ground bone; fermentation starts, and the soil is heated to 120 degrees Fahrenheit, which will kill all insect life and weed seeds and makes the bone meal available as plant food. Bone meal should be worked into the compost long before it is needed, as it is not fit for use until fermentation has subsided. It should never be used as a top dressing.

"I have said that light soil is best for potted plants, but a man may get along with heavy soil if he understands its management. Injudicious watering will lessen the value of the best compost, and lack of air and proper heat and moisture would ruin the best plants. In potting plants, have clean pots. If new, deodorize that is, expose to a rainstorm, or else fill with moist earth and leave for a day or two. This earth should not be used again. Next in importance is good drainage. The best material is crocks or broken pots. Coal ashes, though excellent for many plants, is bad for others.

"Plants which do the greater part of their growing in winter time, as well as those which remain a long time without repotting, require most care. All potting should be done firmly and for the most part by hand. Plants which grow quickly, ger-

animus, heliotropes, coleus and fuchsias—what gardeners call soft-wooded plants—need less care.

"The best of liquid manures for potted plants, to continue the productiveness of flowers or fruits after the natural resources of the soil have been exhausted, is the dregs from the barnyard. It is well to start with one-eighth strength and increase as experience dictates. Colorado sheep manure may be used at the rate of a peck to fifty gallons of water. Sulphate of ammonia and nitrate of soda, at the rate of one pound to fifty gallons, are really stimulants, and not lasting manures, and their action is quick of benefit as well as of injury. Liquid manures should be used only on healthy plants, and there must be free drainage."

Preserving Natural Beauty.

The man who buys a bare lot in a new village has no chance of profiting by Nature's previous occupancy. But those who know the value of her work will gladly pay \$50 more for a lot with a single fine tree than for a bare one. Sometimes the only natural feature of a plot is destroyed in building, for a mere whim concerning some feature of the house, or its location. Well may the village improvement associations give a section to the "Preservation of Natural Beauties," but no association can do this work for the individual. Here it is helpless, except as it can create that public sentiment which alone, oftentimes, can coerce the landholder. Free discussion of this and allied topics brings them to the notice of those who otherwise would scarcely know there was any difference of opinion, or any need of thought.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.
WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c. per bottle. Sold by all Druggists. Testimonials free.

WHEN you need legal advice, you go to a lawyer, and pay for it. Why? Simply because the lawyer keeps informed on law matters by reading reliable reports on new laws and decisions by the courts on matters of law in general. Law is his business; he keeps informed on it. You, as a farmer, need to keep equally well informed on your business. *The Rural New-Yorker* gives you the information. It costs only \$1 a year. We can send it and AMERICAN GARDENING both one year for \$1.80.



This book should be in the hands of all who wish to be successful in planting. It is a safe guide to right seeds and right methods. It makes you acquainted with

Gregory's Seeds

the purity and reliability of which are known to all successful planters. Gregory's Seed catalogue is sent free of charge to anyone anywhere.

J. J. H. GREGORY & SON,
Marblehead, Mass.

Mention American Gardening when you write.

Potash

is a necessary and important ingredient of complete fertilizers. Crops of all kinds require a properly balanced manure. The best

Fertilizers

contain a high percentage of Potash.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion:

A PRACTICAL working gardener, wants situation on private place, good references, moderate wages, strictly temperate. Address Palmer, 28 Gardiner Park, Rochester, N. Y.

WANTED, private situation for my thoroughly experienced gardener, especially good rose grower. Strictly temperate, married. Address, G. H. Perkins, 221 East Avenue, Rochester, N. Y.

SITUATION wanted as gardener's assistant by Scotch-American, 21 years of age, has worked 4 years on one place, is desirous of getting under good gardener, where he would learn. Address, W. H., care of Anchor Line, 68 Wall St., New York.

SITUATION wanted by thorough practical English gardener, twelve years' American experience, in all branches, roses and chrysanthemums a specialty, moderate wages, strictly temperate, first-class references, married, one child. Address Palmer, 28 Gardiner Park, Rochester, N. Y.

HEAD GARDENERS.—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 36 & 37 Cortlandt St., New York.

SITUATION wanted by a gardener and grower, 23 years' experience, conversant in all branches of business, especially grapes, roses, miscellaneous cut flowers, palms, orchids, mushrooms, ornamental bedding; would like position where neatness and accuracy are required, can furnish proof. H. N. Birth, care American Gardening.

GARDENERS, farmers, etc.—Employers desiring the services of reliable men to fill positions as above, are invited to correspond with us. On our Register are the names of excellent men whom we have known for a long time. No fee charged to any one.—R. & J. Farquhar & Co., Seedsmen, 16 and 19 South Market St., Boston, Mass.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

PRIZE WINNING DAHLIAS
\$1.00 per doz. Catalogue Free.

LOTHROP & HIGGINS, E. Bridgewater, Mass.
Mention American Gardening when you write.

ALL THE LATEST NOVELTIES
AND PLANTS THAT CAN'T BE HAD ELSEWHERE.
Cannas, Italia and Austria, at \$1 each.
New Roses, New Fruits, New Shrubs, New Bulbs.
10 Cents for \$1.—5 for 50 cts. Book on Cacti 110 pages, 120 cuts, 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free.
A. BLANC & CO., Philadelphia.

Mention American Gardening when you write.

Growing Tropical Nymphæas for Their Flowers.

Although the hardy species of water lilies are the best for cutting from, the tender one should also be grown on account of their showy, brilliant-colored flowers. There is a greater number of tender species and varieties than hardy ones. By hardy ones I mean those which can be left out of doors all winter north of the thirtieth degree of latitude. The tender kinds are very distinct in their manner of growth from the hardy species. Curiously enough it is those kinds which grow nearest the Equator that are least suited to remain for a long time in an absolutely dormant state. While none of the hardy species are suited to exist long in that condition, they may be said to be continually growing, except during the latter part of summer and autumn; after that period, if the rhizomes of any of the species are examined, the flower buds and leaves for the following season are plainly visible.

All of the tender kinds form little tubers when a few weeks old from seed, or, in the case of stolons about three weeks after being parted from a parent tuber. Both are capable of being thrown into a resting stage and they may be kept at about the same size so far as the tubers are concerned for a number of years. I have some of the identical tubers of the true sanzibarensis and N. gigantea, which were purchased from Sturtevant, of Bordentown, over six years ago, and yet these tubers have not increased in size during that period although they have given off plants every season since they were procured.

The day blooming tender kinds in forming large roots do not, as a rule, make small tubers; sometimes they will be formed on the rootstalks of N. acutifolia, and I have found them on N. gracilis and N. pulcherrima, but it is always best to depend on small tubers for their propagation. The night bloomers all form an abundant supply of small tubers, which does away with the necessity of keeping large plants over winter.

If those tubers be started now in the tank of a house to which the sun has free access, they will be large enough for planting out before the middle of May. Take, for instance a fair-sized tuber of N. rubra, N. devoniensis, N. dentata or any of the night-flowering hybrids which have lately been sent out, put it in a five-inch pot and cover it over with about an inch of soil, then another slight covering of sand; sink about six inches below the surface of the water, and the chances will be that six or eight stolons will be thrown up, all of which will make good-sized plants. They should be detached from the tuber only after they have made three or four fair sized leaves. N. dentata is white, N. rubra and N. devoniensis are reddish pink. They are the best of the night-blooming section for cut bloom purposes the hybrids being, as a rule, shy bloomers compared to the above.

Among the day bloomers, the Zanzibar section, consisting of the true dark purple N. sanzibarensis, the lighter colored N. Z. azurea, and the one with rose colored flowers N. Z. rosea, are very easily managed. Seeds of any of the above sown now will flower before the end of May. The South Australian N. gigantea produces an ideal flower, but it has the reputation of being difficult to manage. I have found no trouble in growing it, provided that the plants do not receive a check by being transferred suddenly from warm water to that of a much lower temperature. N. gracilis is white, but if grown in company with any of the sanzibarensis section the seeds are almost certain to produce plants with blue flowers resembling N. pulcherrima. N. mexicana and N. flava have medium-sized yellow flowers; both are hardy in this latitude, N. mexicana being by far the best of the two.

G. W. OLIVER, D. C.

"The Botanists of Philadelphia, and Their Work," by John W. Harshberger, of the University of Pennsylvania, has been finished in manuscript, and will soon be published. The work is very complete and interesting. It will contain about 500 pages of printed matter and fifty full-page engravings.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

"LUCK" WITH SITTERS.

Persistent ill luck, so-called, points pretty surely toward something wrong that might be righted. It goes without saying that forethought is better than afterthought, as well as generally cheaper, in the poultry yard. The forethought that would prevent ill luck here looks well to the nests, that they are free from vermin and of good shape. A nest so deep and small that the eggs form two layers means always broken eggs. The same may be said of the nest too large and flat for the one needed layer of eggs; and also of the hard nest, made without sufficient nesting material. Seclusion is a practical help to good luck. Solid shells save time, eggs and temper, as well as insuring more chicks. Grit and oyster shells are, therefore, as potent factors in successful hatching as in other portions of the work. Though all may have ill luck at times, continued ill luck is a disgrace which should not be endured.

COLOR OF YOLKS.

Neighbor A gravely informs us that the Leghorns always lay a pale egg, as to yolk, an egg plainly lacking in nutrition. Neighbor B affirms that he would rather have one rich, yellow yolked Brahma egg than two of any other. As a matter of fact, by denying the Brahmas their corn and clover, or grass, their eggs may be made as "innutritious"—in color of yolk—as a lemon. While, by adding these things to the fare of the Leghorns, their egg product may be made equal to the orange in color of yolk.

A SO-CALLED TEST OF FERTILITY.

"Did you know that eggs can be tested before you set them at all?" It was the novice who spoke. "Oh, you need not open your eyes so wide, it's true. See here! You just hold the egg up to the light, with your hand on edge above it. Now, look! Do you see that lighter spot? If you can see that the egg is fertile. You don't need to wait eight days, or four days." The novice was sure she had it all right. But isn't it funny that none of the men who have wanted to know for so long, never discovered that a visible air-space meant a fertile egg?

BUTTERFLY LILY AS A HOUSE PLANT.

Although the natural habitat of the butterfly lily is a hot marsh, it has condescended to do duty as a decorative plant in a temperature ranging from 45 to 65 degrees usually. For the purpose it is as good as a canna, if the plant alone be considered. Indeed, it is better than many cannas, as it is of manageable size. It makes a good background for delicate foliaged plants; it has scarcely lost a leaf throughout the winter season, and is making promising new growth at the present time. Of course, it has not yet bloomed, although we are assured that it will continue to bloom for a long time "if kept growing."

AN ORCHID FOR HOME GROWING.

Lycaste Skinnerii, now blooming in the window, is, at least, a standing refutation of the statement sometimes made, that no amateur can bloom orchids. With its large pink and white blooms (three to four inches in diameter), it is certainly a sort that would generally be chosen at sight; hence it seems rather strange that it should be one of the easier ones to manage. It is described in a well known list of orchids for beginners, as flowering usually "from January to April, after which a slight rest should be given, until the new growth advances an inch or two. Pot culture, with fibrous peat and a top dressing of moss as the material, a temperature of 55 to 60 de-

Blood Pure?

Is it? Then take Ayer's Sarsaparilla and keep it so. Isn't it? Then take Ayer's Sarsaparilla and make it so. One fact is positively established and that is that Ayer's Sarsaparilla will purify the blood more perfectly, more economically and more speedily than any other remedy in the market. There are fifty years of cures behind this statement; a record no other remedy can show. You waste time and money when you take anything to purify the blood except

Ayer's Sarsaparilla.

grees, partial sun and strong light and air, are the necessary conditions to give good results." This seems simple enough for any one who has a cool window, to follow. Orchid plants as collected are seedlings, it must be remembered, and are liable to variation, even as are our own seedling wild flowers. This Lycaste varies in general color from pale lilac rose almost to crimson, being heavily spotted with crimson in the throat. One may get exactly what one wants by selecting in person, when plants are in bloom. And fortunately this is not an expensive sort.

MYRA V. NORYA.

BLACK KNOT REMEDY

A sure cure for Black Knot on Plum Trees. Write for Catalogue. Agents wanted.

L. R. FREEMAN & SON, Charlotte, Mich.
Mention American Gardening when you write.

HATCH Chickens BY STEAM With the **EXCELSIOR Incubator**

Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatchery made. 625 E. 9th St. Circulars free. Send for this Catalogue. 114 to 122 E. 9th St. Quincy, Ill.

Mention American Gardening when you write.

HAMMOND'S "WHITE PAINT,"

For Outside or Inside Use on Greenhouses or other Buildings.

For 19 years this Paint has been in use for this specific purpose, and it is as indestructible as paint can be made. Put up in 5, 10, 15, 20 and 25 Gallon Kegs, and in Barrels of 50 Gals. B. HAMMOND, Fishkill-on-Hudson, N. Y.

Mention American Gardening when you write

PROFIT IN SPRAYING FRUIT

DEPENDS LARGELY UPON THE EMPLOYMENT OF BETTER METHODS.

SPRAYING Helps Amazingly.

We make everything used for SPRAYING and tell all about it in our Book on SPRAYING. Formulas for insecticides; when and how to spray—FREE.

THE GOULDS MFG. CO.
11 Ovid St., SENECA FALLS, N. Y.

Mention American Gardening when you write.

Select Carnations.

At the regular meeting of the New York Gardeners' Society, held on Saturday, March 13, C. W. Ward, of the Cottage Gardens, Queens, N. Y., gave an interesting and instructive talk upon carnations, for exhibition, and general purposes.

He pointed out that in a commercial variety early and continuous free flowering qualities were essential. There were some varieties that were "croppers," as, for instance, Buttercup and Bridesmaid, neither of which was a continuous bloomer; there was always an intermission in their flowering. The same was prevalent in Scott, though the intermission was not so marked as in some other varieties. This tendency to crop could be changed somewhat by pinching in the field; endeavoring to avoid cutting all the buds back at one time so as to prevent getting all the breaks together. There were also some varieties that can be "stumped" by checking and thereby thrown into flower.

Mr. Ward named the following carnations as being in his experience the best commercial kinds to-day:

PINK.—Scott, Daybreak, C. A. Dana and Tidal Wave.

WHITE (the most difficult list to lay out at the present time).—McGowan, Alaska, Storm King, Flora Hill and Harrison's White, the last one finding a place in the list on account of it being a sport from Scott.

VARIEGATED.—Mrs. George M. Bratt and Armazindy.

YELLOW.—Buttercup, Eldorado and Mayor Pingree.

SCARLET.—The only variety in this color the speaker had ever been able to make a commercial success of was Portia; it was the best commercial scarlet to-day, but, unfortunately, the flowers were too small.

As exhibition varieties, Mr. Ward enumerated:

PINK.—Bridesmaid, Daybreak, Maud Dean, Triumph, C. A. Dana and Victor.

WHITE.—Storm King and Flora Hill.

VARIEGATED.—Lily Dean, Mrs. George M. Bratt, Helen Keller and Armazindy.

YELLOW.—Buttercup and Mayor Pingree. Eldorado can also be grown, but it bursts its calyx. The speaker said he had obtained perfect flowers of this variety by placing a rubber band around the bud as soon as the flower began to show.

In regard to seedlings, Mr. Ward stated it was becoming a difficult matter to select the best variety to grow. It was utterly impossible for him to tell anything about a carnation until he had grown it sometimes three years. By studying the habits of many seedlings, it was possible to grow splendid flowers and obtain large crops.

In the discussion a member asked a question regarding Mayor Pingree carnation being opposed to heavy feeding—rich soil. Mr. Ward had seen the variety at the originator's place; there, he thought, the plants were fed regularly; the soil was rather heavy, somewhat of a clayey nature. He saw the plants about Thanksgiving; they were then in full flower. The stems were from 18 to 20, some 22, inches in length, and the flowers 3 inches in diameter. It seemed to him that a rich soil suited the variety. He thought the color a little bit too light; the stem and flower were right, and it was a magnificent keeper.

A question was asked relative to the propensity of Scott to burst at the present time. Mr. Ward said it was inexplicable, unless Scott was taking the downward course, which every variety of carnation takes after it has been forced for any considerable length of time. His impression was, the freer you have a variety, the more cuttings it produces, the greater the number of flowers you can grow from it, and the more you propagate it the sooner it goes down. Interrogated as to whether obtaining cuttings from different places would help the matter, the speaker replied that it might, and, again, it might not—it depended entirely where the cuttings had been obtained and whether or no the stock had been selected. In choosing a strain of Scott, for instance, he would prefer to go around the country and examine the plants; and specially in the cutting-bench, to ascertain how well the cuttings struck. Here a pretty good test of the vitality of a carnation could be obtained. If the cuttings

ARMSTRONG & McKELVY Pittsburgh.
REYNOLDS-BAUMAN Pittsburgh.
DAVIS-CHAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ANCHOR Cincinnati.
ROKSTEN }
ATLANTIC }
BRADLEY }
BROOKLYN } New York.
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MISSOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROOK Philadelphia.
MORLEY Cleveland.
SALEM Salem, Mass.
CORNELL Buffalo.
KENTUCKY Louisville.

PRACTICAL painters everywhere use and recommend Pure White Lead (see list of brands which are genuine) and Pure Linseed Oil because they make not only the cheapest but by far the best paint. In fact you cannot afford to use anything else.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free. Also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write

struck readily; if they came out green, without any spot or without any burning of the tips, it would be found that the vitality of the plant was unimpaired. One thing noticeable in the falling away of vitality was the difficulty with which cuttings could be struck. There was also a falling away of the productiveness of the plant when the striking of the cuttings was not affected at all; that is, the plant would grow to grass and not blossom much, if any. This had occurred in several kinds; in that case, the cuttings rooted readily, much more readily than when the plant was very productive. If one finds a variety, the cuttings of which are difficult to strike, he may make up his mind that something is wrong.

Chris Besold, Mineola, N. Y., made a few remarks about his new varieties, Mrs. Francis Joost and Nero. He said it was possible, by selection of good cuttings, to obtain improved plants of a variety that would appear to be a different strain altogether. He advised against using cuttings affected with bacteria. Plants attacked with spot, by proper attention, could be got into good condition again.

Among the exhibits shown were the varieties Mrs. Francis Joost and Nero, from Mr. Besold, the former being certificated; Maud Dean and Lily Dean, from John N. May; the latter was awarded a certificate. H. Molatch, Bay Ridge, sent two seedlings, red and white, receiving honorable mention for same.

Kansas Growers are discussing the question of co-operation in marketing at distant cities. If the plan should be adopted by a majority of small fruit growers, it will greatly relieve congested home markets, and afford better rates to distant and larger cities. The plan is simply for the growers to unite in filling the car, each one's fruit going to market on its own merits, and individual returns made accordingly.

Bouvardias.—The treatment of these when done blooming must look to the growth of stocky plants, well furnished with branches, for next season's bloom. To this end they may be kept rather cool and dry for a few weeks, after which they are to be well cut back and kept warmer, with a moist atmosphere. As soon as they are well started let them be carefully shaken out and repotted. As they grow the young shoots may be pinched to form shapely plants, and shifts made, if in pots, until midsummer. Or, perhaps better, they may be put in the open ground, pinched every two or three weeks and carefully potted up at the beginning of September, giving shade and water plentifully for the first few days.

HENRI BEAULIEU, Seedsman and Florist, Woodhaven, N. Y. Price list free. Mention American Gardening when you write.

ROSES

\$2.00 per doz.; \$20.00 per 100.
 Large 3 year old, field-grown plants of Hybrid Perpetual, Hybrid Tea, Moss and Climbing Roses. All the best varieties true to name. Write for catalogue. W. E. WALLACE, Nurseryman, Hartford, Conn. Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

GLADIOLUS BULBS.

Very fine mixed, 25c. per doz. Superb Seedlings, mixed 25c. per doz. White and Light, 30c. per doz.; \$1.50 per 100. Isaac Buchanan, fine yellow, 30c. per doz.; \$1.50 per 100. Marie Lemoine (Orchid marked), 25c. per doz.; \$1.25 per 100. Marie Lemoine Balbista (mostly bloom 1st year), 50c. per 100; 65c. per 500. 10 named varieties, each different, 50c. 20 named varieties, each different, \$1.00. All post-paid. Price list free. Cash with order.

JOHN FAY KENNEL, (Grower),
 Box 405, Rochester, N. Y.
 Mention American Gardening when you write.

FLOWER QUERIES.

A book written in Questions and Answers, discussing 500 topics on flower culture, in ten chapters as follows: Chap. I.—Soil and general cultivation. Chap. II.—Bulbous Plants. Chap. III.—Lilies, Culture and Management. Chap. IV.—Roses. Chap. V.—Vines or Climbers. Chap. VI.—Shrubs. Chap. VII.—Ferns and Palms. Chap. VIII.—Insects and Diseases. Chap. IX.—Miscellaneous Queries. Chap. X.—Floral Hints. Every one who loves and cultivates flowers needs it. PRICE 25 CENTS.

THE COURIER, Chatham, N. Y.
 Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.
 Mention American Gardening when you write.

WHOLESALE MARKET REPORT

New York.

The trade in cut flowers has been poor; stock has been very abundant, buyers slow and prices low. In pot plants it has been the reverse; the demand for Easter deliveries has been very large, and prices of former years have been well maintained.

The volume of stock coming into the vegetable market is now very great, yet withal the market cleans up well each day, and fair prices are obtainable.

The general condition of the apple market is better, and fancy apples have realized an improved price. Some Greening, Ben Davis and Northern Spy made as high as \$3.50.

Strawberries are coming to the market in greater quantities, but for some reason there seemed unusual difficulty in getting them to market in saleable condition, consequently all prices are ruling low.

Hothouse strawberries are falling in price a little owing to the full supply of Southern berries now in; prices this week are down to \$2.25 per quart for No. 1, and 30c. for No. 2.

Cucumbers are moving very freely at figures varying from 75c. per dozen to \$1.12 for No. 1. Mushrooms are selling much better than they were; prices this week run from 30c. to 50c. per lb.

Hothouse tomatoes, 30c. per lb.

Radishes \$1.50 to \$3.50 per 100 bundles.

Hothouse lettuce are hardly as stiff this week as before reported, 75c. per dozen being the average top figure for fancy unless for a few very special heads.

Asparagus is stiffening, sales being made for special stock from \$3 to \$5.00 per dozen bunches.

Bermuda parsley, per box, \$1.00 to \$1.25. Romaine, \$1.25 per 24 heads; onions, No. 1, per box, \$2.25 to \$2.50; No. 2, \$2.00.

Apples,

Receipts for week..... 12,970

Receipts since Sept. 1..... 1,298,852

Receipts same time last year..... 669,980

Exports for week..... 8,949

Exports since Sept. 1st..... 585,939

Exports same time last year..... 264,776

Greening, cold storage, fancy, per bbl. \$3.00 to \$3.50

Ben. Davis, cold storage, fancy..... 2.50 to 3.50

Northern Spy, cold storage, fancy..... 2.75 to 3.50

Baldwin w'n N. Y., choice, per bbl. 1.62 to 1.75

Strawberries,

Charleston, ice boxes, prime to fancy..... 25c to 30

Charleston, open crates, good to choice..... 20c to 25

Florida, refrigerator freight, prime per qt..... 20c to 25

Florida, refrigerator freight, poor to fair..... 10c to 15

Florida, ice boxes, prime to choice, per qt..... 18c to 20

Florida, ice boxes, fair to good, per quart..... 12c to 16

Florida, ice boxes, inferior, per qt. 8c to 10

Potatoes,

Receipts Since S'me time

Domestic, bbls..... 22,470 787,714 1,032,648

Great Britain, sacks 8,066 11,347 5,986

Continent, sacks..... 4,757 5,986

Bermuda & W.I. bbls 986 8,806 9,144

State old potatoes have been quiet and show a weaker tone. Eastern in light supply; fancy have some call for seed, but there is no important outlet at top figures on current trade wants. Bermuda new, firm. Florida new, meet a good demand when well grown and well culled.

Bermuda, No. 1, per barrel..... \$3.00 to 9.50

Florida, new, No. 1, per barrel..... 5.00 to 6.00

Scotch Magnum, per sack..... 1.00 to 1.25

Maine Rose, per sack..... 1.25 to 1.35

Maine Hebron, per sack..... 1.20 to 1.30

Vegetables,

Asparagus, Ch'n, Colossal, per doz. bchs..... — to \$5.00

O'h'n, choice, per doz. bchs..... 3.50 to 4.00

Norl., prime to choice, doz..... 3.50 to 4.50

Beets, Florida, new, per bush. crate..... 75c to 1.00

Cabbages, Charleston, per bbl. crate 1.25 to 1.75

Florida, p'me per bbl. crate..... 1.25 to 1.50

L. I., per 100..... 2.00 to 4.00

Celery, Fla., large to extra, doz. stalks..... 1.00 to 1.25

Cucumbers, Florida, per carrier..... 2.50 to 4.00

Eastern, per dozen..... 75c to 1.00

Kale, Norfolk, per barrel..... 40c to 60

Lettuce, Fla., prime, per ¼-bbl. basket..... 2.00 to —

Lettuce, Eastern, per dozen..... 50c to 75

Onions, red, per bbl..... 4.00 to 5.00

Onions, yellow, per bbl..... 3.50 to 4.50

Bermuda, per crate..... — to 2.25

Peas, Georgia, per bush. crate or basket..... 1.00 to 1.50

Charleston, per basket..... 1.00 to 1.75

Radishes, Norfolk, per basket..... 50c to 60

String beans, Fla., green, exp., cr. 1.25 to 2.00

Spinach, Norfolk, per bbl..... 75c to 1.25

Baltimore, per barrel..... 90c to 1.00

Squash, Florida, per bushel-crate..... — to 1.25

Tomatoes, Fla., prime to fancy, per carrier..... 3.50 to —

Key West, per carrier..... 1.50 to 3.00

Turnips, Canada, Russia, per bbl. 80c to 65

You Can Eat

Campbell's Early Grapes without eating the seeds. The pulp is sweet to the centre, so the seeds are easily separated without making the tongue sore, as common grapes do.

CAMPBELL'S EARLY GRAPES

are unusually hardy and vigorous. Largest clusters, finest quality. Ripen early and keep late. None genuine without our seals. Elegant Catalogue free.

GEO. S. JOSSELYN, FREDONIA, NEW YORK.

Mention American Gardening when you write.

Philadelphia.

Business has been very good in this market during the past week; all kinds of stock moving well.

Apples are being held much firmer, and the stock now received is better than that of two weeks ago.

Strawberries, Florida, are more plentiful and of improved quality, these now being 30c. per quart.

Lettuce is still scarce, and remains firm, very few receipts from Florida. Some nearby frame grown is coming in, and sells at 50c. to 60c. per dozen.

Tomatoes are still somewhat scarce, very few hot house are arriving, and these sell at 30c. to 35c. per pound.

Mushrooms clean up well at 25c. to 40c. per pound; receipts have fallen off.

Bermuda potatoes are arriving in small lots, and are held at \$8 to \$9 per barrel, with very few buyers.

Radishes are becoming quite a glut, and scarcely pay freight charges.

Asparagus is more plentiful, and is moving freely, but a large quantity is of inferior quality.

Apples,

Baldwin, fancy, per bbl..... 2.00 to 2.25

—Fair to good, bbl..... 1.35 to 1.60

Ben Davis, fancy, per bbl..... 1.75 to 2.00

Willows, fancy, per bbl..... 1.75 to 2.00

Russets, fair to good, per bbl..... 1.35 to 1.50

Vegetables,

Asparagus, per doz. bunches, No. 1. 3.00 to 3.50

—No. 2..... 1.75 to 2.00

Beets, Fla., per bushel basket..... 75c to 1.25

—Charleston, per 100 bunches..... 3.75 to 5.00

Cabbage, Fla., per bbl. crate..... 1.75 to 2.00

—Charleston, per bbl. crate..... 2.25 to 2.50

Celery, California, per doz..... 50c to 75

—Fla., large, per doz. stalks..... 1.00 to 1.25

Cucumbers, per crate..... 4.50 to 5.00

Kale, Norfolk, per bbl..... 40c to 60

Lettuce Fla., ¼ bbl. basket..... 2.00 to 2.50

—N. C., per bbl..... 4.00 to 4.50

—Local, frame grown, per doz..... 50c to 60

Onions, Eastern white, per bbl..... 6.00 to 7.00

—Yellow, per bbl..... 4.50 to 5.00

—Red, per bbl..... 4.50 to 5.00

—Bermuda, per box..... 2.50 to 2.75

Peas, Fla., per bushel box..... 2.50 to 2.75

Radishes, Charleston, red, per 100 bunches..... 50c to 1.00

—White, per 100 bunches..... 1.00 to 1.50

String Beans, green, per box..... 1.25 to 1.50

Spinach, Norfolk, per bbl..... 1.00 to 1.25

Squash, Fla., per crate..... 2.50 to 2.75

Tomatoes, Fla., fancy, per crate..... 3.75 to 4.00

—Fair to good..... 2.75 to 3.25

—Hot house, per lb..... 30c to 35

Egg plant is arriving in large quantities, and are held firm at \$3 to \$3.50 per crate.

Boston, Mass.

The demand for hothouse cucumbers is much better than it was a week ago, but the supply is lighter owing to the dull and cloudy weather; prices have remained unchanged, however, and the stock is not lying around, being quickly taken care of at \$8 to \$10 per hundred.

Hothouse lettuce remains in quick demand, little more offered and 75c. per dozen is ruling price.

Mushrooms are unchanged at 75c. per pound, but more inquiry.

New beets evidently please the consumers because the healthy demand continues, with price \$2 per dozen bunches.

Florida cabbage practically unchanged, \$1.50 to \$2.00; there is a good demand for the old stock, but quite a good deal showing up with "split" heads, therefore harder to place at over 50c. per bbl., or about \$10 a ton; while the red cabbage brings \$1.75.

The little Hubbard squash offered, easily brings 2½ to 2½ cents per pound.

Massachusetts onions still remain in the "corner," but the larger supply of Bermuda stock has weakened their position, so that more are sold at \$6 perhaps than at any other figure; Bermudas \$2.50 per crate.

Nothing new can be said about Romaine, \$1 to \$1.25 per dozen heads; the general trade is unacquainted with the article.

While Florida celery has given satisfaction it is in light demand at \$5.50 per dozen, owing to so many other things taking its place.

Old carrots and beets are unchanged at \$1.50 a bbl.; little more inquiry at \$1.25 per bbl. for turnips; parsnips pleasing many a good man at \$1 a bu.; white or red radishes 50c. dozen bunches. Readers must understand these are nearby stock, grown under glass, brought in fresh and washed every morning.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

DAHLIAS. 500 varieties. H. F. Burt, Taunton Mass.

HULSBOSCH BROS., bulbs and plants, Englewood, N. J.

DAHLIAS! Prime strain of 100 named exhibition varieties, 10 for \$1. A. H. Brown, Westboro, Mass.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedsman, Rochester, N. Y.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 466 W. Broadway, New York

THE "RIDGEWAY."—A new strawberry of great merit. For price of plants and free catalogue address M. H. Ridgeway, Washak City, Ind.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

EGYPTIAN or Top Onion sets cheap; one dollar per bushel in any quantity; purchaser to pay freight. W. W. Thompson & Sons, Station D, Milwaukee, Wis.

THE "IRON AGE" Garden Tools are light, strong and work "just right." High steel wheels, tubular frame, malleable castings. Write for catalogue. Bateman Mfg. Co., Box 208, Granloch, N. J.

VIOLETS.—A few thousand left, young well-rooted plants Lady Campbell, the sweetest double violet. Flowers seven months in the year, succeeds everywhere, \$1.00 per 100 postpaid. C. E. Price, Smithtown Branch, N. Y.

CEDAR OIL INSECTICIDE, better and cheaper than fir-tree oil, \$2.50 the gallon; \$1.00 the quart. Cedar Oil Soap, pound tins, 50 cents; half pounds 25 cents. Sold by seedsmen and florists. August Rolker & Sons, New York, P. O. Station E.

CALIFORNIA PRIVET make the finest ornamental hedge and are perfectly hardy. Strong plants one to three dollars per hundred. Atlantic Coast Nursery, James H. Cornell, Proprietor, 606 4th Ave., Asbury Park, N. J. Reference 1st National Bank of Asbury Park.

SUCCESS, an early market berry, a seedling of the Bubach, fertilized by Michel's Early. Perfect blossom, an improvement on Bubach in size, firmness and quality. Early and productive. Dossa, 40 cts.; 100, \$1; 1,000, \$6. Address Originator, Geo. N. Hannah, Whigville Conn.

CLEMATIS PANICULATA, best Clematis, blooming size, mail, 25c. each, \$3.50 doz., Japanese Memorial Rose (Wichurana), mail, 10c. each, \$1.00 doz.; Columbian Rasp., new, tips, mail, \$1.00 doz.; London, best hardy red, mail, \$1.00 doz.; Munger, best and largest black, mail, \$1.50 doz. E. Y. Teas, Irvington, Ind.

HOME GROUNDS, HOW TO LAY OUT.—The most perfect plan ever given the public, by which to lay out an estate of one to ten acres or more. We give the cardinal principles which govern the art so clearly that all may easily understand. Heavy paper, safely packed, postpaid, for 25 cents. It will pay you to study this plan. American Gardening, P. O. Box 1697 New York.

THERMOMETER WITH WEATHER GLASS.—One of the best combinations ever offered. Thermometer is specially scaled for greenhouse use, and we warrant it. Weather Glass is very correct, indeed. Both sent, prepaid, for two new subscriptions or 60 cents in cash. Highest recommendation from the trade and experts generally. You should not be without the combination one week longer. American Gardening, P. O. Box 1697, New York.

FOR SALE.

Two large greenhouses; fine residence; No. 1, 4½ inch flowing well, 395 feet deep, 16 lbs. pressure; 7 acres of land, good soil; in city limits. Flowers a specialty. Address

J. K. LOSS, St. Peter, Minn.

Mention American Gardening when you write.

Bermuda potatoes not in over-supply, bringing \$10 a bbl.; Havana \$8; Maine State Hebrons 45c. a bu.; this advance has come on account of muddy roads in the country and not from any scarcity of stock. Speculators please take notice.

Dandelions plentiful and with beet greens bringing 75c. bbl. per bu. This city is very partial to these two articles and there never is a time but what they find a large sale. Norfolk spinach in lighter supply, consequently little higher prices rule. The same can be said of kale; rhubarb is easier, owing to the large quantities of Southern Illinois stock sent here by the Chicago speculators; hothouse brings 607c. a lb., with Illinois stock 304c.

Consumption of asparagus very large; receipts heavier and \$3.45 would be good quotations and at these figures this city can take much stock.

Leeks 75c. a dozen. Artichokes \$1.50 a bushel. Oyster plant \$1.50 a dozen bunches. Florida beans \$2.50/3.00 a crate.

The supply of egg plant was better in quality this week; price remaining unchanged at \$1.50 a dozen. It seems as if everybody wanted a few egg plants to eat.

Horse radish 8010c. per pound for large roots; Western stock 5c.; parsley \$1 a bushel.

Quality of Florida strawberries this week exceeded anything we have had. Supply not so large and 35045c. the ruling price; Charleston stock near at hand and people are thinking they will soon have some very nice berries.

Tomatoes, being red, set off a table so that the hotels almost need them, let alone any one's appetite, and are quite willing to pay 35045c. a lb. for hothouse or 4005 per carrier for Florida stock.

Stories are circulating that New England apples are not to be found in such quantities as was expected, that we are wakening up and finding no apples here; while choice repacked Baldwins or russets are bringing \$1.50/1.75 we should be a little careful about quoting those figures unless it was understood stock was fancy; choice spies in good demand at \$2.00/2.25, with gilt edge \$3045 per bbl.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*We cannot undertake to reply by mail.

VIOLETS FOR NEXT YEAR.

W(Are the violet plants which are in the hot house now, good to carry over and put back next year, or must new ones be started.—G. L. S. BUCK.)

—Cuttings need to be made at once to make new stock plants. The old ones are worthless a second year.

LETTUCE RUST.

(What can I do to prevent my lettuce from rusting in the greenhouse?—A SUBSCRIBER.)

—The trouble may lie with either the soil or the management of the house; watering, cleanliness, and proper ventilation have been in some way neglected. When it is the soil, there is nothing left to be done but cart the old soil out entirely and bring in an absolutely new supply.

RAISING AZALEAS.

(Can you give any information regarding the raising of Azaleas from slips in the house? I am very successful in having the old ones bloom in winter, but would like to start some more.—M. W. BROOKS.)

—Raising Azaleas from slips is a slow and tedious process, and needs a greenhouse, and even then it takes several years to make a plant. The wood that makes the best cuttings is new growths or half ripened points, these are dibbled in sand in the usual way, and kept close, either by bell glasses or pieces of glass over a box, in a temperature of 55° to 60°.

REPAIRING PIPES.

(What is the best way of fixing hot water pipes in a greenhouse that have been frozen and burst? Would cement covering be substantial and not obstruct their heating capacity?—B. ROSS, Ohio.)

—There is nothing else left to do but put in new sections. No patching or covering is ever satisfactory or safe. In an emergency, binding made from an old rope or something of that nature, covered with red lead, will assist, but only till the section can be got in. Cement is useless, even if you succeed in making a perfect covering over the broken parts. Later, by expansion and contraction, the adherence becomes imperfect and leaks follow; further, if it were possible and much of the pipe surface was covered, a large percentage of heat would be lost.

Hardy Flowering Plants.

Spring is at hand, and the time is fast approaching when the preparation of the flower garden must receive attention. The question is always asked: What shall I plant different from previous years? To this we will reply: Plant a collection of Hardy Perennials, which will give a continuous bloom, varied in color and form, throughout the season. With a very small outlay a most desirable collection can be secured, which will be a continual source of beauty from year to year. We offer twenty of the most popular varieties, which we will furnish at the prices attached, or will send them all for \$2.50.

Achillea The Pearl.....	\$0 15	Heuchera sanguinea.....	\$0 20
Anemone japonica Whirlwind.....	20	Iris germanica Mad. Chereau.....	15
Aquilegia chrysantha.....	20	Lychnis semperflorens.....	15
Campanula persicifolia alba plena.....	25	Monarda didyma.....	15
Coreopsis lanceolata.....	15	Paeonia double, in variety.....	25
Delphinium formosum.....	20	Palaver orientale.....	15
Geilardia grandiflora.....	15	Phlox, choice named varieties.....	15
Gypsophila paniculata.....	20	Pyrethrum roseum, double.....	25
Heliosia Pitcheriana.....	15	Rudbeckia Golden Glow.....	25
Hemerocallis Kwanoo plena.....	15	Veronica longifolia subcaerulea.....	20

PITCHER & MANDA, JOHN N. MAY, Short Hills, N. J.
RECEIVER.
Mention American Gardening when you write.

BOWKER'S FERTILIZERS

for HOUSE PLANTS,
LAWNS, GARDENS,
FARM CROPS.

A book on "Window Gardening,"
and enough odorless fertilizer
for thirty plants three
months, sent by mail for

25c.

Catalogue free. State for what purpose fertilizer is wanted when writing.

BOWKER FERTILIZER CO., Boston.

Mention American Gardening when you write.

For Many Years

Well-posted buyers in all parts of the country have made our Nurseries their source of supply for

NEW AND RARE TREES, SHRUBS, RHODODENDRONS, AZALEAS, EVERGREENS, PERENNIAL PLANTS and every hardy variety of the choicer garden subjects which critical growers of taste are always looking for. Our new Catalogue, 170 pages, is full of interest to the amateur, and to every one who seeks the best for garden or grounds. In it will be found many things quite rare, and not generally offered.

Any buyer can get from us Plans and Suggestions for the arrangement and planting of grounds.

THE SHADY HILL NURSERY Co.,

102 State St., Boston, Mass.

Mention American Gardening when you write.

MUSHROOMS OFF COLOR.

(In the market reports in a recent issue it said that many mushrooms are off color, and consequently do not bring full price. How can you water a bed in bearing and not have them off color?—W. R. MESEROLE.)

—When mushrooms are off color it is usually the result of poor cultivation, too great variation of temperature, too much water, and an excess of light. Some growers cover their beds with clean straw to darken the bed and water through, and it is a good plan. Others find they can do as well without it, and manage to produce mushrooms white as Lillies. This they bring about by securing the proper amount of moisture in their beds in the beginning, and thus are saved from having to apply much moisture afterwards. And they are also particular to keep their temperature steady at from 56° to 58°, and at the same time they are careful to exclude all light.

INTENSIVE CULTIVATION OF RASPBERRIES.

(Please give directions for preparing ground, planting, and after culture, on the intensive plan, of red raspberries.—CUTHBERT.)

—The intensive plan of growing raspberries would differ somewhat according as to whether it be looked at from a market standpoint or for home use, although the preliminaries may be the same, by preparing the land as for sweet corn, only in a more moist location, if possible. Plant in rows five feet apart, and the plants one foot in the lines, or plant in hills 4x4 feet, three canes in a hill. Cut the plants back to six inches from the ground. The plan consists in making every part of the work from time of planting till by striving for best quality, appearance, and quantity. Thus in a nearby village (within 35 miles of New York) and

throughout the summer peddlers of all kinds of fruit are plentiful, peddling not country fruit, but that which had been shipped to the cities perhaps a few days before. Right in the village is a man and his wife; they have about an acre of strawberries, and they cannot supply the demand from private houses, and that at an advance in price of several cents on the store price. This man is working on the intensive plan.

TOP-DRESSING RHODODENDRONS.

(Will you kindly tell me the best fertilizer I can spade into a Rhododendron bed this spring?—CONSTANT READER.)

—Rhododendrons will not stand the application of any strong fertilizer at any time. If you can give a top dressing of thoroughly spent manure or half decayed leaves either would be excellent. Do not spade in, however. What Rhododendrons really do require is very heavy watering in June and July.

PLANTING DAHLIAS.

(To G. S., Brooklyn, N. Y.)—For your purposes it is immaterial whether tubers or started plants be put out, the only difference being that tubers should be put in at once.

Fire in a Nursery.—The Green Nursery Company, Rochester, has suffered a heavy loss by fire in one of the packing sheds. The loss is estimated at \$10,000, with only \$4,000 insurance.

Statens Island, N. Y.—Assemblyman George Garby has introduced a bill providing for the establishment of a public park near Silver Lake.

OUR PREMIUMS ARE OFFERED

doing we expect them to obtain the new subscriber and retain the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. New names sent in direct are, of course, also entitled to our premium offers. Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

THE THREE BEST CANNAS KNOWN.

Austria, Italia and

Mrs. Fairman Rogers

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed Madam Crozy type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of Mme. Crozy, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{4} \times 1\frac{1}{4}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.

ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. Austria is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. Italia as flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the Gladiolus, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of Austria with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 83 growths, and attained a height of 43 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and Italia were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.

Plants ready for shipment on and after May 15th, but to avoid delay this premium should be earned now, as thousands will want it.



OFFER

No. 66.

CANNA
ITALIA.

OTHER PREMIUMS NOT ADVERTISED HERE ARE:

Yellow Rambler Rose. The Hardest Climbing Rose ever introduced, and the Novelty sensation of 1897. The demand for this new rose is something phenomenal; readers wishing one should be early with their subscription.

New Hybrid Sweet Briars. Every garden should possess a group of these beautiful hardy Roses—prolific bloomers; sweetly scented; beautiful; hardy; vigorous growers; free from disease and the attacks of insects.

Standard and Small Fruits, offered by growers and specialists from various parts of the country.

Strawberry Plants. The offers in this line embrace all the standard well established sorts and many Novelties. No garden should be without a strawberry bed, and in no way can a collection be obtained so easily.

IF YOU ARE INTERESTED IN ANY OF THESE OFFERS SEND US A POSTAL CARD FOR FULL DESCRIPTIONS.

Our Premium Offers open the way to all who want a fine garden, but lack the means wherewith to buy.

Offer No. 35.

SENT postpaid, for ONE NEW subscription at \$1.00

...BEAUTIFUL...

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Flaman Cochet
Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Mermet

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, off finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

Offer No. 47.

Sent, Postpaid, for one NEW Subscription at \$1.00.

NEW GIANT FANCY COSMOS

(MRS. SHEPHERD'S STRAIN).



Mrs. Shepherd's New Fancy Cosmos was offered for the first time last season, but this is the first time they have been offered, put up in separate colors, as here described:

Of this strain, five packets of which are offered in this collection, the grower, Mrs. T. B. Shepherd, of Ventura, California, says:

"No one else grows it, and it is so distinct as to be readily recognized anywhere by one who has once seen the different varieties in bloom. I have been working with it so long that it has an individuality peculiarly its own."

One packet of the above, in splendid assortment, containing over 35 varieties of beautiful flowers, in all shades of red, pink, mauve, tinted and white... 15c.

Three packets of above, in separate colors, Red, Pink and White, one packet of each, at 15c. 45c.

"Tints of Dawn," one packet of above, lovely tinted flowers, white ground, delicately tinted or flecked with pink or mauve in lighter or darker shades..... 15c.

Curled and Crested ZINNIAS, splendid mixed, one pkt..... 10c.

These are the gayest, brightest and most esthetic bedding flowers imaginable, all colors and shades, with petals daintily curled and crested, having none of the coarseness of other Zinnias.

IPOMCEA, Heavenly Blue, one pkt..... 10c.

A perfect dream of beauty.

SCABIOSA, New Large Flowering, red and pink varieties, mixed, one pkt..... 10c.

These are very beautiful.

Total Value.....\$1.05

The Choicest Collection of Seeds ever sent out for the money; a poem in flowers and a revelation in nature.

Offer No. 60.

CACTUS.

The following collection will be sent for one new subscription at \$1.00, with 35 cents additional to prepay express charges. The plants offered are worth \$2.00 at retail, and come from a noted collector.

One plant each of

<i>Astrophytum myrtilloides.</i>	<i>Echinocactus setispinus.</i>
<i>Anhalonium lewinii.</i>	<i>Berlandieri</i>
<i>Mamillaria discipulus.</i>	<i>Opuntia Engelmannii.</i>
<i>Hederil.</i>	<i>Senilis.</i>

Offer No. 42.

For one NEW subscription at \$1.00, receiver to pay express charges, or by mail, postpaid, for \$1.25.

25 NIAGARA GRAPE VINES

Comment on this offer is unnecessary, beyond stating the fact never before was such an opportunity offered to start a vineyard at so small an outlay.

Offer No. 54.

THAT GRAND NEW SINGLE VIOLET

PRINCESS of WALES



Away and beyond the best of all the single varieties lately introduced. The Queen of Single Violets. Fragrance equal to Marie Louise. Blooms very large, strong grower and productive. Grower, who is one of our most renowned violet experts, will send, postpaid, for one new subscription,

Eight (8) good rooted plants, with some flowers accompanying same; carefully packed for safe arrival. Plants ready for delivery now. Grown in New York.

Offer No. 43.

DAHLIAS

The recent revival of interest in this most worthy class of plants, coupled with the introduction of many new and interesting varieties, renders it incumbent on every one to see to it that their garden is supplied with the best obtainable.

Any one of the three collections here offered will be found up-to-date and choicest kinds, and as they come from celebrated growers and prize winners, we can assure our friends we are offering them a remarkably good thing and trust they will not be slow to take advantage of one, or more of these offers.



A—Four Superb Cactus Dahlias.

One strong root each, Wm. Agnew, Oriental, Nymphæa and Zulu, by mail, postpaid, for one new subscription.

B—Four Show and Fancy Dahlias. (Dwarf)

One strong root each, New Double Tom Thumb, Arabella, Blumenfalter and Lucy Fawcett, by mail, postpaid, for one new subscription.

C—Four Pompon or Bouquet Dahlias.

One strong root each, Elegante, Sprig, Ariel and Vivid, by mail, postpaid, for one new subscription.

Any one of these collections is worth over \$1.00 at retail, but will be sent postpaid, carefully packed, and guaranteed to arrive in first-class condition for one NEW subscription to AMERICAN GARDENING at \$1.00. Order by Offer No. and Letter.

Offer No. 64.

POTATOES

One half pound each of the four following varieties sent, postpaid, for one new subscription:

Early Michigan.
Early Fortune.

Carman's No. 3.
Livingston's Banner.

Two pounds or eight potatoes in all.

Option: One pound Early Michigan, or two pounds of any one of the other three varieties. Grown in Michigan.

OUR PREMIUMS ARE OFFERED

with a view to interesting present subscribers to obtain us New Subscriptions, and for so doing we expect them to obtain the new subscriber and retain the premium. If the subscriber they procure wants a premium (and he doubtless will,) he, in turn, should interest himself in the same way. New names sent in direct are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

Offer No. 68.

FLOWER SEEDS.

NONE BETTER.

This entire collection of twenty packets of choice Flower Seeds, offered by a reliable seedsman, will be sent, postpaid, for one new subscription at \$1.00.

One packet each of the following varieties:



Ageratum, blue; Aster, Queen of the Market, mixed; Aster, White Comet; Truffaut's Peony Perfection, mixed; Balsam, Camellia, mixed; Candy tuft; French Cannas, mixed; Gypsophila, elegant white; Mignonette Machet; Poppy, double mixed; Pansy Trimardeau; Petunia, single mixed;

Phlox Drummondii, dwarf, mixed; Stocks, double white; Verbena, fine mixed; Zinnia, elegant double, mixed; Sweet Peas; one packet each Emily Henderson, Blanche Ferry and King of the Blues; also one oz. of Sweet Peas, mixed.

Offer No. 67.

Two plants each of....

Logan Berry, *Rubus sorbifolius* and Japanese Mayberry.

By mail, postpaid, for one new subscription.

The Logan Berry (Raspberry-Blackberry) is a decided novelty, and promises to be a valuable addition to our fruits. The plants are described as unlike either the Raspberry or Blackberry, and are of low growing habit with fine soft spines, like those found on Raspberry plants; leaves of deep green color, coarse and thick, more like those of the Raspberry than Blackberry. The fruit is as large as the largest size Blackberry, is of the same shape, with globules similar to that fruit; color, when fully ripe, a dark rich red. It partakes of both the flavors of the Raspberry and Blackberry, being a combination of the two mixed, a very pleasant, mild, vinous flavor, delightful to the taste, not found in any other fruit, but peculiar to this alone. It is excellent for the table, eaten fresh or cooked, and for jelly or jams without an equal. The fruit is firm and carries well, seed small and few. The vines are enormous bearers. Ripening very early—beginning with Strawberries and the bulk or nearly all, ripe and gone before Raspberries become plentiful, rendering it a very valuable fruit for market. Genuine stock very limited. Beware of seedlings offered by some.

Rubus sorbifolius (Strawberry-Raspberry). While the fruit is regarded with favor by many, we would commend the plant most as an ornament for a corner of the garden or lawn, where a strong rampant growth is required. Its snow-white blossoms are very fragrant, and the plant is covered with beautiful fiery crimson translucent berries from early in July until frost.

Child's (Burbank's) Mayberry. An improved variety of the Mayberry, the result of a cross with the Cuthbert Raspberry, and described by the introducer as the most remarkable of all fruit novelties ever introduced. It grows in sturdy form six to eight feet high, and ripens its fruits before Strawberries and a month before the earliest Raspberries. The bushes are distinct from other berries, with spreading tree-like tops, large, bell-shape, pendulous blossoms, which hang along the entire length of the branches in pairs or triplets. These large handsome blossoms are followed by great glossy berries, which are of a golden yellow color, and in quality sweet and luscious beyond description. Its earliness makes it the most important of all fruits.

Offer No. 48.



Every Gardener Needs a

....GOOD GOOSEBERRY....

And, we will send two one-year plants, of the best new variety known, for one new subscription; safe delivery guaranteed.

THE PEARL GOOSEBERRY.

Read what the Introducer has to say:

"The Pearl is a gooseberry grown from the seed of Houghton, crossed with Ashton seedling, by Prof. Wm. Saunders, and worthy of special notice because (1) of its good quality; (2) its size; (3) its productiveness; (4) its freedom from mildew. As a result of my observation I find the quality good, very much like the Downing in this respect, as well as in color marking; but in size it averages nearly double that berry, and that in spite of the prodigious crop under which the bushes are laden. There was a row of some sixty fine bushes one year planted, and most of them were literally bent to the ground with heaps of fruit. The average was eight berries per inch of wood, and on one bush we estimated that there must have been 5,500 berries. Should this productiveness prove constant the berry will be of great value for the market. With regard to the mildew, all I can say is what I have seen, namely: After seven years of trial I have never found any trace of mildew."

Offer No. 71.

One plant each of....

Japanese Mammoth Chestnut, Japan Walnut and Pecan.

By mail, postpaid, for one new subscription.

The Japan Mammoth Chestnut is quite distinct from the American or European varieties, being hardier, nuts of superior size, flavor and sweetness. Leaf long and narrow, like a peach leaf, and very ornamental; enormously productive and comes into bearing at two to three years of age.

Japan Walnut is as hardy as an oak; leaves of immense size and a charming shade of green. Nuts, which are produced in extreme abundance, grow in clusters of fifteen or twenty; have a shell thicker than the Persian Walnut, but not so thick as the American. The meat is sweet; of the very best quality; flavor like the Butternut, less oily and much superior. Trees grow with great vigor, assuming a very handsome form and need no pruning; mature early; bear young, and are more regular and productive than the Persian Walnut. Having an abundance of fibrous roots it transplants as safely as an apple tree.

Pecan, Paper-Shell—a beautiful symmetrical and rapid growing tree, of luxuriant foliage, which it retains until very late in the Fall; producing valuable timber and heavy crops of sweet, oblong, smooth nuts of very good quality. Makes a handsome lawn tree, hardy wherever the hickory grows.

Offer No. 79.

Loudon Raspberry Ohmer Blackberry

Three of each, or six of one variety. Sent, postpaid, for one NEW subscription at \$1.00.

GROWER SAYS:

"Nice plants, well established in pots, like Verbena plants, 5 to 6 inches high, with a mass of roots. They grow off as well as strawberry plants, and really are better for making a plantation than plants a year older. They will thrive, and be larger and better next fall than year-old-plants set along side of them. I have tried this several seasons and know what I am talking about. Although more delicate at first than year-old-plants, with reasonable care they do splendidly."

Loudon Raspberry is one of the very best of all red varieties, of large size, very productive, good color, excellent quality. Ohmer Blackberry has five excellent points. "Hardy, late, large, productive, and of the finest flavor."

Offer No. 62.

One plant each of....

Koonce Pear, Rocky Mt. Cherry, Trifoliate Orange, and Starr Apple.

By mail, postpaid, for one new subscription.

Koonce Pear. This is an early pear, of striking beauty, fair quality and great value. Claimed to be a better grower than Kieffer. Fruit medium to large, skin yellow and bright red on one side. It does not rot at the core, and it is the best early pear. Its strong, vigorous growth, freedom from blight, early bearing, immense productiveness, early ripening, beautiful appearance, large size and quality combine to render it the most valuable early market pear before the public and will be largely planted.

Rocky Mountain Dwarf Cherry. Fruit jet black when ripe, in size larger than the English Morello; season late. As profile as a currant bush. Height four feet. Free from disease. In addition to its luscious fruit it makes a handsome flowering bush, with its mass of pure white flowers.

The Trifoliate Orange. This is a hardy dwarf tree, of symmetrical growth, with beautiful trifoliate glossy green leaves and an abundance of large, white, sweet-scented blossoms, larger and finer than any other variety, and borne almost continuously. A conspicuous and showy plant, for lawn or pleasure ground.

Offer No. 55.

One plant each of....

Starr, Parlin Beauty and Rismarek Apples.

By mail, postpaid, for one new subscription

Starr. Fruit very large, 11 to 12 inches around, showy, pale green, frequently with handsome bluish on sunny side; very early; an excellent shipper; superior cooking and very good eating apple.

Parlin. Very hardy; a good grower and productive. Fruit splashed and striped with red; September.

Bismarek. Dwarf and extremely prolific. Most suitable apple for hot climate, yet the hardest known. A wonderful bearer. Fruit is large, brilliant in color, handsome. Flesh tender, pleasantly sub-acid; of distinct and most delicious flavor, unequaled as a dessert apple and very superior for cooking. Will keep until March.

Offer No. 56.

GLADIOLUS BULBS.

The following offers on Gladiolus Bulbs are well worth striving for. Your choice of one of the two collections offered for only one new subscription at \$1.00. Sent, postpaid, in neat pasteboard boxes. Order by Offer No. and Letter.



A.—6 Bulbs each of May, Bertha, Mabel, and Marie Lemoine.

May.—Large spike, well expanded flowers. White, edge of petals touched pink. A grand variety.

Bertha.—This is the finest variety of its color, which is a brilliant light scarlet. Makes a tall spike, with large side branches.

Mabel.—Dwarf, upright habit. Full spike open at one time. In color it is a blending of carmine, cherry and pink. One of the first to bloom.

Marie Lemoine.—Upper division of flowers of pale creamy color, flushed salmon lilac, the lower petals spotted purplish violet, bordered canary yellow. Peacock blotched.

B.—100 Cushman's High Grade Seedling Gladioli.

All blooming size. No two alike. Rivaling the floccelle silks in coloring and sheen.

Offer No. 69. VEGETABLE SEEDS.

The following collection of Seeds is offered by a reliable dealer, with a view to introducing his stock. They are of precisely the same grade as is sold to market gardeners and all desiring the best. The entire collection of twenty named varieties will be sent, postpaid, for one new subscription at \$1.00.



One oz. Beet, Eclipse; one pkt. Cabbage, Early Wakefield; one pkt. Cabbage, Early Flat Dutch; one pkt. Cabbage, Savoy Early; one pkt. Cabbage, Savoy Late; one pkt. Cauliflower, Erfurt; one-half oz. Carrot, Half Long Nantes; one pkt. Celery, Paris Yellow; one oz. Sweet Corn, Early Mammoth; one pkt. Cucumber, White Spine; one pkt. Onions, Early Flat, Red or White; one pkt. Parsley, Double Curled; one pkt. Lettuce, Summer Blonde; one pkt. Radish, Early White Tipped; one pkt. Tomato, Acme; one pkt. Spinach, Viroflay; one pkt. Squash, Early Bush; one pkt. Turnip, Red Top; one pkt. Rutabaga, Champion; one pkt. New Victoria Spinach.

Offer No. 57.

CHRYSANTHEMUMS

For one new subscription and \$1.00, we will forward, postpaid,

A Collection of 36 Plants.



All different; prize-winning varieties, comprised in great part of last year's novelties, in all shades of color and types of bloom.

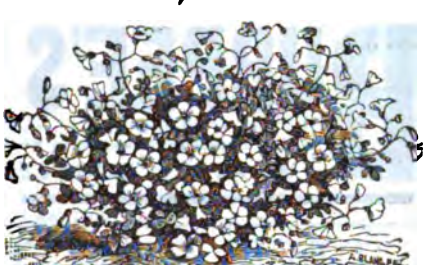
This offer comes from a noted grower, and we hope to receive a great many orders for this collection.

Offer No. 49.

Sent, postpaid, for ONE NEW subscription at \$1.

SUMMER BEDDING

150 OXALIS BULBS



These bulbs make beautiful borders for summer flower beds, as well as attractive pot plants. The collection includes 150 Bulbs in equal proportions of the four following varieties, named, and in separate packets:

OXALIS DEPPEI ALBA.—White.
OXALIS DEPPEI ROSEA.—Old rose or salmon.
OXALIS ERYPHILLA PURPUREA.—Purple.
OXALIS LASLANDRA.—Crimson. Tall, fine pal-
mate leaves.

Offer No. 50.

THE COMPLETE

VEGETABLE GARDEN.

Plants all ready to set out.



All good plants. Grown in Maryland. Delivery April 15, postpaid. This is an offer we are not able to make our friends every week in the year, and we will be mistaken if this Bargain is not taken advantage of by thousands.

12 Peppers, two kinds.
12 Egg Plants.
12 Cauliflower Snowball.
12 Tomatoes, two kinds, select.
50 Cabbage or Sweet Potato Plants.
50 Lettuce, two kinds.

148 choice vegetable plants, and AMERICAN GARDENING one year, to a NEW name, for only \$1.00.

Offer No. 52.

Collection of Flower Seeds



Sent, postpaid, for one new subscription to AMERICAN GARDENING. The following list embraces 16 varieties of choice flower seeds; fresh and true to name, eight of which are of 5 cent packets, six of 10 cent packets, and two of 15 cent packets valued in all at \$1.30. This collection is offered by a reliable

grower, in whom we have full confidence.

Alyssum, Sweet
Asters, mixed
Cosmos, Large
Flowered
Calendula, Price of
Orange
Calliopais, mixed
Datura, Double,
mixed
Carnation Marguer-
ite, finest double
mixed
Mignonette Machet

Nasturtium, Dwarf
mixed
Poppy, Carnation
flowered, mixed
Sweet Peas, Eck-
ford's mixed
Heliotrope
Larkspur, Dwarf
double
Cobaea Scandens
Zinnia, Double,
mixed
Lobelia compacta

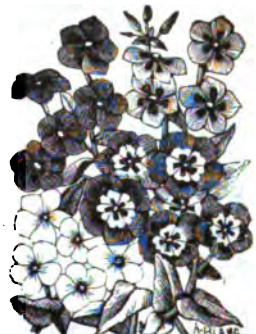
Offer No. 40.

THE COMPLETE

Flower Garden

Plants all ready to set out.

This is a collection which everybody should be sure to obtain. It only requires one NEW subscription to become the possessor of all the plants here mentioned. Ready for delivery May 1st. Postpaid. Grown in Maryland. Save time growing from seed and get this lot all ready to set out.



10 Antirrhinums, choice mixed.
10 Asters, mixed.
10 China Pinks, mixed.
10 Cosmos, choice mixed.
10 Petunias, mixed.
10 Phlox Drummondii, mixed.
10 Marigold Eldora.
10 Scabiosa, mixed choice.
10 Zinnias, mixed choice.
10 Scarlet Sage.

100 Choice Flowering Plants and AMERICAN GARDENING, one year, to a NEW name, for only \$1.00.

Offer No. 59.

GRAPES



Every country and suburban home needs a vine, and those who avail themselves of the offer which follows will be well satisfied and pleased for years to come with the result. A grower offers:

Agawam,
Lindley,
Brighton,
Worden,
Niagara,
Moore's Early.

Your choice of Ten one-year vines, all of one variety, or three each of three of the above sorts, for only one new subscription. Forwarded postpaid.

USE

Bradley's Fertilizers

ON ALL FARM AND GARDEN CROPS.

Being superior in quality, manufacture, and condition, they possess the highest crop-producing powers, and therefore yield at harvest larger returns than those of any other make.

BRADLEY FERTILIZER CO., Boston, Mass., Rochester, N. Y., Cleveland, Ohio, Augusta, Ga.

Mention American Gardening when you write.

NEW PINK VIOLET

MRS. J. J. ASTOR.

(Named by permission.)
Very fragrant, similar in form and habit to Marie Louise, but more vigorous, stems longer, flowers larger.

Price, \$2.00 per doz.; \$10.00 per 100.
Orders booked now and filled in rotation after May 1.

Marie Louise, \$1.00 per 100, any quantity.
G. SALTFOORD, Violet Specialist, RHINEBECK, N. Y.
Mention American Gardening when you write.

MICHIGAN WILD FLOWERS

Are remarkable for their great beauty, number of species, diversity of habit and use. Trees, shrubs, vines, Orchids, Ferns, Bog Plants and Aquatics, suitable for all locations and conditions.

Send stamp for fine, illustrated catalogue.
THE MICHIGAN WILD FLOWER COMPANY,
ROCHESTER, MICH.

Mention American Gardening when you write.



Vineless Sweet Potatoes

Tubers and Plants.

McKINLEY'S CHOICE.
Indor ed by our President, and no one else has them, and
GOLD COIN PROLIFIC
Genuine home grown, no Arkansas Yama.

I grow my own tubers and plants; plants grown without glass or manure; perfectly hardy and stocky.

G. Camerer, Madison, County, Ind.
Mention American Gardening when you write.



LOTUS OF THE MILK.

Mention American Gardening when you write.

AQUATIC GARDENING

WATER LILIES. Leaflet free. Egyptian and Japan Lotus, Victoria Regia. We carry a full line of Aquatics and things needed in water gardening. Japan lilies, Bamboos, and hardy ornamental Reeds, Grasses and Perennials. Plans and estimates furnished, and selections of varieties made upon request. See annual calendar.

HENRY A. DREER,
Philadelphia, Pa.

MANWELL STRAWBERRY

The verdict given by competent judges. Prof. Budd, Iowa Hort. Station, says: "Have fruited it two seasons, its perfect foliage and capacity to resist drought, makes it very desirable. It bore more good fruit than Parker Earle, Beder Wood, Warfield or Haverland." John Wragg & Sons, Wankee, Iowa, says: "There is no doubt it will be one of our very best varieties for shipping, and I think it the richest berry I have eaten of over a dozen of our best varieties; the plants are fine." R. M. Kellogg, Mich. says: "I am fully persuaded you have a grand berry. It is surely taking a lead in my trial plot; the quality and the color of the berries are superb and the vigor of the plants is simply splendid." C. G. Patton, Nurseryman, Iowa, says: "Its good size, bright color, firmness and quality combined give it high rank among strawberries, and being a strongly staminal variety, with the bearing quality that it has, makes it just what we have been looking for."

Send for catalogue of plants and runner cutter to
ALLEN D. MANWELL, P. O. Box 606, Vinton, Ia.
Mention American Gardening when you write.

GREENVILLE (formerly Downing's) APPLE

GREENVILLE STRAWBERRY or anything else in the nursery line. Send for free particulars.
Address. E. M. BUECHLY, (Box 991) GREENVILLE, OHIO.
Mention American Gardening when you write.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL FOR 1897

Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." 42 Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

THE WM. H. MOON CO.

Glenwood Nurseries, Morrisville, Pa.
Gow, for the SPRING OF 1897, a Complete Assortment of

EVERGREEN AND DECIDUOUS TREES.

Flowering Shrubs, Grasses, Dahlias, Climbers and Climbing Roses.

Special attention is called to the following.

Chestnuts, Asparagus, Barro's Maple, Strawberry-Rasp, Burbank's Golden, Industry Gooseberries, Purple-leaved Beech, Elm, American and English, Horse-chestnuts, Lindens and Maples, Norway, Sugar, Sycamore, Silver-leaved. By the thousand, from 4 to 12 or 14 ft.
Oaks, English, Pin, Mossy Cup, Red, Scarlet and Turkey.
Poplars, Carolinas and Balsam.

Willows and Weeping Trees, in variety.
Hedge Plants. Evergreen and Deciduous varieties, including 200,000 California Privet, from 1 to 5 feet.
Evergreens, Arber Vines, dwarf and tall growing sorts.
Nordmann's Fir, from 1 to 3 feet.
Balsam and European Silver Fir.
Hemlock, Colorado Blue, Norway and White Spruce.
Retinespermas, in variety of all sizes.
Pines, White, Scotch, Austrian and Dwarf.
Evergreen Shrubs, including Mahodias, Hones and Rhododendrons.
Deciduous Flowering Shrubs. General assortment of various sizes.

DESCRIPTIVE ILLUSTRATED CATALOGUE of 48 pages, containing prices, etc., to be had on application. Correspondence solicited.

Mention American Gardening when you write.



SURPLUS BERRY PLANTS

We have a surplus of the following varieties, and will make exceptionally low prices to readers of AMERICAN GARDENING.

Strawberries—Splendid, Eureka, Lovett, Haverland, Parker Earle, Brandywine, Wm. Belt, Marshall, Timbrell, Tenn. Prolific, H. W. Beecher, Michel, Beder Wood, Atlantic, Warfield, and 50 others.
Raspberries—Guthbert (100,000 plants), London, Miller, Caroline, Columbian, Schaffers, HILBORN (50,000 plants), Gregg, Palmer, Kansas, and others.
Blackberries—Snyder, Taylor's Prolific, Agawam, Lovett, Anc. Briton, Kittatinny, Lawton, Maxwell, W. Triumph.

Also Currants, Gooseberries, Grapes, Apples, Novelties, etc., etc. Catalogue Free.

Please note that ours is the latest season in the country, and we can ship plants as late as June 15 with success. They grow and do well though your season be well advanced. If you neglect planting till late, or get disappointed with plants from others, here is the place to find them late in the season. We make up collections for home use, or market and answer any letters pertaining to varieties, etc., free. If you have no experience, better leave the selection of varieties to us, merely stating kind of soil and for what purpose. Send \$1, \$5, \$10, or whatever you wish to invest and we will use our best judgment. As to our reliability, we refer to the Pulaski Bank, or to the editor of AMERICAN GARDENING. Write to-day and enclose 35 cents for "Farmer on the Strawberry" if you want it. Address

L. J. FARMER, Nurseryman and Fruit Grower, Box No. 1, Pulaski, N.Y.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 122.
CONTINUED SERIES VOL. LI.

NEW YORK, APRIL 24, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Asparagus Beds.....	297	Fruits of Experience.....	305	Melons and Cucumbers.....	297	Readers Notes.....	301	Vegetable Garden.....	297
Canadian Markets.....	298	Fruits, Russian.....	300	Onion Seedlings.....	297	Seasonable Sayings.....	294	Window Plants.....	304
Catalogues Received.....	296	Grape, The James.....	301	Peas and Sparrows.....	299	Societies Reported.....	302		
Cultivate.....	297	Grape Vines.....	306	Potato Scab Again.....	298	Spiraea as a Hedge.....	301	Illustrations.....	
Discussion Wanted.....	297	Hand Lights.....	297	Potato Stock Increasing.....	306	Spraying in Canada.....	297	Lilium Harrisii.....	297
Diseases, How they Spread.....	294	Home Plot, The.....	304	Potatoes and Sulphur.....	293	Strawberry Growers' Guide, IL.....	295	Marker, A.....	295
Easter Plant Trade.....	297	Iris, The Japanese.....	299	Poultry Notes.....	304	Tomatoes.....	297	Potato Experiments.....	293
Foreign Correspondence.....	299	Lilacs.....	306	Private Gardeners.....	302	Tomatoes, Forcing Varieties of.....	299	Strawberry Plant Set-ter.....	296
Fruit Garden, The.....	297	Market Reports: New York and Philadelphia.....	307	Privet Hedge, A.....	306			Strawberry Setting.....	296
				Questions Answered.....	306				

Potato Experiments with Sulphur.

In last year's volume (page 17), appeared a summary of the results obtained at the New Jersey Experiment Station Farm, from the use of various fungicides as against the potato scab in 1895. The evidence in favor of the use of sulphur was very remarkable, and the further tests conducted during 1896 are so strongly confirmative of the value of the simple sulphur treatment as to demand practical attention of potato growers.

for 1896, where every potato was almost literally covered with scabs, is taken as representing the 100 per cent., and all other belts compared with it. Average sample tubers of this standard of scabbiness have been preserved for future use in rating the disease upon the same series of plots in coming years.

Some changes from the plan of the previous year were made upon the potato series in 1896. There was an increase in the number of belts receiving sulphur, the addition of more kainit belts and the introduction of the Early Rose and American



FIG. 80.—POTATO SETS VARIOUSLY TREATED. (For explanations see text.)

Last year's experiments were conducted upon the same plots as had previously been under the test. For the conclusions of 1895, readers are referred to our issue above quoted.

In 1895 the percentage of scabbiness was determined by the presence of the scab upon each potato, and in 1896 the attempt was made to record the actual amount of the scab; that is, in 1895, one hundred per centum meant that every tuber was more or less scabby, but for future years the basis of percentages is changed to the amount of scabbiness. The worst belt

Giant sorts as a variety test for the scab. Rural No. 2 was generally used however. Four of the belts were irrigated.

The largest amount of scab was with the variety Early Rose, the belt in this sort in the worst Plot (IV.) being taken as the maximum of 100 per cent. with which to compare the other belts. The Giants were planted in two belts, that this variety, sometimes mentioned as exempt from the scab, might be fully tested as to its susceptibility. While it is a fact that the scab does not work as deeply in this variety as in the Early Rose,

it is true that when placed in a scabby soil the Giants will scab badly. Of the three varieties represented in the series, Early Rose is the most susceptible, and the Giants the least, with the Rural No. 2 taking a position midway between them.

The belt treated with lime, 300 bushels per acre, of three years' residence in the soil, gave a very small and poor yield. The adjoining belt with sulphur, 120 pounds per acre, added, gave a fair yield and the scabiness much reduced. The belt in the same plot, with corrosive sublimate added to the soil, gave the smallest yield of all the belts in the field, but the potatoes were but little marked with the scab.

In Plot II., the best belt by large odds is the one receiving the sulphur, 240 pounds per acre, followed by the one with kainit. The largest yield in Plot III. is upon the irrigated belt, where the scab is very severe. Here again the best results, considering both yield and scabiness, are in the belt receiving the sulphur.

Plot IV. represents that end of the area of potato ground having the largest percentage of scab. Here the seed treatment was made with corrosive sublimate, sulphur and kainit, leaving one check, one for irrigation and one where sulphur was added to the soil for the previous crop. The worst potatoes were in the irrigated belt, which were literally covered with deep patches of scab. There is no noticeable difference between the belts having the seed treated with corrosive sublimate (1 to 500 for two hours), rolled sulphur and the check, although the largest yield was upon the one treated with the sulphur. The kainit belt gave a lower yield and somewhat smaller percentage of scab. The most striking fact in this plot is the good-sized crop of potatoes, almost entirely free from scab, produced upon the belt that received sulphur, three hundred (300) pounds per acre, in 1895, a fact which seems to be entirely due to the lasting fungicidal effects of sulphur. An adjoining belt had 100 per cent. of scab, while this one gave only 5 per cent.

The results indicate that for soil treatment for the scab, sulphur takes the lead, that its good effect is lasting when added to the soil; but when the soil is badly infested, there is no hope of checking it successfully by simply rolling the seed in the sulphur.

In order to test the value of the rolling of cut seed in sulphur the following experiments were carried out: Upon February 5th, thirty-two pieces, in all weighing one and a half pounds, were thoroughly dusted with sulphur. Another equal weight of thirty-two pieces of potato was dusted with an acid phosphate. A third similar lot was rolled in a half-and-half mixture of sulphur and acid phosphate, and a fourth set was left untreated.

After one week (February 12th), the four lots were weighed, with the following results:

Sulphur.....	1 pound $\frac{3}{4}$ ounces.
Acid phosphate.....	12 $\frac{1}{2}$ "
Sulphur and acid phosphate.....	15 "
Nothing.....	1 pound $\frac{1}{2}$ "

Upon the same date, a set was rolled in the Albert food, a concentrated commercial fertilizer, with similar results as for the acid phosphate.

Upon February 26th, four pieces from each of the five above sets were planted and four weeks later the following result was recorded:

Sulphur.....	Four plants came up.
Acid phosphate.....	None.
Sulphur and acid phosphate.....	None.
Nothing.....	Four plants came up.
Albert food.....	None.

An average of the plants from the sulphured seed and from the set receiving

no treatment are shown in fig. 80 (kindly lent by the director of the Station), of those plants and a sample dead cut piece from the pots where the "seed" had received the fertilizers. The sulphured potato is shown at 1, the one receiving nothing at 2, and the three others were killed by the fertilizers.

These tests show that there is much less drying out of the potatoes where sulphur is used than elsewhere, and as a result a quicker and larger growth is obtained. Concentrated fertilizers are evidently too strong to be used in the same way. Sulphur may well replace the land plaster to prevent evaporation when potatoes are cut some days before planting.

The field experiments indicate that corrosive sublimate will check the scab when the soil is badly infested, but the mere soaking of the seed is ineffective and it needs to be added to the soil. The same failure of the plants to come up well was experienced with kainit, and here, while the scab was checked, the yield was light. Dr. Halsted concludes that it is not unlikely that a proper amount of kainit mixed with sulphur, about 300 pounds of the former to an equal weight of the latter, would give a combination of fungicide and fertilizer that may prove of great value on the scab-infested farms.

Summary.

The summary of the contents of Bulletin 120 from which our facts are gathered are: The experiments with Irish potatoes indicate that corrosive sublimate when added to the soil will check the scab, but the mere soaking of the seed in a solution of that substance is ineffective when the soil is infested.

Kainit during the past season has shown considerable fungicidal value in reducing the amount of scab.

Sulphur has maintained the first place as a remedy for the scab, and its wholesome effect upon the soil is demonstrated as remaining undiminished through at least the second season.

The tests in cutting the seed tubers show much better yields when the middle pieces are used than when either the seed or stem ends are employed.

Irrigation considerably increased the amount of scabiness.

The tests with depths of planting do not show any advantage in varying from the normal.

Seasonable Sayings.

Head work pays in the garden.

Don't stir the ground when the weather is wet and cloudy.

Have a good lettuce and radish bed this year; and if you have only a small garden, try sowing a packet or two of mixed varieties of each.

Plant a few watermelon seeds and Lima beans on an inverted sod in a mild hotbed and transplant when the weather gets warm and danger of frost is over.

It does not pay to sow seed in the mud.

Get a file to sharpen hoes, etc.; it beats a grindstone.

If you want some mammoth pumpkins or squashes this year start seeds early in a hotbed or box in the house; when setting out fertilize well, and only let one fruit mature to each vine.

Always keep a copy of your order when sending for seeds or nursery stock of any kind; then see if the seeds and plants correspond with order when they arrive.

Free seeds from the Government seed shop benefit but very few except Congressmen and Senators who are fishing for votes of the people. Who ever heard of the Government introducing any new and valuable vegetable? That is always done by seedsmen.

W. B. L., Gratiot, Ohio.

How Diseases Spread.

A lecture on the spread of parasitic diseases among plants was delivered before the Massachusetts Horticultural Society, March 27, by Dr. Erwin F. Smith, of the United States Department of Agriculture. In substance his remarks were:

I shall for the most part neglect the well-known dissemination of parasites by wind and water, and deal chiefly with the methods which are to a larger extent within our control. Farmers, fruit growers, florists, and market gardeners are not infrequently responsible for the spread of diseases. There are now so many who grow crops for market, and the competition is so close and the profits so small, that even the most experienced must stop every leak in his expenses. Therefore the avoidance of parasitic diseases is most important.

Most diseases which prevail extensively and are known as "catching" diseases are due to parasites. These plant parasites are plants or animals which have in some way lodged on or gained an entrance into the "host-plant" and there multiply to its detriment. Many of these organisms are exceedingly small, so as to be overlooked, and are well provided with means of reproduction. We speak of saprophytes and parasites, the former being fungi which derive their nourishment from dead and decaying substances, and the latter nourished at the expense of other living organisms. The most of this address will be devoted to showing how certain parasites succeed in getting from one plant to another. It is commonly assumed that their reproductive bodies, floating through the air, lodge on the plants; but I am inclined to believe that often the chief danger of infection lies in other directions, for reasons which I will now explain.

Spread by Insects.

The gnawings, borings, and punctures of insects, though often injurious are by no means the whole of the injury which they do. Pear blight: It has been discovered that the germs of this disease were carried on the mouth parts of bees, which had visited blighted pear blossoms; that the bees passed from such flowers to healthy ones; and that subsequently the blight appeared on the latter. It was also shown that flowers covered with mosquito net remained free from blight, while the unprotected, insect-visited ones blighted freely. Apparently pear blight is disseminated only through the agency of insect visits. The organism exudes from the tree in the form of small sticky or gummy masses, and probably all the spring outbreaks of pear blight start from them as a result of insect visits, and not from the soil. Bacterial wilt of cucumbers, musk melons, pumpkins, and squashes: This is due to a sticky white micro-organism which fills the water ducts of the plants and causes a sudden collapse of the plant. It is readily communicated by the striped cucumber beetle and by squash bugs. The insects carry the virulent sticky germs on their beaks and deposit them in the next plant bitten. Bacterial brown rot of the potato, tomato, and egg plant: The Department of Agriculture has recently published a bulletin on this subject. Insects feed on the diseased plants that are swarming with the parasite, and go to other plants which are bitten and subsequently become diseased. The disease may be known by the sudden wilt of the foliage, the stems becoming brown internally and shrivelling.



PRINTED BY THE PHOTO-COLOTYPE CO., N. Y. FOR A. T. DE LA MARE PTG. & PUB. CO. LIMITED, N. Y.

Copyright, 1897, by Siebrecht & Son, New York.

TYPES OF JAPANESE IRIS

REDUCED TO ONE-HALF NATURAL SIZE.

1 Gold Boud

2 Oriole

3 Norma

4 New York

5 Blue Danube

Spread by Snails and Slugs.

The damage done by these animals as carriers of disease is greater than the injuries they induce by feeding. I shall refer to a few cases only. (1) Wagner's Experiments with Snails: A German of the name of Wagner experimented with downy and powdery mildews, ascomycetous fungi, and rust fungi. Snails were transferred from diseased to healthy plants and the latter became infected. They were fed various parasitic fungi and a subsequent examination of the excreta showed that the spores of these fungi passed through the animals uninjured and in condition to germinate. (2) Mr. Galbraith, an Englishman, living in the Seychelles Islands, has found snails largely responsible for a disease of the vanilla prevalent in those islands. (3) The bacterial brown rot of cabbage: This blackens the vines, causes the leaves to fall off, and prevents the formation of heads. I have found that the common greenhouse slug disseminates the micro-organism to which this is due, and insects also probably carry the disease.

Spread Through the Manure Pile.

Barnyard manure always contains a great variety of organisms, most of which are harmless to plants. But sometimes spores of parasites get in through fodder or bedding and often through mouldy or rotting vegetables thrown on the pile. (1) The watermelon wilt: This disease lives over winter in the dead stems and grows readily in manure. I investigated a case where a planter in South Carolina lost nearly his whole crop by this disease, the plants being more severely attacked in the place which had been most carefully manured. In order to have a fine crop the planter had raked stubble from the whole farm, including refuse from the last year's melon field, where there had been some disease, and made a compost heap in his barnyard. He had unwittingly made an immense culture bed of his manure pile, and when the infected manure was put under his melon hills the most disastrous results followed. (2) Smut Diseases: Some of the smut diseases are well known to be transmissible through fresh manure, and this should never be used on fields of cereals. (3) Other Diseases: Cucumbers, turnips and other plants have become diseased in this way, and it should be remembered that manure should at least be kept free from the rubbish of plants that have been diseased.

Spread by the Soil.

Certain parasitic diseases live and multiply in the soil as saprophytes, ready when opportunity offers to become parasites. These soil fungi get from field to field, sometimes by irrigation or by floods; sometimes by the plough or tools. Onion smut, potato scab, etc., are examples of these soil parasites. I shall mention particularly only one type—the *Fusarium* diseases of the United States. I now know of eight cultivated plants subject to them. In all the trouble is due to a parasitic clogging of the water ducts. The plants I have found so affected are cotton, cow pea, watermelon, cabbage, potato, tomato, sweet potato, and pineapple. The cause of the trouble is too frequent growing of the same crop on one piece of ground, and the best remedy is a wide rotation.

Spread by Other Means.

Disease is also spread by the way of seeds, buds, tubers, cuttings, and nursery stock. In oats and wheat the smut spores adhere to the kernels, germinate at the same time and bore into

the young seedlings. Many diseases are distributed in bulbs, but the most wholesale manner of distribution is through the medium of irresponsible nurserymen. In this way all sorts of fungi and insect pests are spread from one end of the country to the other. The San Jose scale has been distributed in this way.

The Strawberry Grower's Guide—II.

In continuation of the remarks on page 254 we now take up

Methods of Planting.

For marking out where a number of acres are to be set out a sled, as shown in the accompanying illustration, can be used to good advantage. Get the first row perfectly straight, and select as the man to draw the sled one who can make the straightest mark.

A board about 10 inches wide and $\frac{1}{2}$ inch thick is nailed to four runners 18 to 24 inches long, which are placed as far apart as it is desired the rows should be. Nail on two light shafts, so as to be able to draw it easily. This marker does the work rapidly, and the $\frac{1}{2}$ -inch board will allow the runners to mark where the ground is a little uneven better than a thicker board would, besides being much lighter. It answers all practical purposes as a marker.

I used to be so particular that I would mark out the rows with a No. 9 wire, using it in the same way as a rope. This will make a row so straight



FIG. 81.—A MARKER.

that it will be about as near perfectly straight as it is possible to mark a row, but I find that if a mark should be a half inch out one way or the other there are just as many dollars in it after all, and if a matted row is grown it is not long before the straight row is practically out of sight.

We have probably set more plants with the spade than by any other means, but unless on sandy soil there are two objections to using the spade—first, the back of the spade leaves a glazed surface against which to firm the roots, and, secondly, if a weeder be used the plants are not braced in all directions, so as to keep the little raker teeth from occasionally pulling out a plant.

Plant Setting.

Last summer we had the pleasure of using the Perfection plant setter, and if the land be cleared of stone and other obstructions it works to perfection. I always liked the cone method of setting strawberry plants, but always found it too tedious a process to be practical, but this machine not only makes the cone quickly, but it is adjustable, so it can be changed to set to any depth desired and so every plant, all over the field, will be at a uniform depth. It also makes very fine soil and throws up a ridge, as shown in the illustration, which is in the best condition to place against the fine, fibrous roots. Since the use of a weeder I have come to the conclusion that the cone method is superior to any. It gives the plant a chance to be braced in every direction and allows the plant to receive nourishment from

all sides, so that it gets a strong hold on the soil before drouthy weather sets in. Plants set in the same field last season and on the same kind of soil made a much better growth by the cone than by the spade method. I prefer a large plant for cone setting, but a medium-sized one when using the spade.

In preparing plants for setting I trim the roots with a sharp knife and leave roots long enough so that when placed over the cones as shown in the sketch they will come about $\frac{1}{4}$ inch from the bottom of the cone; thus the fine roots will have some loose earth around them and will not be crowded. As the soil warms up the fine roots will take hold and grow from the start, and the plant will be thoroughly established in a very short time.

Some growers plow a furrow about 5 or 6 inches deep and set the plant along the land side of the furrow. This is somewhat of a bungling way, and has the same objections to it as the spade on heavy soil; moreover, considerable labor is involved in drawing the soil back into the furrow.

Cultivation.

Cultivation among strawberries should be very thorough. After much experimenting and observation with other growers as to whether deep or shallow cultivation is the better, I have become a firm advocate of shallow cultivation during drouthy seasons. I believe it to be the only method that will bring best results. The more shallow the better, if the soil is thoroughly firmed. For this we use the leveler attachment on the Planet, Jr. I prefer to cultivate the ground every week, that it is in proper condition from the first day after setting until the first part of October.

There is much pleasure as well as profit in giving plants clean culture. How often do we look back down the rows as we are cultivating and see the plants looking fresh, green and vigorous in response to frequent and clean cultivation!

Hoeing.

When the plants begin to mat after a good, thorough cultivation the finishing touches are put on with the hoe, thus stirring and fining the surface between the plants where the cultivator could not go. If a person have the time a hoeing once in every seven to ten days would be about right, but it should not go any longer than two weeks, as frequent hoeing makes the work easier.

The soil should not be drawn up toward the plant, but the hoe merely slipped under the soil, say one-half to one inch deep, as you draw it toward you, and the back of the hoe pushed lightly back over what was drawn forward, thus fining the soil and leaving the surface level.

For this purpose we get the common steel hoes at the hardware store, and with a cross-cut file (the hoe being placed in a vise) mark or crease the hoe straight across about $1\frac{1}{2}$ inches from the edge and break off, then sharpen, and have a hoe that is ahead of any other for fining the surface of the soil along the side of the rows and between the plants.

When the plants get quite thoroughly matted a tool made from an old hoe will do fairly well; this is done by cutting off about one-half the blade from each side; but possibly a hoe which is narrow at one side and with three or four rake teeth on the other (such as can be bought at any hardware store), would be desirable for breaking the crust. A "scuffle" hoe is also good to break up the surface and

keep the ground level, but it should be made by a blacksmith out of the best steel, so that it will not allow the soil to stick on it. The difference in price in a good steel hoe and a poor one is not to be considered when ease of movement and lively work are valued.

After a row is hoed there should not be an inch square of soil which has not a loose surface or sort of "blanket of earth" over it.

A great fault with some men is leaving little "scraped spots" on the surface and not pushing or leveling some loose soil over, so as to prevent evaporation. Careless men will sometimes give a pull toward them and leave quite a considerable surface thus exposed, whereas, a "dust mulch" should have been brushed back over it. A hoe should be sharpened by beveling the inner edge with a cross-cut file; by filing the hoe on the inside it will take hold better without the worker having to lean over.

When cutting runners in hill culture we gather them up with one hand, and with a sharp knife in the other cut them all with one clip. It takes only two or three seconds to each hill.

For the matted row there are more rapid ways to cut them. Some persons who do not care to invest money in a machine have the blacksmith cut a wheel out of the widest part of an old cross-cut saw, and file sharp; then drill a hole in the center for a bolt, and make a handle long enough and in the shape as will best suit the operator. By being kept very sharp a man can cut with it as fast as he can walk along the side of the row.

Diseases, Etc.

The experiment stations give us much valuable information in regard to fungous diseases and injurious insects and the remedies for treating them. Therefore, I will not mention this subject for the present, only to say that they can be had for the asking. Write to your State experimental station for the bulletin treating on this subject.

Marketing.

In home marketing success in gaining customers rests much on appearances. Nice, clean crates, painted in fancy colors; the best-looking basket boxes, a sleek-looking horse, painted buggy, and a man with a neat appearance make 50 per cent. more customers, and confidence in yourself; also enables you to ask and receive the best retail price of the market. Such a rig costs something? Not necessarily! Paint and varnish enough to make an old delivery wagon look nearly new don't cost much; your horse will keep more easily if well groomed; a neat business suit will pay for itself in the extra custom gained, and the highest priced crates and boxes in a home market are generally given back. The boxes can be used for vegetable plants after they are too badly stained, and the crate can have a new coat of varnish or paint for use the next season.

For shipping, new and well-ventilated crates should be used, but, of course, they will have to be of the common, cheap grade unless arrangements can be made for their return.

Strictest honesty should be paid attention to, as, once "fooling" a customer, he will never give you a chance to fool him again.

Picking.

Of course, we all try to grow the large berries, but often toward the last pickings some commence to get small and need sorting. For this purpose one of the boxes in each tray, which

generally contains from four to six boxes, should be used by the pickers to put the small berries in. As a general rule the first pickings do not need any sorting where the care described above has been given; but a few of the last pickings often do.

It is the rule among large growers to have a man superintend the pickers and keep track of the careless ones—the honest, painstaking pickers don't need much watching. Persons who make it unpleasant for other pickers and do ten times as much talking as any one else should be dropped; a big talker often does poor work. A good



FIG. 82.—SETTING A STRAWBERRY PLANT.
(See page 295.)

plan in holding pickers through the season is to contract with them to keep back one-quarter or one-third of their pay until the season for picking is over. Then you can make quite a certain count on your pickers and not be disappointed when you are in the greatest rush.

Management for Fruiting Another Year.

If we desire to fruit the patch another year, as soon as picking is over the mower or scythe should be taken and the leaves and stems cut as close to the ground as possible, and left to

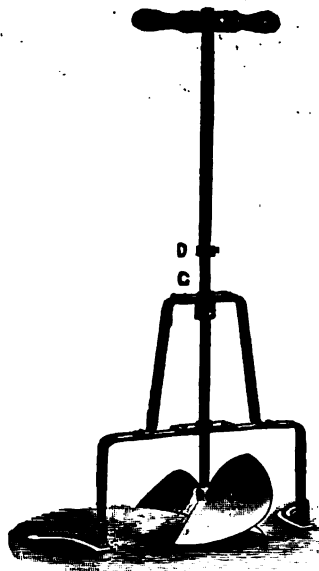


FIG. 83.—STRAWBERRY PLANT SETTER.
(See page 295.)

dry after scattering and shaking out the mulch, so it also will be thoroughly dry. When the first brisk wind starts up after all is dry, touch a lighted match to them. We find that it pays to leave a patch to fruit again if treated as already described. A little cultivation may do, but it generally is more profitable to put the time on the new spring set plantation and let the old one take care of itself after three or four cultivations between rows.

Late in the fall or early the next spring a few loads to the acre of fine manure are scattered directly over the row. If the ground becomes wet two or three weeks after burning I found it to pay to run the harrow over the row.

CHARLES C. NASH.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogue notes here. They are sent free to our readers except when otherwise stated.]

LEAN MANUFACTURING CO., Mansfield, Ohio.—All Steel Harrows.

W. BULL, Chelsea, London, England.—Catalogues of Seeds and Bulbs.

A. J. McMATH, Onley, Va.—Price List of Small Fruits and Fruit Trees.

J. H. PALM, Lexington, Ohio.—Cold Storage Seed Potatoes and Implements.

H. B. RUSLER, Johnstown, Ohio.—Spraying Pumps and Fruit Pickers, Hose, etc.

ARTHUR J. COLLINS, Moorestown, N. J.—Fruit Trees, Nuts and Nursery Stock.

E. E. BURWELL, New Haven, Conn.—Market Gardeners' Price List of Vegetable Seeds.

E. & J. C. WILLIAMS, Montclair, N. J.—Fruit and Ornamental Trees, Vines, Plants, etc.

JOHN SAUL, Washington, D. C.—Supplement to catalogue No. 6, new, rare and beautiful plants.

NATHAN SMITH & SON, Adrian, Mich.—Wholesale List of Chrysanthemums, Violets and Roses.

GEORGE H. MASS, Woodstock, Vt.—Greenhouse and Bedding Plants, Flower and Vegetable Seeds.

E. J. HULL, Olyphant, Pa.—Catalogue of Strawberries, Blackberries, Grapes, Hot House and Vegetable Plants.

FREDERICK C. POMRENCHE, Altona, Hamburg, Germany.—Price List of Seeds, Flowering Plants, Palms, etc.

POWELL FERTILIZER CO., Baltimore, Md.—Specially Prepared Fertilizers and Insecticides with Testimonials of their use.

JOHN W. HALL, Marion Station, Md.—Pedigree Seed Potatoes and Strawberry Plants, with Cultural Directions. Contains a chapter on second crop potatoes.

H. CANNELL & SONS, Swanley, Kent, England.—Exhaustive Catalogue of Seeds for Flowers and Vegetables, Plants, also list of Chrysanthemums. Illustrated.

H. H. GROFF, Simcoe, Ont.—A daintily gotten up catalogue in antique style, contains descriptive lists of the best Gladioli of all sections in name. A valuable list.

W. N. SCARFF, New Carlisle, Ohio.—Catalogue of Strawberries, Raspberries, Fruit Trees and Farm Seeds, with cultural directions and lithograph plate of Eureka Raspberry.

THOS. S. WARE, Tottenham, England. Catalogue of Vegetable and Flower Seeds, illustrated. Also annual list of Chrysanthemums, Lilies, Bulbs in general, Begonias, Gloxinias.

ROYAL PALM NURSERIES, Reasoner Bros., Oneco, Fla.—A very daintily prepared catalogue of sub-tropical ornamentals suitable for the South. Also Fruit Trees, Grasses, Palms, Ferns, etc.

CALIFORNIA NURSERY CO., Niles, Cal.—Price List of Fruit and Ornamental Trees, Small Fruits, Evergreens, Roses, etc. Some of the ornamental trees and shrubs listed are rarities in the East.

GREEN'S NURSERY CO., Rochester, N. Y.—Exhaustive List of Hardy Fruits, Apples, Pears, Grapes, Small Fruits and Ornamentals. Cover has representations of some leading fruits in colors.

BARBIER BROS. & SON, Transon's Nursery, 16 Route d'Olivet, Orleans, France.—A most exhaustive list of Ornamentals, Herbaceous Perennials, Shrubs, Nuts, Strawberries and Fruits; also stocks.

GEO. H. STAHL, Quincy, Ill.—A very dainty little handbook on raising chicks without heat with full detailed instructions in the use of the model Excelsior Incubators and also their Poultry Appliances and Spraying Apparatus.

FANCHER CREEK NURSERY, Fresno, Cal.—A well printed list of fruit trees and ornamental trees and shrubs, freely illustrated with photograph plates. Palms, Agaves, Dracenas, Yuccas are specialties. A useful list of tropical ornamentals.

Home Grounds—How to Lay Out.

This supplement contains a half-tone drawing (6½x10¼ ins.) of an estate of about six acres; this plan, together with the accompanying explanatory text, presents in a nutshell all the salient points of landscape gardening.

With the aid of this plan, and by careful study of its suggestions one can lay out an estate of one acre or fifty acres, for we give the cardinal principles which govern the art so clearly that all can understand.

Printed on heavy paper and forwarded, securely packed in a cartoon, on receipt of price, 25 cents, or given as a premium for one new subscription.

The Easter Plant Trade.

Never before has the Easter festival seen such an abundance of flowering plants in New York City, and more strange still, despite the hardness of the times, the demand was never before equaled, consequently prices were well sustained, and an enormous sum of money changed hands. Many of the retail florists establishments were veritable flower shows in themselves, several of them, indeed, having secured extra stores for this occasion. A notable example in this respect was that of Messrs. Siebrecht & Son.

Owing to the late date on which Easter fell, and the favorable weather prevailing, plants, generally, were of fine quality, well flowered, and well hardened. This was especially true of Azaleas, no forcing having been given to the plants to get them into bloom. This helped materially to sharpen the color and improve appearances, and possibly to a large degree accounts for the Azalea's popularity this season, for unquestionably it was the most popular of all plants offered. Hydrangeas were offered in quantity, and sold well. Rhododendrons were also plentiful. The old and well-known spring friend, *Cytisus racemosus*, was only offered in limited quantity, having failed in recent years to find favor in the high-priced stores. *Kalmia latifolia* was only seen in small quantities. *Lilium longiflorum* in pots was more popular than ever. Some very handsome tubs were made up of these. Lilac, both in white, and in those shades of gray which are called by the same name as the plant, met with a moderate sale, so did pot roses. Hyacinths and tulips in pots, may also be said to have sold moderately well.

Among the newer aspirants to popular favor were Violets in pots. These were of far better quality than is usually the case; one batch of Lady Hume Campbell plants noticed, had an average of 50 expanded blooms on each; these were in 6-inch pots. Crimson Rambler Rose was seen in quantities, but there was hardly enough flower on a plant to make a good impression. *Erica persoluta*, in different colors, was offered in quantities and sold rapidly; one grand plant of *Erica translucens* was seen, and the storekeeper who had it was particularly proud of the same, setting it aside for a very much favored customer. The sweetly scented brown *Boronia elatior* and the showy crimson *B. heterophylla* were offered for the first time in quantity, and were much prized. Some charming baskets were noticed at the store of Mr. Charles Dards, with *Boronias* as the center, with Tulips and Ferns added; the effect was exquisite.

Acacia armata has been before the public for several seasons, and is fast gaining in popularity. Still another *Acacia*, an introduction into Europe of 1824, has found its way into our trade. The most noticeable feature of this new comer is the beautiful form of the plants and their great size.

Acacia undulata differs from *A. armata* in the matter of color. The foliage is a lighter green; the flower heads are a little larger, but of a much paler yellow. The wood growth is also a little more supple and trains better; it is red-skinned; that of *A. armata* is nearly white. *A. undulata* also seems inclined to grow taller. This is the first season that any quantity has been seen in this country. Julius Roehrs has imported a number of grand specimens, which he does not propose to sell this season, but will give them a year's growth in our climate when he thinks he can get more flowers on them. They are already starting freely into growth. A number of the plants on his place are trained in pyramidal form; some attain the height of 10 feet and over.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send sc. stamp for our new catalogue.

The Fruit Garden.

More Discussion Wanted.—As we have provided for the apple and pear trees, and there is not much work pushing in the fruit garden, just now, we may pause and think if there be no way by which more private opinions on fruit can be obtained from the many gardeners who weekly scan the columns of AMERICAN GARDENING. If for one would like to read about the practical work of my fellow gardeners, especially of the failures and their beliefs as to the causes thereof. Our growers for the market can, and do get together and give us lots to think about at their meetings. Even there quality does not always stand first, but size, which naturally is not the growers' fault but the consumers' who buy in the market, and go in every 100 will choose size, everytime before quality. That is why I would prefer to hear more from those who are supplying the demands of private establishments,



FIG. 84.—THE EASTER LILY; LILIUM HARRISII.

which often expect better than the market supplies. Therefore, I know they can give us some good points on the quality of their different fruits they grow if they will but find the time to write a few lines about them for the benefit of others. I can imagine I hear the grunt as I mention, find time. Yes, I know, and I sometimes stop and think, if we do not try to crowd 16 hours work into 12 at the expense of bodily health and good nature. But I know of no line of business in which work and pleasure are so closely combined as in the work of the solid gardener.

Cultivate.—By the way, don't forget to keep the cultivator, hoe, and rake moving, so that the weeds will have no show at the manure which belongs to the trees and bushes.

Worms.—See that they don't get a good start on the currant and gooseberry bushes; look for their first work (chewed leaves and their castings) on the lower parts of the bush. Treat them to a shower bath of hellbore water, one ounce in three gallons of water.—J. HOLLOWAY, L. I.

The Vegetable Garden.

Hand Lights.—A good supply of hand lights is very useful in the vegetable garden at this season, for the protection of early squash, melons, and cucumbers. They are also advantageously used for the protection of cauliflowers, by setting three plants in a triangle, as far apart as the size of the hand lights will admit for their covering. By the time they grow too large for the covering the lights can be entirely removed. I have seen very good early cauliflowers grown in this way, although there are three in each hill.

Onion Seedlings that were started in heat early in the season, as directed in previous issues of this journal, may now be transplanted to where they are to remain. They should be firmly set in well-enriched soil, five or six inches apart, in rows 15 inches apart; the ends of the roots and tips of the tops may be shortened before planting. Good culture should be given, and a satisfactory crop will result.

Melons and Cucumbers.—As soon as the weather is settled and the ground warm and dry, sow a few hills about five feet apart, putting six to eight seeds in a hill. In a week or ten days afterwards, whether the first are sprouted or not, a second planting should be made in the same hills. By this method better success is assured. The plants should be gradually thinned out to the three best plants in each hill.

Asparagus Beds.—All winter mulching should now be moved and cleaned off, the soil carefully forked over in such a way as not in any way to disturb the surface roots or the crowns. Beds that have not received any applications of manure will be benefited by applying a dressing of a complete fertilizer, wood ashes, or nitrate of soda.

Tomatoes for fall use may still be sown, early set plants having a tendency to exhaust themselves by September, being also frequently destroyed by the tomato blight. Those requiring a good crop of late tomatoes will do well to make a small sowing now. They may be planted out later on ground that was occupied by some early crop, as spinach, cabbage.

Rhubarb, Artichoke, Seakale should now be cleaned up, manured, and forked over.

Lettuce and Radish should be sown each alternate week, so as to maintain a constant supply.

All Garden Work should be completed, as in seed sowing, all rakings to be removed, walks kept clean, and the rubbish carted away; all this will add pleasure to utility.

W. M. EDWARDS, N. Y.

Experimental Spraying in Canada.

The Ontario Government, which is at the present time in session at Toronto, has again appropriated the sum of \$1800 for experimental spraying to be carried on throughout the Province during the coming season. The Province will be divided into three sections, viz., the western, the central, and the eastern. There are to be ten spraying points in each section, and each point is to have six applications, the applications being from ten to fifteen days apart. Mr. W. M. Orr, of Fruitland, Ont., who carried on the experiments so successfully last season, will have the work under his charge again this year. Under his supervision the work will be carried on by Mr. R. H. Dewar, of Fruitland; Mr. J. H. McNeilly, of Stoney Creek, and Mr. J. B. Pettit, of Fruitland, at the head of the different sections.

Our publishers will supply any book wanted. Send your orders.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1904.

PUBLISHED BY
A. T. DE LA MARE PTO. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 5154 Cortlandt. P. O. Box 1897.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

We insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

To order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Potato Scab THE large total area which is devoted to the cultivation of the potato, and the great damage annually wrought to the crop by the ravages of the scab disease, will surely be sufficient justification for us in once again calling attention to the use of sulphur as a preventive of the scab.

Not only is the subject one of great importance to the commercial grower, but it is also a matter of no small moment to the man who merely grows potatoes for his own home use, and perhaps, indeed, there is the greater necessity of talking to the latter since the practice of rotation of crops is not always given that due consideration which experience has taught it deserves—nay, in most cases, demands, if the best results of cultivation are to be had. It is a very frequent complaint of private growers that they cannot produce a crop of decent potatoes because of scab, and upon closer inquiry we usually find that it has been the custom to plant the same plot to the same crop for a number of years in succession.

While under most favorable conditions such a course may be followed with satisfactory results, still if once the dreaded pest make its appearance, the soil is infected, and in the absence of any precautionary measures, each successive year's yield of tubers will in all probability be worse and worse.

In a recent issue of AMERICAN GARDENING, attention was directed to the favorable results which had been obtained at the Indiana Experiment Station from the use of formalin as a remedy. The results of the use of this substance seem to justify a more extended trial, and while we are favorably disposed toward it, we must still remember that so far, it is practically untested. Corrosive sublimate, in a solution of which the seed is soaked before being planted, has the backing of experience to recommend it, but its deadly properties are such that it would be well if some other substance equally as efficient but less dangerous were to supplant it.

In our issue of January 11 of last year, (page 16), details of the New Jersey Experiment Station tests with sulphur were given. If this substance be found to give satisfactory results the safety with which it can be handled, its cheapness and ease of procuring, should make it a standard cure for scab. It is these considerations that lead us to direct our readers' attention to the further results of Dr. Halsted's work at New Brunswick, N. J., and we ask again, has anyone else tried sulphur?

Canadian Competition in Foreign Markets. AT the present time the Ontario fruit growers have a very encouraging prospect before them. They have been successful in their negotiations with the Dominion Minister of Agriculture, and will soon be able to export to Great Britain their choicest fruits and vegetables in perfect cold storage.

The enormous fruit yields of last season, (as a result of which the choicest pears sold at 25 cents per twelve quart basket, excellent grapes at a cent per pound, and many varieties of plums at 15 cents to 20 cents per twelve quart basket, also apples at 40 cents per barrel), and the rapidly increasing acreage that is annually being planted with fruits of every description, compelled the fruit growers to understand that there is danger of overproduction, and that a market would have to be secured for the products of their labor. As a consequence, at the last meeting of the Ontario Fruit Growers' Association, held in the City of Kingston in December, 1896, a Committee of five of the leading fruit growers and nurserymen of the province was appointed to wait upon the Dominion Minister of Agriculture and ask for assistance to reach the best markets of the world. This Committee met the Hon. Sidney Fisher in the City of Hamilton, in January, and laid the matter

before him. They claimed that as an experiment, it would be necessary to ship at least one car load a week, of the choicest Canadian fruits, valued at about \$400, that the shipments should continue through August, September and October, that they should be stored in cold warehouses at shipping points and chilled before being placed in refrigerator cars, and that a Dominion agent in Great Britain should watch the European markets and report fully concerning the state of the fruit when received, and of its reception by the consumers.

The Committee also claimed that, as it was an experiment the success of which was uncertain, the profit was to the whole country, and if the growers at two or three points would agree to combine and furnish one experimental car-load each week of the finest fruits, the Dominion Government should, in return, erect at these points small storehouses, which the growers would agree to take over at a valuation within three years, should the experiment prove successful.

The Department of Agriculture has recently announced that the Government is prepared to meet the wishes of the Committee, and that the fruit men will have a chance to put their fruit on the European markets. A station has already been begun at Grimsby, a great fruit center, and is rapidly nearing completion; and if the scheme proves successful every fruit section in the province will no doubt erect a warehouse for itself. The Minister has made the necessary arrangements with the railroads and steamship lines to carry out the experiment.

In view of the facts, as set forth above, it behooves the American fruit grower to strive his utmost to raise the best, and by maintaining a uniformly high standard of excellence, make for his goods a sound reputation in the foreign markets.

The First Copy?

If this be the first copy of AMERICAN GARDENING that a reader has seen, we ask him (or her) to read these few words.

Any one issue of a paper does not present a complete idea of what the regular readers get in its perusal week after week, and in order to the better enable a possible subscriber to have a more thorough appreciation of the caliber of the paper, arrangements have been made to send the paper for a trial term of three months, and at the end of that time a fair conclusion can be reached. A reader for three months always a reader!

Privileges of Three Months' Trial Subscribers.

These are duly entitled to a premium if they take out a yearly subscription. As the season for planting is fully upon us, it would be best policy for those amongst our trial subscribers who intend taking AMERICAN GARDENING for a further twelve months, to send in their subscriptions now so as to avail themselves of one of our Premium offers at the best time for planting. In entering such subscriptions on our books all unexpired time on the trial subscription will be duly credited.

The Japanese Iris.

[SEE COLORED PLATE SUPPLEMENT.]

This section of the lovely Iris family, is by its inherent gorgeousness of color, size of flower and grace of form, forcing its way into the forefront of popular favor. The weather conditions which prevailed during last spring and summer, proved more favorable to the growth and bloom of *I. Kämpferi* than had that of many previous seasons, and as a consequence of the attention then drawn to the plants, they are this season destined to be more popular than ever, particularly as they are now being offered at cheaper prices.

And all this is how it should be, for no hardy plant more justly deserves to be popularized. The freedom of growth and ease of culture, the enormous flowers and their extraordinary range of color, all tend to make the Japanese Iris one of the most desirable of garden plants. Then again, for home adornment, it has no equal; as a cut flower, when gathered in a fresh state and immediately put in water, it is very satisfactory, and it even ships well with a little extra care; and even if the expanded bloom does suffer, satisfaction will be had from the buds which open up after being placed in water.

As regards cultivation, this Iris is possibly less fastidious than are the majority of highly colored, large-sized flowers, for it can be found succeeding under all sorts of different conditions. These Irises like to have their toes, so to speak, in the water during the growing and flowering period, and if such can be accomplished, it would be well, for in no other way can the largest sized perfect blooms be secured. That the plant responds to such treatment, anyone would admit after seeing the sunken bed of Japanese Iris in the grounds of Mrs. Jack Gardner, at Brookline, Mass. This lady adopted this style of bed after seeing the plants growing under cultivation in their Japanese home. The arrangement is simple and inexpensive, provided that water is easily obtainable.

The bed in question is cut out of a sloping lawn, being deep enough to allow the flowers when expanded to be on a level with the grass, small perforated water pipes are placed in rows in the bottom of the bed, and the water oozes out continuously. Connections are so made that the supply is put on or off at will. There is nothing about the contrivance to prevent a large number of people from employing a similar privilege.

Many people have fountains in their gardens, and so have an ideal place for these Irises, a circle of which would make the picture perfect. Or perhaps nearby there is a small pond or stream. What place more desirable than on the banks of either?

Failing any of these conditions, where there is no water to fall back upon, can we grow Japanese Iris? Yes, certainly! There are several large establishments around and near New York City where the plants may be seen growing by the acre in dry, hot, and arid soil, and under these conditions attain a wonderful degree of perfection. All the attention they have received is good deep cultivation and a liberal dressing of rotted manure. The plants are put out in ordinary nursery rows, set wide enough apart to allow for horse cultivation—in other words, ordinary field culture—yet last summer, toward the end of June and during the first two weeks of July, when we visited these fields, they presented a wealth of floral beauty.

If the above be true, then of this hard, crude, commercial treatment how much

more satisfactory would the plants have been under the watchful care of a flower lover in the home plot or the kitchen garden border, with all the other herbaceous and perennial plants?

At the time of one of our visits to one of these displays last summer (July 11) we made the following notes on the varieties then seen, and to us appearing at that late date as the most striking. *Eclair*, a charming white, very large flower, measuring eleven inches in diameter. Another good white, and which is an extremely free one, that can be recommended to any one, is *Gold-bound*. The flowers are from nine to ten inches in diameter, but lack the chasteness of *Eclair*. Mr. Fell is perhaps the most floriferous of all and the color is very effective, being a light gray, sometimes coming almost white; the stem and flower are the most erect and rigid of any we noticed. Mr. Hood is a very large flower, in color purple and gray. *Isabella* is a blue and gray flower, and a favorite with all. *Oriole* easily ranks as one of the best in the high colors, being a solid, crimson-purple. *Blue Jay* is aptly described by its name, and is a very free variety. *Crimson Tuft* is another very good, highly-colored flower. *Chameleon* is a beautifully blue-gray marbled flower, very charming. *Apollo* ranks as one of the best dark blues. *Zenobe* is a light blue of immense size. *Prince Camille de Rohan* is most likely the darkest of all purples, very solid, even and very large. *Hyde Park* ranks well as a light blue. *Fay Templeton* is a delightful purple. *Coronet* is a very rich dark purple. *Dinah* is a very pleasing light gray. *New York* is a massive flower, a fine combination of purple and lilac in color. *Mount Hood* is a grand light blue. *Blue Danube* is a grand massive flower of the color named.

Our colored supplement is from a painting made from varieties in the collection of Messrs Siebrecht & Son, New Rochelle, N. Y.

Forcing Varieties of Tomatoes.

In a recent issue of *American Gardening* I noticed some remarks on *Lorillard* and *Sutton's Best of All* as fine forcing tomatoes. We grew *Lorillard* four or five years ago, but discarded it, practically because it did not set freely enough and also because its shape is not what we like in an indoor tomato. *Sutton's Best of All* we grew last year, also *Sutton's Earliest of All*, but neither of them proved equal to other kinds we are growing.

For indoor work during the past winter we used *Chemin*, *Eclipse*, *Nicholson's Hybrid*, and *May's Favorite*. The first named fruits freely enough, but a certain proportion of the fruit is liable to come hollow; a great improvement on *Chemin* is *Eclipse*, which we have now grown two winters, it is an enormous cropper, fruit of fine shape and firm. For early forcing to fruit during December and January *Nicholson's Hybrid* is superb. This variety was raised by Mr. W. Nicholson of Framingham, Mass. The fruit is not large, averaging six to eight to the pound, but is of first-class quality and averages five to nine fruits per bunch. For ripening after February *May's Favorite* is very fine. The fruit is firm, richly colored and larger than the other forcing kinds named.

This year we are testing a new variety named *Comet*, which we found extensively used in Scotland and the North of England last summer. It promises to be even better than *Eclipse*. Both these varieties were of

Scotch origin, being introduced by Austin & McAslan, of Glasgow.

Respecting the number of fruits, a tomato plant will carry and ripen in winter, everything, of course, depends on the setting qualities of the variety. From *Nicholson's Hybrid*, our earliest winter sort, we average fifty fruits per plant; *May's Favorite* will yield thirty-five to forty-five; *Chemin* fifty, and *Eclipse* even more. Some of our plants have given us as many as seventy-five fruits, fine ones, too; some bunches have carried nine to thirteen fruits, all of good size.

Our plants are all grown in ten-inch pots, are allowed only two feet of space each, and have one lateral besides the main stem. The main stem is allowed to carry six to seven bunches and the side lateral four bunches. From twenty plants of *Eclipse* we have gathered in all 1,250 fruits.

We prefer pot culture to planting in benches for several reasons; the flowers set more freely, stimulants can be applied more frequently (we use sheep manure chiefly), the roots being more under control, there is less liability to "club foot" and fewer hollow fruits. Then the pots can be moved if occasion requires, which means something where space is limited. We make our first sowing toward the end of July, and usually pick fruit from these by the end of October. Have not been without fruit for a week during the past four years.

W. N. CRAIG, Taunton, Mass.

FOREIGN CORRESPONDENCE.

Peas and Sparrows—Conditions in Australia.

It's a long cry from here to your headquarters, but I take upon myself, on behalf of your correspondent of January 30 (W. T. A., Melrose, Mass.), to give the plan which is used in this colony to keep sparrows from destroying green peas when just above ground. It is simply to run lines of black cotton alongside or over the rows about one inch high. The sparrow is a very suspicious bird, and the moment he touches the cotton he clears. Lines of strawberries may be protected in the same way. The English sparrow is in these colonies a frightful pest, and their numbers are only kept down by payment of bonuses to boys upon eggs and heads. They breed all the year round, as our winters are not cold enough to stop their supplies of food. What with sparrows, rabbits, and foxes, all of which have been introduced here, the settlers have a bad time. One cannot conceive of the vast quantities of rabbits and the destruction of herbage they accomplish without having seen them. Fences of 1½-inch wire mesh 3 feet high are the only remedy to keep them out from cultivation. Thousands of miles of such fence are in use, while trapping and poisoning is every day work all over the colony, and is supervised by Government inspectors.

After a bad setback through land-plunging, our colony is now making way again. Our butter shipments are an ever-increasing trade, which pays milk producers from 6 to 7 cents per gallon for milk. No need of barns or storage of food, for cattle graze all the year round. Shipments of apples and other fruits are yearly increasing, being made under refrigerators. We are now putting grapes into London by this means and realizing good prices. The production of gold keeps steadily increasing.

We have just gone to poll to elect a federal convention, with a view to form the whole group of these colonies into one commonwealth, which, as has long since been proved, will add materially to our prosperity.

I should like to say that this being my third year as a subscriber to *AMERICAN GARDENING*, I find that the value received far exceeds my outlay, and the balance constantly increases in my favor.

—L. T. CHAMBERS, Melbourne, Australia

Russian Fruits.

Under the head, "Some Russian History in Iowa" (page 129), the words used and resolutions quoted give a false impression. The truth is that we have sent out for trial in a small way the most promising apples, pears, cherries, plums, prunes, peaches, shrubs, etc., of Eastern Europe and Central Asia. The reports from careful amateurs are specially favorable, as an almost invariable rule.

The apples, pears and many shrubs have naturally proven most valuable in North Iowa, Dakota, Minnesota, Vermont, and the cold North generally, as have some of the cherries and plums.

South of the forty-second parallel the East European plums, cherries and peaches have proven specially valuable. If your space will permit, we can send you from all parts of the West reports from our trial stations as favorable as that I inclose, by Mr. Curtis. This is selected for the reason that he is widely known as a careful experimenter with long experience, and as a judge of good fruits; his location is like that of Southeast Iowa.

Our labor in securing a wide test of these fruits, shrubs, etc., is now about completed. In 1898 we will be able to close for good the College Nursery so severely criticised by three or four of our Iowa friends. The new crosses and hybrids of fruits, roses, etc., we are now testing will be distributed without cost to planters, as from the other experiment station. Our nursery work was forced on us, as without it the real value of these new fruits would never have been known.—I. L. BUDD.

The report referred to follows:
REPORT OF B. O. CURTIS OF PARIS, ILL., ON NEW PLUMS AND CHERRIES.

The Russian cherries with me are a great success. In 1895 the severe freeze on the 14th of May killed all my cherries, except on the English Morello and the Cerise de Osthelm. In 1896 the cherry crop was good. All the Russian varieties were loaded with fruit. Cerise de Osthelm again produced a heavy crop of delicious fruit. This is very late and equal to English Morello in productiveness, and superior to it in hardness and quality.

I prize the Russian cherries for their hardness of tree, quality of fruit and for early and profuse bearing. I have had them for ten years and have not lost a tree from transplanting or any other cause.

Early Morello (Orel No. 23) ripened the 23d of May last season. The trees were full, the fruit large and of very good quality. This is the earliest I have known any variety of cherry to ripen. Its size and keeping after ripe are worthy of special notice.

The Russian plums have come to stay. I have been planting them now for ten years and have not lost a tree and have not seen the least damage on them, except one tree of Maruraka, with stem five feet high, which is sunscalded on the south side. Another tree of same variety, with a low stem, is perfect. Both of these bore a full crop in 1896 of large, nice blue plums of the best quality and most beautiful appearance. It was a sight to see the fruit as it hung on the trees. It matured perfectly and is one-third larger than the Communia. Dame Aubert Blue is the largest of all plums I have grown or seen. Many of the specimens measured two and one-fourth inches in diameter. Color, dark blue; flesh firm, juicy, rich and delicious. It is equal to the best English varieties, and the tree is a perfect ironclad. In the May freeze, in 1895, the ground froze half an inch deep. This killed all the leaves and young shoots on the Lombard, while the leaves of the Communia and the Russian plums were not damaged in the least. This proves the Communia to be of Russian origin. The leaves of the English plum were all scorched by that freeze, but not a leaf of any Rus-

Scrofula

"My little son was afflicted with scrofula sores and he was weak and sickly. Our physician recommended Hood's Sarsaparilla and I bought a bottle. Before he had taken all of this bottle his face began to break out with sores. I continued giving him Hood's Sarsaparilla until he had taken two bottles. The sores were then healed and he has been well and hearty ever since." Z. W. SMITH, Big Shanty, Pennsylvania.

Hood's Sarsaparilla

Is the Best—in fact the One True Blood Purifier

Hood's Pills are tasteless, mild, effective. All druggists. 25c.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan Ivy, 3 years, \$2.00 per 100.

E. S. PETERSON, Montrose, New York. Montrose Nurseries.

Mention American Gardening when you write.

ALL THE LATEST NOVELTIES
AND PLANTS THAT CAN BE HAD EVERYWHERE.
Cannas, Italian and Austria, at \$1 each.
New Roses, New Fruits, New Shrubs, New Bulbs.
10 Cents for \$1.—\$4 for \$6 cts. Book on Cacti 116 pages, 125 cuts, 10 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free.
A. BLANC & CO., Philadelphia.

FLORA OF JAPAN & CALIFORNIA
Chinese Narcissus, over 100 varieties of Lily Bulbs, Camellias, Palms, etc.
HARDY PLANTS, Japan Maples, Iris K., Clematis, Cacti, Flower Seeds and seeds of the most interesting and beautiful plants of California and Japan.
Send for our richly illustrated Catalogue of 48 pages giving full descriptions of above.
M. H. BERGER & CO., San Francisco, Cal.
(ESTABLISHED 1878).

IOWA TREES.

First-class and prices reasonable at the
Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.



LOTUS OF THE Nile.

Mention American Gardening when you write.

SURPLUS OF

Peach and Grapes...

I have a surplus of HILL'S CHILI, GOLD DROP, KALAMAZOO, ST. JOHN, WAGER, LEWIS SEEDLING, CROSBY, and ELBERTA, 3 to 4 ft., fine stocky trees that I offer to clean up for 4 1/2 cts. each, F. O. B. jars.

A few New Prolific at 8 cts. Also have 50,000 Grape Vines for sale at lowest living prices. This is strictly first-class stock, and I offer at these prices only to close out as I need money.

F. L. WRIGHT, Plainfield, Mich.

Mention American Gardening when you write.

Danish Ballhead Cabbage.

IMPORTED RELIABLE SEED.

Prices on application. Catalogue Free.
FRANK H. BATTLES, Seed Grower Rochester, N. Y.
Mention American Gardening when you write.

FLOWER QUERIES.

A book written in Questions and Answers, discussing 500 topics on flower culture, in ten chapters as follows: Chap. I.—Soil and General Cultivation. Chap. II.—Salubrious Plants. Chap. III.—Lilies, Culture and Management. Chap. IV.—Roses. Chap. V.—Vines or Climbers. Chap. VI.—Shrubs. Chap. VII.—Ferns and Palms. Chap. VIII.—Insects and Diseases. Chap. IX.—Miscellaneous Queries. Chap. X.—Floral Hints. Every one who loves and cultivates flowers needs it. PRICE 25 CENTS.

THE COURIER, Chatham, N. Y.
Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.

Mention American Gardening when you write.

ROSES

\$2.00 per doz.; \$20.00 per 100.

Large 2 year old, Semi-double plants of Hybrid Perpetual, Hybrid Tea, Moss and Climbing Roses. All the best varieties true to name. Write for catalogue. W. E. WALLACE, Nurseryman, Hartford, Conn.

Mention American Gardening when you write.

Borberry, California Privet and Japan Quince
For Ornamental

HEDGES.

HARDY ROSES ON OWN ROOTS.

Write for Prices to
FAIR OAKS NURSERY, OAK PARK, ILL.
Mention American Gardening when you write.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 665, ALBANY, N. Y.

Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 3 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America.
A printed list sent on application. Sales made at reasonable prices.

F. CORNING.

Mention American Gardening when you write.

BERRY BASKETS
AND
CRATES

of all kinds. Also material in the Flat. Write for Catalogue and Price List.

WEBSTER BASKET COMPANY,
WEBSTER, Lock Box 43, Monroe Co., N. Y.
Mention American Gardening when you write.

DEMING PUMPS
THE WORLD'S BEST
SPRAY FOR PROFIT
WE MANUFACTURE
PUMPS FOR ALL PURPOSES
Our Spray Pumps and Nozzles are used by the experiment stations and all leading horticulturists. The best fruit and berries can only be produced by spraying. We send a valuable illustrated 36 Page Book on Spraying, FREE. Address
THE DEMING CO., SALEM, OHIO.
HENION & HUBBELL, General Western Agents,
61 to 69 North Jefferson St., CHICAGO, ILL.
Mention American Gardening when you write.

asian was changed in color. The trees seem as hardy as any forest tree.

The Long Blue, Lelapic, Hungarian and White Nicholas produced plentiful crops the past season.

The Russian plums I have are all hardy, productive and superior in quality. The English plums are tender in tree and will be winter-killed when it is cold enough to kill peach trees.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

James Grape.—Nothing but absence from home and the stress of many duties have prevented a sooner writing to thank you for the premium of two Green Mountain vines, which came nicely packed and began to grow at once. We are all much pleased with AMERICAN GARDENING. We have in this section (the tidewater district of N. C.) the James Grape. There seems to be no "bunch" grape to equal it in flavor, while its size and productiveness are wonderful. I have frequently measured berries 3½ inches round—a moderate estimate—and a crop of say from 30 to 60 bushels of fruit per vine. In bearing capacity and general habit it resembles the Scuppernon, though I believe it will live further from the sea. The James Grape was found a wild Muscadine seedling, in the woods of Pitt Co., N. C., a few years after the war. In the month of November, Dr. O'Hagan, of Greenville, N. C., arriving in the country, met a man who showed him some uncommonly fine fruit. The doctor tasted them and inquired where they came from. Mr. James told him, and was advised to return to the spot and dig up the root, which he did. The original vine, in an immense arbor, still adorns his premises. I enclose a short account of the variety from the catalogue of Mr. Warren, of Greenville. By the way, I wonder whether it would be possible to produce a hybrid between the Vitis rotundifolia or Scuppernon family and the bunch grapes.—A. G. Kingston, N. C.

[Prof. Munson, we believe, has hybrids of Scuppernon and Herbemont (Vitis Aestivalis.—Ed.)]

Spiraea as a Hedge Plant.—For an ornamental hedge I have seen nothing equal to Spiraea Van Houttei. We set the plants 18 inches apart in the hedge row, using plants one to three feet high, as we may have them. After the blooming season is past, we cut the plants back pretty well, after which the new growth forms a beautiful hedge. We usually allow the hedge to attain a height of about four feet, though where a lower screen is desired they will bear cutting down to about two feet. Few shrubs bear shearing or training better than this. Van Houttei is the hardiest of all the Spiraeas, and when in bloom in early summer is one of the very finest of all hardy shrubs. The habit of the plant is also graceful and pleasing at all times.—E. Y. T., Irvington, Ind.

Premiums at Shows.—I read with interest the article of W. H. W., Mass., in your issue of April 10, urging some plan by which premiums may be offered at flower and fruit fairs to interest small growers. For the past two years we have had a flower and fruit fair here, which I think has done much good in our place by encouraging our citizens to grow the best, especially in flowers, and leads some to grow them who have not in the past, and cannot but add to the beauty of our homes and city and to the welfare of our people. We offer as premiums choice of six Hyacinths, six Narcissus, twenty-five Tulips, fifty Crocus, etc. And we find that by some systematic work we can get a very nice exhibit, and by charging a small admission fee it can be made to pay expenses and more. We bar professional florists from competing for premiums. It certainly has had a good influence in our city, and now many inquire if we are going to have the flower show this year.—J. F. M., Ohio.



This little picture will come home with telling force to many a tired and overworked farmer's wife, who has often felt that she could not longer stand the strain and who finally succumbed to disease. Poor woman! Do you not know that there is within your easy reach a remedy that will quickly restore you to health and happiness? A remedy that will positively cure

**FEMALE COMPLAINTS
BRIGHT'S DISEASE
URINARY TROUBLES
GENERAL DEBILITY
AND MALARIA**

and all diseases caused by disordered Kidneys and Liver. It is a purely vegetable compound which has cured thousands and will cure you. Its name is

Safe Cure

Large sized bottle or new style smaller one at your nearest store.

Mention American Gardening when you write.

PRIZE WINNING DAHLIAS

\$1.00 per doz. Catalogue Free.

LOTHROP & GIGGINS, E. Bridgewater, Mass.

Mention American Gardening when you write.

Lawns and Gardens

How to Beautify the Home Lot, the Pleasure Ground, and Garden. By N. JONSSON-ROSE. With 172 plans and illustrations by the author. Large 8vo. gilt top (in a box), \$3.50.

Contents:—On the Study of Natural Scenery—Implements—The Plan—Grading—Drives and Walks—Grouping and Massing of Trees and Shrubs—Detached Groups and Specimen Plants—On the Proper Use of Herbaceous Plants—The Lawn—Rocks and Water—Flower Beds and Borders—Hedges—Buildings and Enclosures—On the Embellishment of the Dwelling House—The Orchard and Kitchen Garden—After-treatment—Deciduous Trees—Coniferous Trees—Flowering Trees—Ornamental Shrubs—Creeper and Vines—Herbaceous Plants—Index of Common Names—Index of Botanical Names.

Mr. Jönsson-Rose is landscape gardener in the Department of Public Parks in New York City. Under his direction, Morningside Park has lately been replanted and improved, and he is now engaged in laying out Riverside Park according to plans made by himself.

This book is intended to be a help to all lovers of gardening, as applied to home surroundings; a useful aid to every owner of a country residence, to village improvement societies, landscape gardeners, and young students of the art. It treats of the practical side of landscape gardening, describes the best hardy plants, and points out the proper use of each.

G. P. PUTNAM'S SONS,

New York and London.

Mention American Gardening when you write.

Corn

is a vigorous feeder and responds well to liberal fertilization. On corn lands the yield increases and the soil improves if properly treated with fertilizers containing not under 7% actual

Potash.

A trial of this plan costs but little and is sure to lead to profitable culture.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.

EARN A BICYCLE
500 Second Hand Wheels. All Make. GOOD AS NEW. \$5 to \$15. New High Grade models, fully guaranteed \$17 to \$25. **Special Clearing Sale.** Shipped anywhere on approval. We will give a responsible agent in each town free use of sample wheel to introduce them. Our reputation is well known throughout the country. Write at once for our special offer.

N. L. MEAD CYCLE CO., Wabash Ave., Chicago, Ill.
Mention American Gardening when you write.

SOLD BY THE SEED DEALERS OF AMERICA.
For pamphlets address
B. HAMMOND,
Fishkill—N. Y.
Hudson. N. Y.

HAMMOND'S SLUG-SHOT
INSECTICIDE & FUNGICIDE

Mention American Gardening when you write.

TWO VALUES FOR ONE PRICE.
Every user of Page fence gets full value in the way of protection for crops and stock. Then there is the satisfaction in having the best article there is made, something durable, something that actually adds value to the premises. Better think of this. Write us and investigate.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO.
Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

Market Gardeners

SHOULD TRY OUR

W. & D.'s Self-Blanching Celery
W. & D.'s "Bennett's" White Spine Cucumber
W. & D.'s Improved Am. H. Crown Parsnip
W. & D.'s American Beauty Pea
W. & D.'s Deep Scarlet Forcing Radish
W. & D.'s Improved White Bush Squash

Descriptive Catalogue Free, by mail.

WEEBER & BON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Wednesday, April 28, 11 A.M.

A choice assortment of Roses, in bundles of ten, in ten varieties. A large quantity of well budded Ghent Azaleas, also Hardy Rhododendrons. Spring Bulbs of all kinds will also be offered.

Friday, April 30, 11 A.M.

Roses, Nursery Stock, Gladioli, Tuberoses, Caladiums, 500 Lillium Giganteum, 500 Pancratium Caribaeum.

At each sale will be offered a choice assortment of house plants, Ficus, Palms, etc., and a full line of Bedding stock.

Goods on view morning of sales. Catalogues free.

Mention American Gardening when you write.

GLEARY & CO., 60 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on

Wednesday, April 28, at 11 A.M., with a complete assortment of Irish Grown Roses, Nursery Stock, Tuberoses, Caladiums, Dahlias, Canna Roots, Gladioli, also Holland grown Roses, Rhododendrons, Azaleas, Viburnum, etc. Also flowering and bedding plants.

Tuesday a special sale of Hydrangeas.

Sales every Tuesday and Friday hereafter.

Catalogue on application.

Mention American Gardening when you write.

R. M. GARDNER & CO., 199 Fulton Street, NEW YORK.

Will sell every TUESDAY and FRIDAY at their rooms at 11 a.m., a general line of Nursery Stock and Spring Bulbs and a large assortment of Bedding plants.

Catalogue on application.

Mention American Gardening when you write.

PEACH TREES \$2. per 100.

List Free. RELIANCE NURSERY CO., Geneva, N.Y.

Mention American Gardening when you write.

ASTER SEED Leading kind, best kind for bedding and out flower at low price.
PANSY PLANTS, 5 cts. each, large plants, too large to send by mail. English Ivy, 4 ft. high, 15 cts. Honeysuckle, 3 years old, sweet scented, each 10 cts., by express. Carnations, rooted cuttings, etc.
HENRI BEAULIEU, Weedhaven, N. Y.

Mention American Gardening when you write.

GLADIOLUS. A Superfine Mixture, made up of very best named varieties and choice un-named seedlings. Fine blooming bulbs at \$1.00 per 100, \$8.00 per 1000; by express, purchaser's expense.
J. A. REED, (Gladiolus Specialist), CANTON, OHIO.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

PRIVATE GARDENERS.

Auction Sales.

Wednesday, April 28.—Hardy Roses, Standard Roses, Lilacs, Hydrangeas, Nursery Stock, Spring Bulbs and Bedding plants, at Elliott's Rooms, New York.

Roses, General Nursery Stock, Bulbs, Rhododendrons, Azaleas, and Bedding plants, at Cleary's Rooms, New York.

Paeonies, Flowering Shrubs, Bulbs, and Bedding plants, at Gardners' Rooms, New York.

Friday, April 30.—Sales will also be held as indicated above.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

Mr. W. L. Palmer, who was in charge of Mr. George Ripley's fine place and greenhouses at Andover, Mass., for 3½ years, is now looking for an immediate engagement, as will be seen by his advertisement in another column.

David Norris, lately gardener to W. E. C. Bradley, Esq., New Canaan, Conn., is now out of a situation, and is in New York looking for another place.

Mr. G. Atkinson, for ten years foreman for T. H. Spaulding, Orange, N. J., leaves his position on account of Mr. Spaulding's having sold his place, and has engaged with Mr. Herman, of Orange, who expects to erect a large range of glass during the summer.

Arthur T. Caparn, who for several years has been connected with the firm of Pitcher & Manda, is now associated with his father in the landscape gardening business under the firm name of Caparn Co., with offices at 225 Broad st., Newark, N. J., and also at Summit, N. J.

Messrs. Siebrecht & Son, of New Rochelle, N. Y., desire to draw the attention of superintendents and head gardeners of parks, cemeteries and public places to their valuable collection of New Hybrid Japan Iris, which they are now offering. Price list and descriptions thereof, will be found on page 312, this issue.—*Adv.*

Madison, N. J.

The Morris County Horticultural Society met April 14, President Herrington in the chair. At the roll call 23 members answered present. Six new names were presented as candidates for active membership. A committee of six members was appointed to make all the necessary arrangements for the fall show; the Madison committee to consist of J. Jones, W. Reed, and C. H. Atkins; Morristown to be represented by W. H. Thomas, H. C. Holmes, and W. Hanson.

The lecturer for the evening was C. H. Atkins, and the subject selected by him was the "Fertilization and Mimicry of Orchids." The lecture was illustrated by the use of 48 diagrams and colored charts, and quite a collection of living flowers. Mr. Atkins gave abundant evidence of a thorough knowledge of his subject, also of a great amount of labor in preparing his material. The marvelous details of the life history of the flower, and its peculiar construction and organization for the preservation of the species were elaborately dealt with. In the mimicry of Orchids some very amusing points were brought out. The lecture was well received, and a very hearty vote of thanks was accorded to Mr. Atkins at the close.

It may be added that this young Society is giving ample evidence of being a very real and live organization, its membership is increasing very rapidly, and excellent work is being done. The next meeting will take the form of a social gathering.

Lenox, Mass., Horticultural Society.

At the meeting of the above Society, held April 17, Mr. J. Farquhar, of Boston, gave a most interesting lecture on "A Trip to the Seed and Bulb-growing Establishments of Europe." Mr. R. Farquhar illustrated the same by the aid of stereopticon views. Some sixty members and friends were present, and the Society felt very grateful

to the Messrs. Farquhar for coming such a distance to entertain them at so busy a time, it being the Saturday before Easter. The motion for a vote of thanks to Messrs. Farquhar received a cordial response.

This ends the series of lectures or essays which was arranged for at the commencement of the year to make the meetings more interesting. Such well-known men as Mr. P. O'Mara, Mr. J. N. May, Professor Watson, of the Bussey Institute, Rev. Mr. Hutchins, Mr. E. J. Woods, and Mr. I. L. Powell, of Millbrook, N. Y., have entertained and instructed the members at the various meetings, and the consensus of opinion is that the essays have been an undoubted success, and will in all probability be repeated.—E. J.

Northampton, Mass. Horticultural Society.

The Second Annual Spring Exhibition was held in the City Hall, on April 6, 7 and 8, and was a great success; the hall being filled almost to overflowing with spring blooming plants and flowers, and although the weather was not all that could be desired the attendance was very good.

The largest exhibits were from the private greenhouses of E. H. R. Lyman, Esq., the Smith College Botanic Garden, and the greenhouses of the Northampton Lunatic Asylum. The local florists also made good displays of well grown plants, while a large number of amateurs brought in window and house plants, a feature which the officers of the society are doing all they possibly can to encourage. Some very fine Cyclamen were exhibited by E. H. R. Lyman, Esq., (D. McGregor gardener). The plants were in eight-inch pots, and carried from 100 to 150 blossoms; some very fine pots of Violets were also shown by the same gentleman in addition to a large variety of other plants. Some seedling plants of Primula obconica in 10-inch pots, and carrying 150 trusses of flowers, came from the Smith College greenhouses, also some specimen fancy Pelargoniums, 3 feet in diameter, in addition to a varied collection of spring flowering plants and a collection of Cacti and Agaves from the same greenhouses. Mr. G. W. Thornley, gardener at the Asylum, showed some very fine Easter Lilies, Azaleas and Cinerarias, in addition to a collection of well-grown Rex Begonias. The exhibits of the local florists consisted chiefly of Easter Lilies, Cinerarias, Azaleas, Marguerites and Carnations. Some very good window and house plants were shown, notably a plant of Nicotiana affinis in full bloom and 6 feet high. A very fine seedling Coleus with leaves 6 inches long by 4 inches wide and well colored; an Aracauria excelsa and several well-grown Palms, Dracenas, Begonias and Geraniums, etc., were exhibited by amateurs. The society is in a very prosperous condition. The meetings are held on the second Tuesday of each month, except July, August and September, when lectures by the professors from the colleges around here, and informal talks on plants are given. The next exhibition will be the Chrysanthemum in November, but in the meantime the officers of the society intend to distribute 500 small Chrysanthemum plants, with printed instructions how to grow them, among the children of the city. The society will then offer premiums at their Chrysanthemum Exhibition for the best plants grown by the children.—EDWARD J. CANNING, Secretary.

American Institute Show and Meeting.

The regular monthly meeting of the Farmers' Club of the American Institute was held on Tuesday, April 13, at their rooms, 113 West Thirty-eighth st., New York. The main topic of discussion was the forcing of fruits and vegetables under glass. In the place of Dr. F. M. Hexamer, who has been for the past two weeks confined to his bed with the grip, T. L. Harris presided. The speakers were C. L. Allen, J. W. Withers, W. Anderson, A. Herrington, F. L. White and S. Henshaw. The exhibition itself was quite a success, and of a very unique character. One of the principal exhibits was twenty-four pots of Strawberries from A. Herrington, Madison, N. J.

These were superb. Many of the fruits weighed $2\frac{1}{2}$ ounces each, and fifteen would fill a quart. There was an average of five fruits to a pot. The varieties were Jersey Queen and Sharpless. Messrs. Archdeacon & Co., 100 Murray st., New York City, also exhibited some fine berries, set up in the regular market style. Bennett & Hall, 161 West st., Washington Market, put up remarkably fine Boston Market lettuce, from a Rhode Island grower. W. W. Rawson, Arlington, Mass., staged ten improved White Spine forcing cucumbers—a very fine lot.

Messrs. Weeber & Don, 114 Chambers street, exhibited a fine collection of vegetables grown from their seed; their display included Telegraph cucumbers, Golden Queen, and Boston Market lettuce, Mohawk beans, Moss Curled parsley, Scarlet-tip radish; also Non Plus Ultra, a variety which was highly recommended for forcing purposes, owing to its bright scarlet color, uniform size, and more particularly, on account of its remarkably short sparse top. They also had some very fine examples of mushrooms.

C. L. Allen, Floral Park, N. Y., exhibited a distinct ruta бага, round, clean-skinned and very smooth.

John Lewis Childs, Floral Park, exhibited six vases of Swainsona, and Antirrhinum, majus alba and the newer variety, majus luteum. This with the white form should make an admirable forcing plant for winter and spring use, being already extensively grown by commercial florists for use as a cut flower.

W. Anderson, gardener to Mr. J. M. Constable, made an excellent showing with Telegraph and Sutton's Progress cucumbers, Sutton's Best of All tomato (this latter is evidently better for forcing purposes than the Lorillard), some remarkable mushrooms and flats of mustard and cress.

J. H. Horrocks, gardener to Archibald Rogers, Hyde Park, N. Y., was the only exhibitor of cauliflowers, putting up six heads of even size and exquisite color—the variety was Early Snowball. In addition to the above, he exhibited White Spine and Telegraph cucumbers; four of the latter were well-grown shapely fruits.

J. Duckham, gardener to A. James, Madison, N. J., exhibited an exquisite plate of Ne Plus Ultra beans. They were of uniform size, and very good color, in excellent condition for culinary purposes.

A. Welsing, gardener to Mrs. Erhart, Brooklyn, N. Y., exhibited some Californian and Mexican plants, including a Solanum.

The Clauson-Kaas Manufacturing Company, 335 Broadway, made a very interesting and educational exhibit of plastic natural imitations of fruits and vegetables. This firm claims that by this process they can produce an exact facsimile of the original model, weight, size, color, shape, etc. For comparative purposes, these models should prove invaluable. They remain unaffected by temperature, stand handling and cleaning, and are said not to fade.

Messrs. Archdeacon & Co. made an interesting exhibit of vegetables, etc., representing stock as it comes on to the New York market. This included asparagus, tomatoes, water cress, mushrooms, cucumbers, celery, rhubarb, beans, lettuce, radishes, romaine, and a plate of Scotch Magnum Bonum potatoes, from last week's importation. These were of fine skin and great size.

The Farmer's Club. — The afternoon meeting was the best attended of the series so far, and the speakers were listened to with a marked interest. The trend of Messrs. Allen's and Withers' remarks was the advocacy of more forcing of vegetables both for home use and market. Claiming that the increase of Southern stock now coming into the market helped to create a demand for the choicer home-grown article, so much so that the demand for such was greater at this time than ever before. Incidentally, Mr. Withers remarked that the greatest competitor the home market grower had to deal with was Bermuda; their quick, cheap, water carriage and admirable climate making this possible, but perhaps the proposed tariff would help as a check in this direction.

Mr. A. Herrington, referring to his exhibit, said that there were no secrets underlying the production of the fine berries they saw that day, they only represented the measure

HAMMOND'S "WHITE PAINT,"

For Outside or Inside Use on
Greenhouses or other Buildings.

For 19 years this Paint has been in use for this specific purpose, and it is as indestructible as paint can be made. Put up in 5, 10, 15, 20 and 25 Gallon Kegs, and in Barrels of 50 Gals.
B. HAMMOND, Fishkill-on-Hudson, N. Y.
Mention American Gardening when you write

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

A practical working gardener, good Rose grower, wants situation on private place, good references, strictly temperate. Address Gardener, 221 East Avenue, Rochester, N. Y.

AN ARTISTIC gardener, age twenty six years, German, two years in this country, perfect in all the branches of gardening, seeks a permanent position. Please address L. M., P. O. Box No. 6, Westport, Conn.

WANTED—private situation, for my thoroughly experienced gardener, especially good rose-grower, strictly temperate, moderate wages, married. Address G. H. Perkins, East Avenue, Rochester, N. Y.

SITUATION wanted by single thoroughly experienced florist, to take charge of private place; 28 years, 14 years' experience, strictly sober. Would take second position on good place. Good references. Diefenbach, 78 East 88th St., New York.

SITUATION wanted as gardener's assistant by Scotch-American, 31 years of age, has worked 4 years on one place. Is desirous of getting under good gardener, where he would learn. Address, W. H., care of Anchor Line, 88 Wall St., New York.

GARDENERS, farmers, etc.—Employers desiring the services of reliable men to fill positions as above, are invited to correspond with us. On our Register are the names of excellent men whom we have known for a long time. No fee charged to any one. R. & J. Faughar & Co. Seedsmen, 16 and 19 South Market St., Boston, Mass.

HEAD GARDENERS.—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 35 & 37 Cortlandt St., New York.

SITUATION wanted by a thorough practical English gardener, 30 years' experience, 12 years in America, around New York. 54 years on one place in Boston, in all branches. Roses, and chrysanthemums, a specialty, moderate wages, strictly temperate, married, one baby girl. Address Palmer, 28 Gardiner Park, Rochester, N. Y.

GOULDS' SPRAY & PUMPS

are either made of Brass or are Brass Lined. No Iron to rust or corrode. 12 Varieties, meeting all the requirements of Spray Pumps.

GOULDS' NOZZLES ARE BEST.

Made in 28 styles. This shows one of

GOULDS' PORTABLE BRASS FORCE PUMPS.

All about Spraying, "How and When to Spray," and Valuable Formulas for Insecticides sent free. Address

THE GOULDS' MFG. CO.

11 Ovid St., Seneca Falls, N. Y.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.

**CYPRESS
SASH BARS
GREENHOUSE**
AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advt., and each initial or a number counts as one word. No cuts or display type allowed.

DAHLIAS. 500 varieties. H. F. Burt, Taunton Mass.

ULSKEBOSCH BROS., bulbs and plants, Englewood, N. J.

DAHLIAS! Prize strain of 100 named exhibition varieties, 10 for \$1. A. H. Brown, Westboro, Mass.

RADISH and LETTUCE Seed for forcing. Write for Samples and Prices. Frank H. Battles, Seedman, Rochester, N. Y.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

THE "RIDGWAY."—A new strawberry of great merit. For price of plants and free catalogue address M. H. Ridgway, Wabash City, Ind.

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 715 Wharton St., Philadelphia. Three shipping points, can save you freight.

EGYPTIAN or Top Onion sets cheap; one dollar per bushel in any quantity; purchaser to pay freight. W. W. Thompson & Sons, Station D., Milwaukee, Wis.

HAVERLAND STRAWBERRY—Very strong plants packed in moss, \$1.40 per 1000, Warfield's No. 2, medium grade, \$1.00 per 1000, 10,000 \$9.50. Chas. C. Nash, Three Rivers, Mich.

THE "IRON AGE" Garden Tools are light, strong and work "just right." High steel wheels, tubular frame, malleable castings. Write for catalogue. Bateman Mfg. Co., Box 206, Grenloch, N. J.

VIOLETS.—A few thousand left, young well rooted plants Lady Campbell, the sweetest double violet. Flowers seven months in the year, succeeds everywhere, \$1.00 per 100 postpaid. C. E. Price, Smithtown Branch, N. Y.

NEW PINK VIOLET Mrs. J. J. Astor (named by permission), very fragrant, \$2.00 per dozen, \$10 per 100. Also Marie Louise, \$1 per 100, any quantity. Orders filled in rotation. G. Salford, Violet Specialist, Rhinebeck, N. Y.

CALIFORNIA PRIVET make the finest ornamental hedge and are perfectly hardy. Strung plants one to three dollars per hundred. Atlantic Coast Nursery, James H. Cornell, Proprietor, 606 4th Ave., Asbury Park, N. J. Reference 1st National Bank of Asbury Park.

SUCCESS, an early market berry, a seedling of the Bubach, fertilized by Michel's Early. Perfect blossom, an improvement on Bubach in size, firmness and quality. Early and productive. Dozen, 40 cts.; 100, \$1; 1,000, \$6.—Address Originator, Geo. N. Hannah, Whitville Conn.

CLEMATIS PANICULATA, best Clematis, blooming size, mail, 25c. each, \$2.50 doz.; Japanese Memorial Rose (Wichuriana), mail, 10c. each, \$1.00 doz.; Columbian Rasp. new, tips, mail, \$1.00 doz.; Loudon, best hardy red, mail, \$1.00 doz.; Munger, best and largest black, mail, \$1.50 doz. E. Y. Teas, Irvington, Ind.

INCUBATORS \$25, \$15, \$12 each. Brooders 3 styles, \$6. Fowls, eggs, 111, etc. J. A. Chelton, Fairmont, Md. Mention American Gardening when you write.

CALIFORNIA LANDS ARE RICH

and only \$25 to \$50 per acre AT ESCROW. Grows fine oranges, lemons, olives, prunes, apples, figs, grains, etc. Best summer and winter climate in U. S. Send stamp for files. Pamphlet to Riverside Land & Town Co. at Escondido, Los Angeles or San Diego, Cal. Mention American Gardening when you write.

HATCH Chickens BY STEAM—
With the MODEL
EXCELSIOR Incubator
Simple, Perfect, Self-Regulating.
Thousands in successful operation. Lowest priced first-class hatcher made.
GEO. H. STAHL,
Send 6c. for this Catalogue. 114 to 122 N. 5th St. Quincy, Ill.

Mention American Gardening when you write.

Vineless Sweet Potatoes
Tubers and Plants.
McKINLEY'S CHOICE.
Indor ed by our President, and no one else has them, and
GOLD COIN PROLIFIC
Genuine home grown, no Arkansas Yams.
I grow my own tubers and plants; plants grown without glass or manure; perfectly hardy and stocky.

G. Camerer, Madison, Jefferson County, Ind.
Mention American Gardening when you write.

of the cultivator's skill in carrying out the several details of treatment in forcing, such treatment being identically the same as had been practised 50 years or more. The plants were layered into small pots in June, and during the last week in July they were potted in their fruiting pots and stood outside on a bed of ashes with full exposure to the sun. From thence onward the great aim would be to secure a plant with a fine strong crown, and its pot of soil well filled with roots. Successful forcing could only result from well-grown plants, and of equal importance to growing was the resting period. Neglect of this would nullify all that had preceded it however well done, therefore he advised that the plants receive a thorough freezing before any attempt at forcing began. Whilst this was an old practice, he had that season had another striking illustration of its soundness in the comparative failure of one small batch of plants that for want of frame room were put into a cool greenhouse, where but little frost reached them. The plants they saw were started on January 21 of this year in a moderate temperature of 45° to 50° at night, undue excitement being a thing to studiously avoid in the early stages. The degrees of forcing heat must be advanced with the progress of the plant in growth of leaf, flower and fruit, and when once the fruits were set and swelling, assistance with liquid manures greatly aided, in fact was a paramount necessity to the production of large berries, hence the previous advice to get the pots well filled with roots that could take up the extra nourishment given, and out of its essences elaborate that which the plant most needed. All manurial feeding, however, should cease when the berries begin to show color, a gradual reduction of temperature should take place, with liberal ventilation of the houses, the ultimate quality of the finished fruit depending much upon the treatment in these last few days of the berries ripening.

Mr. White went into the details of vegetable growing in frames at great length, treating the subject in a masterly manner. He said, in part:

Cold frames are used very extensively for the forcing of vegetables, yet few people beside the gardener understand their management. Their management, however, is so simple that every farmer ought to have a few sash in the kitchen garden. A simple box, tipped toward the sun, with the ground for a bottom and a sash for top, and you have a cold frame. The best early cabbage plants are those wintered over in cold frames. These plants can be transplanted the first of April, and the frames filled up with strong lettuce plants from the hotbed or house, and a crop of lettuce taken off in six weeks; or they may be filled with tomato plants, with radish seed sowed between the rows. It is good practice to sow radish seed with all slow germinating seed (such as celery, parsley, tomato, pansy and carnation). In bright weather radishes can be pulled in from twenty-one to twenty-eight days, and the little plants seem all the better for the company they have had. Run

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.
WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c. per bottle. Sold by all Druggists. Testimonials free.

WE could not describe a picture so that you would know just how it looks. Neither can we tell you all the good qualities of *The Rural New-Yorker*, you must see it. Send to *The Rural New-Yorker*, New York, for a free sample copy, you will want it for a year. It costs only \$1. We can send it and AMERICAN GARDENING both one year for \$1.80.

a small hotbed to have plants ready to go in the frames as soon as you remove a crop from the latter. Cucumbers may be planted on sods, and after the lettuces and radishes are removed, these sods can be placed one to each frame, and a crop forced considerably in advance of that outside. Pansies, Violets and Carnations can be started in cold frames to advantage. The small expense and liberal income from frames make them very profitable; from \$5 to \$10, according to the market, being the returns from a single sash. The soil must be very rich, for in earliness and quick rotation lie all the profits.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL
AMATEUR.

COMPARATIVE LAYING.

In one hennery, 17 Brown Leghorns, are at present date, giving more eggs than 50 other birds. Shall we say that this proves the claimed championship of the Brown Leghorns as layers? Such single facts are often made the basis of similar claims for one breed and another; but this is usually most unfair. There are other things to consider. For instance, these Leghorns are pullets, mostly, while the rest are chiefly hens. The Leghorns have a new, modern house; the others an old barn. Besides, all though the winter, the Leghorns have done proportionately little better than the others. On the other hand, the Leghorn shed was damp, which ought not to have been. Unless time of hatching, housing, feed, sunshine and unnamed other conditions are proportionately fair, no one has a right to laud any one breed over any other, much less over all others. Nevertheless, the experience of thousands goes to show the Leghorns the champions.

VILLAGE LOT VS. FARM.

Why should one compare these at all, since they are so inherently different? Yet, with respect to poultry privileges they are being constantly compared by their respective occupants. The farm poultry-raiser falls utterly to appreciate the immense advantage which he holds in the mere fact of commanding good range. The town raiser, on the other hand, gives up too easily to the disgusted repetition of the mistaken statement that there is no money in fowls on a village lot. He over-estimates the same advantages which the other under-estimates, and each sometimes envies the other. One has better conditions for success in the advance work, the other better chances for buying and selling. It may be; both can succeed brilliantly if not too faint-hearted.

TRAILING THINGS.

Many window gardeners eschew climbers altogether, as they are not easy to manage, especially if tall. But no one can leave out the trailers without a falling short in the beauty of the collection as a whole. It is the mission of the trailer to supply the deficiencies of all the other plants. To be both extremely beautiful and superlatively useful is not given to many plants, but the trailers can claim both these good qualities. Fortunately, most of them are also easy to obtain from seed. One of the most free in bloom, the *Torenia*, is offered this year in a new, large flowering variety, this making at least four sorts. With many of these drooping things, it is necessary only to drop a few seeds on the bare surfaces of pots carrying plants. Here they will come on without further care other than stirring the soil after they attain some size.

VARIATIONS IN CYCLAMENS.

Perhaps the Cyclamen is the one flower which soonest suggests the orchid to the general mind. Possibly this may be, in part, because it is nearly always seen exhibited with orchids; but the form of the bloom must also have its part in the suggestion. New and strange forms of the Cyclamen are, however, already an accomplished fact, and whether improvements or not, they certainly give variety, and offer opportunity for still further variation. Among the newer forms are created, fringed and double variations.

That Pleasing Paralyzing Pie!

How good it looks! How good it is!..... And how it hurts. Why not look into the question of **Pill after Pie?** Eat your pie and take Ayer's Pills after, and pie will please and not paralyze.

**AYER'S
Cathartic Pills**
CURE DYSPEPSIA.

Mention American Gardening when you write

The last is offered in this country this season, in the form of seed. It looks as though the Cyclamen might come to be a flower differing most strongly from the type, as hitherto known.

Manure Lost.—Great quantities of manure are lost upon the highways. Somebody will presently invent a cheap sweeper, to be attached to a cart, the sweepings to be delivered into the cart as the team passes along the road. Town and village streets would afford a good field for the operations of such a machine.—*Farm Journal*.

SNIPS Then. The best for florists, Holders, gardeners, etc., is **Kelley's Florists' Shears** and Flower Gatherer. Circular free. **FLORISTS SHEAR CO., Fremont, Ohio.**
Mention American Gardening when you write

...THE COMPLETE...

BOOK CATALOGUE.

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers

The Fruit Grower

The Nurseryman

The Private Gardener

The Market Gardener

The Seedsman

The Farmer

The Poultry Keeper

The Student of Botany, Entomology and Ornithology

and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE PTG. AND PUB. CO. LD.

P. O. Box 1697, New York.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Do Your Own Planning if you wish to be successful.

Cleanliness, Healthy Quarters, a variety of food, and regular feeding and watering, are a few of the qualifications of a successful poultry raiser.

Talman Grape.—There are plenty of other varieties which are much superior to it.

Laugh Heartily, it will do you good.

Fruit Should Be Kept in a very cool temperature, but not a freezing one.

Sharpless and Cumberland Strawberries.—Grow a few rows of these side by side in alternate rows, and see some very large berries.

You Can Prune Apple Trees Now, but for old trees it is often advisable to trim when the apples are as large as hickory nuts. The sap is then flowing freely, and the wound will heal over readily. If trimmed now, the wound left from cutting large limbs should be painted over, to avoid decay before the wound heals over.

Do Not Drench the Soil in the flower pots; merely put water enough to moisten thoroughly from surface to roots.

Look in the Pits to see if the callousing roots and cuttings are in good condition.

If There Be any work behind, let's "make up," and get it out of the way at once.

On Clay Soil, an acre of Dutchess Dwarf pear would prove profitable, if one understands the principle of pruning them properly while the trees are young.

Kelffer Pear bears fruit while quite young.

Is the London Raspberry really what is claimed for it? No reports from fruit growers who have fruited it on a small scale? It's time we were hearing from some one about it beside those who are selling it.

Asparagus Bed.—If you haven't an asparagus bed better set out one this spring.

Montmorenci Cherry seems to be quite satisfactory.

Much is Gained by Reading the reports of various horticultural societies which have been held this winter. How will you get them? By thoroughly reading your horticultural papers.

Never Pack Mulch tightly around a tree; leave an air space.

Examine the Bundles of currant, grape, gooseberry, and other cuttings to see that the sand is not too damp around the bark.

If Three Grapes be wanted, one Worden for black, one Brighton for red, and one Moore's Diamond for white, make a good selection.

Pear on Apple.—I have seen the pear grafted on the apple; the cions grew all right for one or two years; then the wind generally broke them out, and it was a failure.

The Wood Pile.—If you live in the country and use wood, now is a good time to have it cut the proper size for the stove and let season over until next winter. It doesn't pay to burn green wood.

Finding Out more economical ways of enriching our worked out soil will increase our profits.

Many Experiments have been tried to see what green crops are best to plough under the previous year on land which is to be put to strawberries. My observation is that there is nothing equal to what is called the cow pea; it leaves the soil mellow where hard crusts generally formed, fills the soil with vegetable mold, and is considered here to be just what we have been looking for where a crop of clover fails. C. C. N.

Improvidence.—Every apple that rots will be needed for food. The besetting sin of the American people is their wastefulness of resources, and improvident habits seem to increase yearly.—Homestead, Ia.

For Many Years

Well-posted buyers in all parts of the country have made our Nurseries their source of supply for

NEW AND RARE TREES, SHRUBS, RHODODENDRONS, AZALEAS, EVERGREENS, PERENNIAL PLANTS and every hardy variety of the choicer garden subjects which critical growers of taste are always looking for. Our new Catalogue, 170 pages, is full of interest to the amateur, and to every one who seeks the best for garden or grounds. In it will be found many things quite rare, and not generally offered.

Any buyer can get from us Plans and Suggestions for the arrangement and planting of grounds.

THE SHADY HILL NURSERY CO.,

102 State St., Boston, Mass.

Mention American Gardening when you write.

BOWKER'S FERTILIZERS

for HOUSE PLANTS,
LAWNS, GARDENS,
FARM CROPS.

A book on "Window Gardening,"
and enough odorless fertilizer
for thirty plants three months,
sent by mail for **25c.**

Catalogue free. State for what purpose fertilizer is wanted when writing.

BOWKER FERTILIZER CO., **Boston.**



The **TWIN COMET** (Stationary) \$5.00
The **LITTLE GIANT** (Traveler) 15.00

LAWN SPRINKLERS.

Best Sprinklers made for Florists and Nurserymen's use. Will save labor of one man, for they sprinkle 4 times greater area than any other sprinkler.

E. STEBBINS MFG. CO.
Made for J. B. FELLOWS & CO., SPRINGFIELD, MASS.
49 Warren St., N. Y. City. Will send on 6 days' trial.
Agents Wanted. Can make big money.

Mention American Gardening when you write.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897

Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable **NEW** Novelties, painted from nature.
"The Leading American Seed Catalogue." **42c** Mailed **FREE** to all.

W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

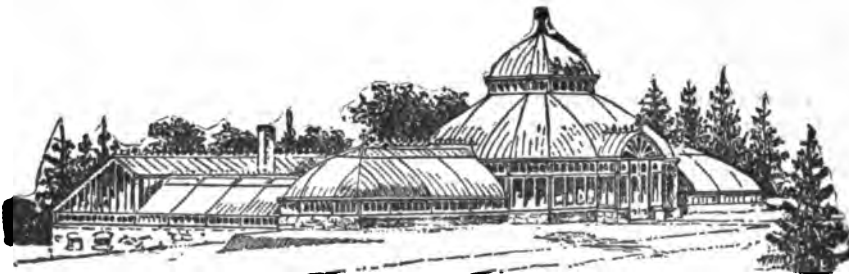
Mention American Gardening when you write.

LORD & BURNHAM CO.,

HORTICULTURAL ARCHITECTS AND BUILDERS.

STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York-Mention paper

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*. We cannot undertake to reply by mail.

TRANSPLANTING GRAPE VINES.

(Would it be possible to move ordinary grape vines (two or three years old) in summer—say in August? Suppose a person were changing his home at that time, and wished to carry some of his favorites with him. Or would they die under the operation?—C. S.)

—The success of such an undertaking would be very questionable indeed, at such an early date. It is possible to do it, and have the plant live, but it would take some time to recover from the shock; therefore it would seem to be more profitable to get new stock in the proper season.

FERTILIZATION OF FLOWERS.

(I have understood that it is necessary for the bees and insects to fertilize the blossoms of the fruit trees, so as to make them bear fruit, and for that reason a cold, wet spell in spring during the time when the trees were in blossom, was followed by a failure of the fruit crop. Please say if this is correct, and if any trees are an exception to the rule.—E. T. H.)

—It is a fact that the insects are necessary for the fertilization of the blossoms of our fruit orchards; when the weather is very cold bees do not come out of their hives—hence the loss of fruit. There are many trees which do not depend upon insect fertilization, and, indeed, the flora is divided into two groups called entomophilous and anemophilous, according as they are insect or wind fertilized. The writings of Sprenger and Lubbock deal exhaustively with this subject, which is far too wide a one for reply here. Wind fertilized trees are such as the conifers, willow, maple, etc., and generally have obscure flowers with abundance of pollen.

MAKING A PRIVET HEDGE.

(I want to plant four hundred feet of California Privet in front of my place and take down the fence. What distance apart will I plant, say two-year-old plants, or how will I plant to make the best hedge? I see by AMERICAN GARDENING that you have a plan for laying out a place from one to fifty acres. Is this the one called "An Ideal Home"?—JOHN CURRY.)

—Dig out a trench as deep as possible, so as to make sure of having the soil deeply cultivated, add some good manure to the same and work well together. Plant in the soil with a slight depression. When completed, this will the better store up and supply moisture to the roots. Make a straight line and plant (if good strong two-year-old plants) 20 inches apart. Then put in another row alternating with the first. If possible, allowing 12 inches between the two rows. This, with proper attention, should give a nice hedge in a short time. Many plant closer, but to do so is to overcrowd. On the other hand, some plant much further apart than prescribed, but when such is the case they are not in a hurry for effect, but mean to shorten back considerably, and eventually make their hedge very strong. The plan advertised is the same as previously announced.

LILACS.

(I have some Lilac bushes that were transplanted two years ago, and they refuse to grow. Are in good soil, rather heavy.—E. P.)

—Possibly they were grafted plants, and had been worked high up the stem for pot culture. When such is the case, head growth is slow. If they are on their own roots, we cannot account for it unless we have more definite information.

PROPAGATING RASPBERRIES.

(Do you propagate Raspberries from the shoots thrown up around the parent plant by taking up and transplanting as suckers of too weak a growth.—E. P.)

—Raspberries are freely propagated by division of the stool, selecting the most healthy and vigorous of the young canes for transplanting.

INCREASING POTATO STOCK.

(I would be pleased if you would be kind enough to publish a short article in your paper soon, as to what method is used by those who secure a very large yield of potatoes when they only have one pound or less to start with.—W. B. L.)

—There are several ways by which a rapid multiplication of potatoes may be made. In

the early fall the tuber may be put in a rather dark, warm place and a growth induced, these sprouts when long enough to handle, may be taken into a greenhouse, potted and grown on, and if kept in a temperature of about 58° to 63° and a light airy atmosphere maintained, the plants being kept near the glass, they thrive first-rate. Potatoes in pots need a very light soil, which must never be packed, and they like ample root room and must never suffer from want of water. A stuffy atmosphere must be avoided, for it brings on mildew. When the plant is well established in the pot, a few points of the green top can be spared to make cuttings, but to root these is not the easiest thing in the world, for it requires some skill and a good deal of attention, and speaking generally, never pays. The previous named temperature will be about right for the house temperature, but a bottom heat of 60° is needed, and this must be of a very steady nature, in no way fiery or virulent. The cuttings may be rooted in coarse sand or in very light soil. Immediately the roots are formed, they need to come out of the propagating bed and be potted up in small pots, keeping the plant on the side of the pot. From these cutting plants small ill-formed tubers can be made which will make sets to create stock from. In the meantime the first-named pot plants will ripen up good sized tubers, and these planted out, should make a good yield of large-sized tubers. In addition to the above, there will be a batch of sprouts which may be rooted in flats in the spring and transferred to the open ground when weather permits. The original tuber is still in good condition, and at planting time can be cut to single eyes if so wished. But this is hardly advisable, for a few fine specimen tubers will be needed for exhibition purposes, and to produce these it is advisable to plant a fair sized set of two eyes, weighing, if possible, four ounces. We have known cases of raising new kinds where the propagation has been so extreme that the tubers which were

needed for cooking tests, were either boiled or steamed after they had been pared. Those parings, which were very thick, were afterwards placed in shallow flats, and grown on during the winter to tubers for spring planting. In addition to the pot system, shallow greenhouse benches may be used and stock planted right out. But in this way there is perhaps a greater danger from mildew in dull weather, owing to inability to dry out and to keep the peculiar volatile atmosphere so necessary during the dull parts of winter. Another method, the sprouting and second crop system, followed out by T. Greiner and others, is fully described in AMERICAN GARDENING, on pages 26 and 28, (January 26 and June 22, 1895). Such intensive propagation may be said to weaken the constitution of the potato. But such a fear is more a question of fancy than reality. It has been found that when the regular garden or field culture has been followed out in the regular way in the second season under normal conditions, seed acted as though the change were beneficial and tubers of very high exhibition quality were produced, and when the stock passed into general commerce, the extraordinary method of propagation was never even guessed at by the users, the stock showed no trace.

GRAFTING CACTI.

This is a simple process, to one who knows aught of the art of grafting, and at this season it may be attempted with good prospect of success. If one have a sort already grafted on a good stock, it may be found interesting to add to the same stock other grafts of other sorts. But, if this be done, one should have a care to use sorts that require about the same general treatment, and bloom at nearly or quite the same season. Otherwise, a difficulty might arise from the fact that one sort would call for rest just when another desired to be pushed.

A SCIENTIST SAVED.

President Barnaby, of Hartsville College, Survives a Serious Illness Through the Aid of Dr. Williams' Pink Pills for Pale People.

From the Republican, Columbus, Ind.

The Hartsville College, situated at Hartsville, Indiana, was founded years ago in the interest of the United Brethren Church, when the state was mostly a wilderness and colleges were scarce. The college is well known throughout the country, former students having gone into all parts of the world.



PROF. ALVIN P. BARNABY.

A reporter recently called at this famous seat of learning and was shown into the room of the President, Prof. Alvin P. Barnaby. When last seen by the reporter Prof. Barnaby was in delicate health. To-day he was apparently in the best of health. In response to an inquiry the professor said: "Oh, yes, I am much better than for some time. I am now in perfect health; but my recovery was brought about in rather a peculiar way."

"Tell me about it," said the reporter. "Well, to begin at the beginning," said the professor, "I studied too hard when at school, endeavoring to educate myself for the professions. After completing the common course I came here, and graduated from the theological course. I entered the min-

istry, and accepted the charge of a United Brethren Church at a small place in Kent County, Mich. Being of an ambitious nature, I applied myself diligently to my work and studies. In time I noticed that my health was failing. My trouble was indigestion, and this with other troubles brought only nervousness.

"My physician prescribed for me for some time, and advised me to take a change of climate. I did as he requested and was some improved. Soon after, I came here as professor in physics and chemistry, and later was financial agent of this college. The change agreed with me, and for awhile my health was better, but my duties were heavy, and again I found my trouble returning. This time it was more severe, and in the winter I became completely prostrated. I tried various medicines and different physicians. Finally, I was able to return to my duties. Last spring I was elected president of the college. Again I had considerable work, and the trouble, which had not been entirely cured, began to affect me, and last fall I collapsed. I had different doctors, but none did me any good. Professor Bowman, who is professor of natural science, told me of his experience with Dr. Williams' Pink Pills for Pale People and urged me to give them a trial, because they had benefited him in a similar case, and I concluded to try them.

"The first box helped me, and the second gave great relief, such as I had never experienced from the treatment of any physician. After using six boxes of the medicine I was entirely cured. To-day I am perfectly well. I feel better and stronger than for years. I certainly recommend this medicine."

To allay all doubt Prof. Barnaby cheerfully made an affidavit before

LYMAN J. SCUDDER, Notary Public.

Dr. Williams' Pink Pills for Pale People are sold by all dealers, or will be sent post-paid on receipt of price, 50 cents a box or six boxes for \$2.50 (they are never sold in bulk, or by the 100), by addressing Dr. Williams' Medicine Co., Schenectady, N. Y.

WHOLESALE MARKET REPORT

New York.

For the week ending with Easter Sunday, the pot plant trade was excellent, possibly exceeding any other previous holiday in both supply and demand. Cut flowers only sold moderately well. In fruits and vegetables, up to the same date, business was also good, the market clearing up well at remunerative prices, especially vegetables.

In the early part of the present week, business, generally, is feeling the effect of the previous rush, and in consequence, is a good deal depressed, with prices inclined to fall a good deal.

Hothouse strawberries are becoming very plentiful, and are of excellent quality. No. 1 grade is worth \$1.50 per quart, No. 2 20c. Charleston berries are improving in quality, with demand increasing.

Cucumbers are selling at 75c. to \$1. for No. 1. Mushrooms are not in good condition, many turning black the second day; good quality is worth from 30c. to 40c. per lb.

Hothouse tomatoes 30c. per lb.

Radishes, \$1.50 to \$2.50 per 100 bunches.

Cauliflowers, \$2.50 to \$3 per dozen heads.

Hothouse lettuce is down in value to 50c. per dozen for extra, No. 1; frame lettuce being very abundant, these sell at from \$1.50 to \$3 per barrel.

Asparagus in now coming in from New Jersey in fairly large quantities, prices are ruling lower than last week. A good deal changing hands at between \$2.50 and \$3 per dozen bunches.

Rhubarb, \$3 to \$4 per 100 bunches, average five stalks to the bunch.

Potatoes.

	Rec'ts Since for wk. Oct. 1.	Since last y'r	S'm't'm
Domestic, bbls.....	27,787	\$15,501	1,051,113
Great Britain, sacks.....	11,347		
Continent, sacks.....	4,757		5,986
Bermuda & W. I. bbls.....	1,007	9,812	10,209
—No. 1, per bbl.....		9 00@	10 00
—No. 2, per barrel.....		6 00@	8 00
Florida, new, No. 1, per barrel.....		5 00@	7 50
—new, No. 2, per barrel.....		4 00@	4 50
Scotch Magnum, per sack.....		75@	1 00
Maine Rose, per sack.....		1 25@	1 35
—Hebron, per sack.....		1 25@	1 30
State, fair to prime, in bulk, per 100 lbs.....		80@	90
—fair to prime, per sack.....		80@	85

Philadelphia.

There has been a much larger amount of stock on hand this week, prices have been held firm, and consequently the market has not cleaned up so well.

Strawberries are being received in large quantities; most of the Florida stock arrives in poor condition. There are a few crates of North Carolina berries, but these are not ripe and sell slow.

Apples have been selling very well; most of these are now cold storage stock. Baldwin and Ben Davis are most sought for.

Cucumbers are going very freely; good stock brings \$1.00 per doz.

The shipments of Southern lettuce are now very few; fancy stock is sold at \$3.00 per bbl.; near by frame grown has sold at 50¢ per doz., but as yet this is poorly headed.

New potatoes are more plentiful, but find few buyers, prices being very firm.

Jersey asparagus has made its appearance; the first consignment sold at \$7.50 per doz. bunches, but the price has now dropped to \$4.00 per doz.

Bermuda onions are very plentiful, and very few barrels of Eastern stock are seen.

Apples.

Baldwin, fancy, per bbl.....	\$1.75@	\$2.00
Ben Davis, fancy, per bbl.....	2.00@	2.50
Northern Spy, fancy, per bbl.....	2.50@	2.75

Vegetables.

Asparagus, Jersey, choice, per doz. bunches.....	5.00@	6.00
—Norfolk, choice, per doz. bunches.....	3.00@	4.00
Beets, Florida, per bush, crate.....	.60@	.75
—Charleston, per 100 bunches.....	4.00@	6.00
Cabbages, Charleston, per bbl.....	2.00@	2.25
Celery, Fla., large, per doz. stalks.....	.75@	1.00
Cucumbers, Florida, per crate.....	3.00@	4.00
Egg plant, per crate.....	2.75@	3.00
Kale, Norfolk, per bbl.....	.40@	.50
Lettuce, Florida, 1/2 bbl. basket.....	2.00@	2.50
—North Carolina, per bbl.....	3.00@	5.00
—Local, frame grown, per doz.....	.50@	.75
Onions, Eastern, yellow.....	3.00@	4.50
—Bermuda, per crate.....	2.00@	2.50
Peas, Charleston, per bush, crate.....	1.50@	1.75
Radishes, Charleston, per 100 bunches.....	1.00@	1.50
String beans, Florida, green.....	1.25@	1.50
Spinach, Norfolk, per bbl.....	1.00@	1.25
Squash, Florida, bushel crate.....	1.75@	2.00
Tomatoes, Fla., fancy, per crate.....	2.75@	3.00
—Fair to good.....	2.00@	2.50
—Hothouse, per lb.....	.25@	.30

ARMSTRONG & McKEE
Pittsburgh.
BEYMER-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANGOR
Cincinnati.
KORSTEIN
ATLANTIC
BRADLEY
BROOKLYN
JEWETT
ULSTER
UNION
SOUTHERN
SHIPMAN
COLLIER
MISSOURI
RED SEAL
SOUTHERN
JOHN E. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALEM
Salem, Mass.
CORNELL
Buffalo.
KENTUCKY
Louisville.

WHATEVER is worth doing, is worth doing well. Painting can only be done well by having the best materials—Pure White Lead and Pure Linseed Oil, properly applied. There is nothing else “just as good.” Avoid “mixtures” and unknown brands of White Lead—the “sold-for-less-money” sort. (See list of the genuine brands.)

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price with list extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
SHANON WAREHOUSES; Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

GLASS For Greenhouses, Grap-
eries, Conservatories, GLASS
Hothouses and Hotbeds. GLASS
VANHORNE, GRIFFEN & CO.

Importers of French Glass.

15, 16 & 17 LAIGHT ST., AND NEW YORK.
52, 54 & 56 VARICK ST.,

Mention American Gardening when you write.

WHEN BUILDING a new house or barn, or in putting new roofing or siding on those you already have, a little inquiry into the value of CORRUGATED IRON AND STEEL ROOFING AND SIDING will repay you handsomely. It is cheaper than boards or shingles, because the first cost is no greater and the lasting qualities are double. No body knows how long it will last if kept properly painted. A GOOD CORRUGATED STEEL ROOF AT 2-12 cts. per Square Foot. For testimonials circulars and estimates—THE BERLIN IRON BRIDGE CO., E. BERLIN CONN.

Mention American Gardening when you write.

“JADOO” FIBRE.
A NEW POTTING MATERIAL.

A PERFECT SUBSTITUTE FOR EARTH.

Advantages of Growing Plants and Seeds in “Jadoo” Fibre:

Seeds germinate much more quickly in Jadoo than in earth.	The flowers are larger, of richer color, and last longer.
Greater perfection easily attained.	No soil to mix; no manures required.
Suits all kinds of plants.	Immense saving of labor to plant growers.
Is much lighter than earth.	
Less frequent watering is required.	

Concentrated “Jadoo” Liquid.

BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

Simply Invaluable in Pot Culture.

For Prices and . . . **THE AMERICAN JADOO CO.**
Testimonials, Address

811-818-815 Fairmount Avenue, PHILADELPHIA, PENNA.

Mention American Gardening when you write.

OUR PREMIUMS ARE OFFERED with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by **AMERICAN GARDENING** in 1897 will be select and valuable, and owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

THE THREE BEST CANNAS KNOWN.

OFFER

No. 66.

Austria, Italia and Mrs. Fairman Rogers

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed *Madam Crozy* type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of *Mme. Crozy*, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{4} \times 1\frac{1}{4}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a peddler. It grows to a height of three feet under liberal treatment.



ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. *Austria* is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. *Italia* has flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the *Gladiolus*, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of *Austria* with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 33 growths, and attained a height of 43 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and *Italia* were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.

OTHER PREMIUMS NOT ADVERTISED HERE ARE:

Yellow Rambler Rose.

The Hardest Climbing Rose ever introduced, and the Novelty sensation of 1897. The demand for this new rose is something phenomenal; readers wishing one should be early with their subscription.

NEW HYBRID Sweet Briars.

Every garden should possess a group of these beautiful hardy Roses—prolific bloomers; sweetly scented; beautiful; hardy; vigorous growers; free from disease and the attacks of insects.

Strawberry Plants. The offers in this line embrace all the standard well established sorts and many Novelties. No garden should be without a strawberry bed, and in no way can a collection be obtained so easily.

IF YOU ARE INTERESTED IN ANY OF THESE OFFERS SEND US A POSTAL CARD FOR FULL DESCRIPTIONS.

Offer No. 45.

COLLECTION OF ROSES.

From Maryland. Strong 2-inch pot grown plants. Delivery on and after April 1, postpaid.



One Crimson Rambler

One Meteor

One Papa Gontier

One Safrano

One Papa Gontier

One Hermosa

One Mme. Camille

One La France

One Marie Guillot

One Bride

One Iphigene

One Nridesmaid

Surely the good things of this earth are open to everyone who exhibits a little energy. Realize you can obtain the above set of Twelve Magnificent Roses as a premium for one new subscription to AMERICAN GARDENING, and that it will not take you more than a few minutes' work to accomplish this, then send and get your reward.

Offer No. 60.

CACTUS.

The following collection will be sent for one new subscription at \$1.00, with 35 cents additional to prepay express charges. The plants offered are worth \$2.00 at retail, and come from a noted collector.

One plant each of

Astrophytum myrtilloides.

Echinocactus setispinus.

Anhalonium Lewinii.

Berlandieri

Mammillaria discipiens.

Opuntia Engelmannii.

Hederil.

Schilli.

Offer No. 42.

For one NEW subscription at \$1.00, receiver to pay express charges, or by mail, postpaid, for \$1.25.

....ONE YEAR OLD....

25 NIAGARA GRAPE VINES

Comment on this offer is unnecessary, beyond stating the fact never before was such an opportunity offered to start a vineyard at so small an outlay.

Offer No. 64.

POTATOES

One-half pound each of the four following varieties sent, postpaid, for one new subscription:

Early Michigan.

Carman's No. 3.

Early Fortune.

Livingston's Banner.

Two pounds or eight potatoes in all.

Option: One pound Early Michigan, or two pounds of any one of the other three varieties. Grown in Michigan.

Offer No. 53.

HARDY EVERGREENS.



Your choice of any one of the below offers of Hardy Evergreens for one NEW subscription. This is a great big offer for the money, and invaluable to any one wishing to set out a young plantation. Plants from Illinois.

A-50 Scotch Pine, 6 inches.

B-50 White Pine, 4 inches.

C-50 Norway Spruce, 3 to 4 inches.

D-50 American Arbor Vitae, 4 inches.

E-25 Red Cedar, 4 inches.

F-25 Hemlock Spruce, 4 inches.

G-15 Blue Spruce, 4 inches.

H-25 Douglas Spruce, 4 inches.

J-15 Picea Canadensis, 4 inches.

Offer No. 58.

CHRYSANTHEMUMS

This collection comprises a very fine assortment of eleven standard large flowering varieties, from 2 1/2-inch pots, good plants, and will be sent, postpaid, for one new subscription; plants grown in Maryland. Ready for delivery on and after April 15. These plants will do well outdoors in mild climate, whilst in more exposed sections to bring them to full maturity in the fall they should have partial shelter.

Mdme. F. Bergmann.—The earliest of all large varieties; color white, of great excellence.

Ivory.—A popular favorite; very dwarf and free flowering.

Miss Minnie Wanamaker.—Pure white Japanese; one of the standard varieties.

Golden Wedding.—The most exquisite yellow Japanese extant.

Eugene Dailledouze.—Monster flowers; yellow Japanese.

W. H. Lincoln.—The champion late flowering yellow; a grand variety.

Col. W. B. Smith.—Japanese incurved bronze.

Mrs. J. G. Whilldin.—Earliest of the Japanese yellows. In flower same time as Mdme. F. Bergmann, Oct. 4 to 7.


V. H. Hallock.—Color rosy pearl; Japanese.

Maud Dean.—The most charming pink Japanese ever introduced; a good market variety.

Cullingfordii.—A reflexed variety of good reputation; color deepest crimson.

Offer No. 61.

COLLECTION OF VEGETABLE SEEDS.



The following collection will be sent, postpaid, for one new subscription. It embraces ten 5 cent packets and seven 10 cent packets; valued in all at \$1.20. The varieties offered are all standard, the packets regular size, the seeds fresh and true to name, and reliable. We feel assured the grower will fill this order to your very complete satisfaction.

Beet, Kolipae.

Bean, Bush Refugee.

Cabbage, Premium Flat Dutch.

Carrot, Henderson's Intermediate.

Celery, Henderson's 1/4 Dwarf.

Corn, Crosby.

Cucumber, White Spine.

Lettuce, Tennis Ball.

Musk Melon, New Hackensack.

Parasnip, Long Smooth.

Peas, Alaska.

Radish, White Tipped Turnip.

Spinach, Thick Leaved.

Squash, Bush Crook Neck, Yellow.

Squash, Boston Marrow.

Tomato, Early Ruby.

Burpee's Bush Lima.

Offer No. 46.

THE CELEBRATED GREEN MOUNTAIN GRAPE



One 2 or 3 year vine and one 1 year vine; two vines in all. Sent, postpaid, for one new subscription.

The Celebrated Green Mountain Grape is fast coming to the front and is bound to stay. It is acknowledged to be the earliest good grape on the market. It is the most delicate and delicious grape grown out of doors. It is a strong-growing, healthy vine, an enormous and early bearer, with well shouldered and handsome bunches.

No one grape possesses so many merits as the Green Mountain. The firm making this offer are headquarters for this vine and have over an acre out as a vineyard.

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE

CHRYSANTHEMUMS

NEWEST, EARLIEST, BEST.



In Splendid Assortment of Varieties.

Form, Substance and Color.

Mrs. Higginbotham. Best of all Ostrich Plumes.

Gloriana. The pretty twisted petalled yellow.

Marie Louise. A grand white.

Pitcher and Manda. A variety of two colors.

Kate Brown. Earliest and best for the garden.

Fred. Smith. A robust pink.

Silver Cloud. Pale salmon.

G. W. Childs. Finest of the reds.

Major Bonaparte. The best yellow.

Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

OUR PREMIUMS ARE OFFERED with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

Our Premium Offers open the way to all who want a fine garden, but lack the means wherewith to buy.

Offer No. 35.



SENT postpaid, for **ONE NEW** subscription at **\$1.00**

....**BEAUTIFUL**....

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene

Bridesmaid
Pink Souper
Naman Cochet

Cornelia Cook
Maurice Rouvier
Catherine Hermet

Empress of China

Prince Hohenzollern

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

Offer No. 47.

Sent, Postpaid, for one NEW Subscription at \$1.00.

NEW GIANT FANCY COSMOS

(MRS. SHEPHERD'S STRAIN).



Mrs. Shepherd's New Fancy Cosmos was offered for the first time last season, but this is the first time they have been offered, put up in separate colors, as here described:

Of this strain, five packets of which are offered in this collection, the grower, Mrs. T. B. Shepherd, of Ventura, California, says:

"No one else grows it, and it is so distinct as to be readily recognized anywhere by one who has once seen the different varieties in bloom. I have been working with it so long that it has an individuality peculiarly its own."

One packet of the above, in splendid assortment, containing over 35 varieties of beautiful flowers, in all shades of red, pink, mauve, tinted and white... 15c.

Three packets of above, in separate colors, Red, Pink and White, one packet of each, at 15c..... 45c.

"Tints of Dawn," one packet of above, lovely tinted flowers, white ground, delicately tinted or flecked with pink or mauve in lighter or darker shades..... 15c.



Curled and Crested ZINNIAS, splendid mixed, one pkt..... 10c.

These are the gayest, brightest and most esthetic bedding flowers imaginable, all colors and shades, with petals daintily curled and crested, having none of the coarseness of other Zinnias.

IPOMCEA, Heavenly Blue, one pkt..... 10c.
A perfect dream of beauty.

SCABIOSA, New Large Flowering, red and pink varieties, mixed, one pkt..... 10c.
These are very beautiful.

Total Value..... \$1.05

 The Choicest Collection of Seeds ever sent out for the money; a poem in flowers and a revelation in nature. 

Offer No. 54.

THAT GRAND NEW SINGLE VIOLET

PRINCESS of WALES



Away and beyond the best of all the single varieties lately introduced. The Queen of Single Violets. Fragrance equal to Marie Louise. Blooms very large, strong grower and productive. Grower, who is one of our most renowned violet experts, will send, postpaid, for one new subscription,

Eight (8) good rooted plants, with some flowers accompanying same; carefully packed for safe arrival. Plants ready for delivery now. Grown in New York.

Offer No. 43.

DAHLIAS

The recent revival of interest in this most worthy class of plants, coupled with the introduction of many new and interesting varieties, renders it incumbent on every one to see to it that their garden is supplied with the best obtainable.

Any one of the three collections here offered will be found up-to-date and choicest kinds, and as they come from celebrated growers and prize winners, we can assure our friends we are offering them a remarkably good thing and trust they will not be slow to take advantage of one or more of these offers.



A—Four Superb Cactus Dahlias.

One strong root each, Wm. Agnew, Oriental, Nymphaea and Zulu, by mail, postpaid, for one new subscription.

B—Four Show and Fancy Dahlias. (Dwarf)

One strong root each, New Double Tom Thumb, Arabella, Blumen-falter and Lucy Faucett, by mail, postpaid, for one new subscription.

C—Four Pompon or Bouquet Dahlias.

One strong root each, Eleganza, Sprig, Ariel and Vivid, by mail, postpaid, for one new subscription.

Any one of these collections is worth over \$1.00 at retail, but will be sent postpaid, carefully packed, and guaranteed to arrive in first-class condition for one NEW subscription to AMERICAN GARDENING at \$1.00. Order by Offer No. and Letter.

Offer No. 56.

GLADIOLUS BULBS.

The following offers on Gladiolus Bulbs are well worth striving for. Your choice of one of the two collections offered for only one new subscription at \$1.00. Sent, postpaid, in neat pasteboard boxes. Order by Offer No. and Letter.



A.—6 Bulbs each of May, Bertha, Mabel, and Marie Lemoine.

May.—Large spike, well expanded flowers. White, edge of petals touched pink. A grand variety.

Bertha.—This is the finest variety of its color, which is a brilliant light scarlet. Makes a tall spike, with large side branches.

Mabel.—Dwarf, upright habit. Full spike open at one time. In color it is a blending of carmine, cherry and pink. One of the first to bloom.

Marie Lemoine.—Upper division of flowers of pale creamy color, fringed salmon lilac, the lower petals spotted purplish violet, bordered canary yellow. Peacock blotched.

B.—100 Cushman's High Grade Seedling Gladioli.

All blooming size. No two alike. Rivaling the floccelle silks in coloring and sheen.

Offer No. 59.

VEGETABLE SEEDS.

The following collection of Seeds is offered by a reliable dealer, with a view to introducing his stock. They are of precisely the same grade as is sold to market gardeners and all desiring the best. The entire collection of twenty named varieties will be sent, postpaid, for one new subscription at \$1.00.



One oz. Beet, Eclipse; one pkt. Cabbage, Early Wakefield; one pkt. Cabbage, Early Flat Dutch; one pkt. Cabbage, Savoy Early; one pkt. Cabbage, Savoy Late; one pkt. Cauliflower, Erfurt; one-half oz. Carrot, Half Long Nantes; one pkt. Celery, Paris Yellow; one oz. Sweet Corn, Early Mammoth; one pkt. Cucumber, White Spine; one pkt. Onions, Early Flat, Red or White; one pkt. Paralel, Double Curled; one pkt. Lettuce, Summer Blonde; one pkt. Radish, Early White Tipped; one pkt. Tomato, Acme; one pkt. Spinach, Viroflay; one pkt. Squash, Early Bush; one pkt. Turnip, Red Top; one pkt. Rutabaga, Champion; one pkt. New Victoria Spinach.

Offer No. 50.

VEGETABLE PLANTS.

All ready to set out.



All good plants. Grown in Maryland. Delivery April 15, postpaid. This is an offer we are not able to make our friends every week in the year, and we will be mistaken if this Bargain is not taken advantage of by thousands.

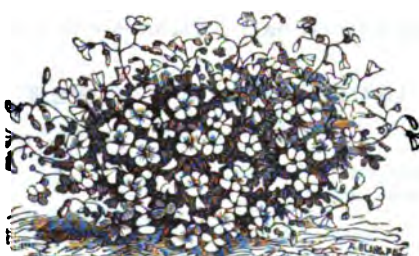
- 12 Peppers, two kinds.
- 12 Egg Plants.
- 12 Cauliflower Snowball.
- 12 Tomatoes, two kinds, select.
- 50 Cabbage or Sweet Potato Plants.
- 50 Lettuce, two kinds.

148 choice vegetable plants, and AMERICAN GARDENING one year, to a NEW name, for only \$1.00.

Offer No. 49.

Sent, postpaid, for ONE NEW subscription at \$1.

SUMMER BEDDING

150 OXALIS BULBS

These bulbs make beautiful borders for summer flower beds, as well as attractive pot plants. The collection includes 150 Bulbs in equal proportions of the four following varieties, named, and in separate packets:

- OXALIS DEPPEI ALBA.—White.
- OXALIS DEPPEI ROSEA.—Old rose or salmon.
- OXALIS ERYTHILLA PURPUREA.—Purple.
- OXALIS LASLANDRA.—Crimson. Tall, fine palmate leaves.

Offer No. 57.

CHRYSANTHEMUMS

For one new subscription and \$1.00, we will forward, postpaid,

A Collection of 36 Plants.

All different; prize-winning varieties, comprised in great part of last year's novelties, in all shades of color and types of bloom.

This offer comes from a noted grower, and we hope to receive a great many orders for this collection.

Offer No. 40.

FLOWERING PLANTS

All ready to set out.

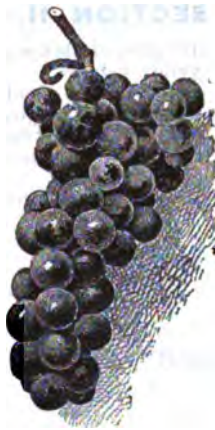
This is a collection which everybody should be sure to obtain. It only requires one NEW subscription to become the possessor of all the plants here mentioned. Ready for delivery May 1st. Postpaid. Grown in Maryland. Save time growing from seed and get this lot all ready to set out.



- | | |
|-------------------------------|-----------------------------|
| 10 Antirrhinum, choice mixed. | 10 Phlox Drummondii, mixed. |
| 10 Asters, mixed. | 10 Marigold Eldora. |
| 10 China Pinks, mixed. | 10 Scabiosa, mixed choice. |
| 10 Cosmos, choice mixed. | 10 Zinnias, mixed choice. |
| 10 Petunias, mixed. | 10 Scarlet Sage. |

100 Choice Flowering Plants and AMERICAN GARDENING, one year, to a NEW name, for only \$1.00.

Offer No. 59.

GRAPES

Every country and suburban home needs a vineyard, and those who avail themselves of the offer which follows will be well satisfied and pleased for years to come with the result. A grower offers:

- Agawam,
- Lindley,
- Brighton,
- Worden,
- Niagara,
- Moore's Early.

Your choice of Ten one-year vines, all of one variety, or three each of three of the above sorts, for only one new subscription. Forwarded postpaid.

Offer No. 52.

Collection of Flower Seeds

Sent, postpaid, for one new subscription to AMERICAN GARDENING. The following list embraces 16 varieties of choice flower seeds; fresh and true to name, eight of which are of 5 cent packets, six of 10 cent packets, and two of 15 cent packets valued in all at \$1.30. This collection is offered by a reliable grower, in whom we have full confidence.

- | | |
|---------------------|-------------------|
| Alyssum, Sweet | Nasturtium, Dwarf |
| Asters, mixed | mixed |
| Cosmos, Large | Poppy, Carnation |
| Flowered | flowered, mixed |
| Calendula, Price of | Sweet Peas, Eck- |
| Orange | ford's mixed |
| Calliopsis, mixed | Heliotrope |
| Datura, Double, | Larkspur, Dwarf |
| mixed | double |
| Carnation Marguer- | Cobaea Scandens |
| ite, finest double | Zinnia, Double, |
| mixed | mixed |
| Mignonette Machet | Lobelia compacta |

SIEBRECHT & SON'S NEW HYBRID JAPAN IRIS

PRICE LIST.

Perfectly Hardy. The Grandest Novelties of 1897. No First-Class Garden Should be Without Them. Once Planted They Last Forever, Requiring but Slight Care.

WE OFFER THE ENTIRE COLLECTION OF 40 DISTINCT VARIETIES FOR \$10.00.

SECTION I.—LARGE DOUBLE-FLOWERING VARIETIES.

Beauty.—Lilac, veined purple; magenta centre.
Orion.—Reddish pink, white centre.
Zenobia.—Deep rose, shaded and veined violet, lilac and yellow centre.
Isabella.—Light pink, shaded light violet.
J. C. Vaughan.—Pure white, very large and fine.
New York.—Reddish maroon, mottled white, yellow centre.

Beth. Hallook.—Delicate lavender, slightly veined white; extra fine satiny finish, clearly marked citron.
Robert Craig.—French gray, veined violet.
Victor.—White, veined violet-purple; violet-purple centre.
Clothilde.—Carnation pink, shaded light violet; lemon colored centre.

Price, 50 cts. each, the set of 10 for \$4.00.

SECTION II.—LARGE DOUBLE-FLOWERING VARIETIES.

Antelope.—White ground, flaked and blotched carnation white; yellow centre.
Crimson Tuft.—Rich plum, shading to deep purple towards centre; marked bright yellow.
Gold Bound.—Pure white, very fine.
Hannibal.—White ground, veined and suffused with purple; light purple centre.
Pyramid.—Lilac-blue, veined white through centre of petal.
Paragon.—Rich velvety purple, centre marked bright orange. Very distinct.

T. S. Watson, Jr.—Bluish violet, veined white; centre white; marked lemon.
Hyde Park.—Purple, striped and blotched white.
Norma.—Very deep red, centre of petal deeply shaded with deep red; yellow centre.
Oriole.—Rich purple, bright yellow centre.
Othello.—Deep rich purple, light blue toward centre.
Coronet.—Rich purple, slightly shaded; centre purple and yellow.

Price, 35 cts. each, \$3.50 for the set of 12.

SECTION III.—LARGE DOUBLE-FLOWERING VARIETIES.

Crystal.—Pale violet, slightly veined white; white and yellow centre.
Mount Hood.—Deep lilac-blue, veined white; pronounced white centre; extra double, fluted and fringed.
Blue Danube.—Blue, veined cream; yellow centre.

St. Oq.—Deep violet, shading to deep blue; centre marked orange.
Turban.—Light pink, violet shading; purple centre.
Templeton.—Light violet shade, mottled reddish pink and white; very double and excellent form.

Price, 30 cts. each, the set of 6 for \$1.50.

A complete set, including the three sections of 28 Double Varieties, the choicest in cultivation, for \$7.50.

SECTION IV.—LARGE SINGLE-FLOWERING VARIETIES.

Only the Very Best Selected.]

Plume.—White, slightly suffused with blue, veined violet; lilac centre.
Porcelain Sceptre.—Bluish white; pink centre.
Neptune.—Light pink, shaded violet; deep pink centre.
Babylon.—Reddish purple; very rich, immense flowers.
Diana.—White, veined violet-purple.
Comanche.—Pink, slightly blotched white, veined deep pink; pale pink and yellow centre.

Condie.—Violet-purple, shading to deeper purple, petals edged silver; deep purple and yellow centre.
Gonfalon.—Carnation rose, veined and blotched white; pale rose and yellow centre.
Blue Bird.—Deep velvet blue; very rich.
Exquisite.—Very light pink, purple veined; deep pink centre.
Venus.—Pure white, very large and fine form.
Quakeress.—Rich, deep purple, veined and mottled cream; primrose-yellow centre.

Price, 25 cts. each, \$2.50 for the set of 12

The entire collection of the four sections, double and single, 40 strong plants of flowering size, for \$10.00.

Best Mixed, or Assorted, made up from the cream of the older varieties, strong plants, \$1.50 per doz.; \$10.00 per 100; \$80.00 per 1000.

See our Colored Plate which gives only the faintest idea of the magnificent types contained therein.

SIEBRECHT & SON, New Rochelle, N. Y.

NEW YORK OFFICE,
409 FIFTH AVE.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 123.
COMBINED SERIES VOL. LI.

NEW YORK, MAY 1, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Ants on Lawn.....	320	Home Plot.....	324	Melons, Fertilizers for..	325	Questions Answered....	325	Tomato Plants Dying...	326
Arbor Day	318	Horse Radish Clearing..	326	Morning Glories, Japan.	320	Rats in Cold Frames....	320	Vegetable Garden	315
Beans	315	Hydrangea paniculata..	313	Nitrate of Soda.....	326	Salads	316	Water Cress.....	316
Cannas, Notes on.....	319	Insects, Destructive, V.:		Peaches and Nectarines	315	Shrubbery, A Native...	314	Window Plants.....	324
Cannas, Trio of.....	319	San José Scale.....	317	Pipes, Mending.....	320	Society Reports.....	322		
Celery	315-316	Lawn Shrubbery, A....	314	Planting a Garden.....	315	Sprayer, Emulsion.....	326	Illustrations.	
Corn	315	Lawn Sprinklers.....	326	Planting New Stock....	315	Spraying Late.....	325	Hydrangea paniculata.	313
Corner Lot Planting, A.	315	Lettuce	315	Poultry Notes.....	324	Strawberry Beds.....	321	Plan for Corner Lot....	315
Fruit Garden.....	315	Market Reports: N. Y.,		Premium Offers, Novel.	316	Strawberries, Second		Scale, San José.....	317
Gooseberries	315	Phila., Boston.....	327	Private Gardeners	322	Crop.....	321	Sprayer Emulsion	326

Hydrangea Paniculata Grandiflora.

As planting time is upon us, I would call attention to this most beautiful of our hardy shrubs, and urge the plant-

streets I noticed hedges made of it, and the effect was most pleasing.

Passing through the northern part of Pennsylvania last

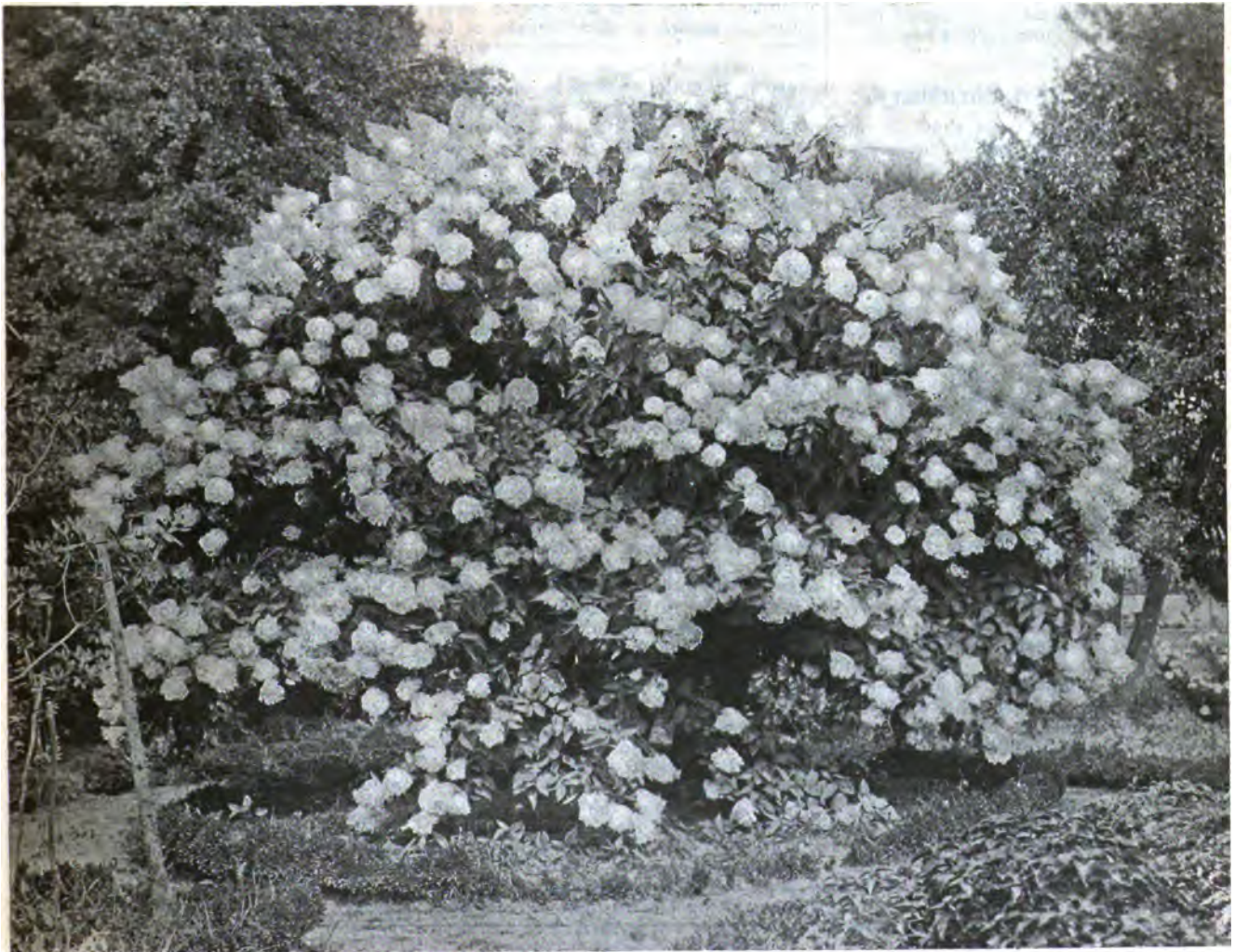


FIG. 85.—SPECIMEN HYDRANGEA PANICULATA GRANDIFLORA. Dimensions 18x18 ft.

ing of it extensively. Those who visited Cleveland last year, at the time of the florists' convention, could not fail to have observed how largely it was planted in that beautiful city; along Euclid avenue, and some of the principal

September, I was compelled to wait for an hour at a country junction and passed my time in the country lanes; in front of a small farmhouse I saw a sight that gladdened my eyes—a grand specimen of this Hydrangea some 12 feet

high, a perfect specimen and covered with its beautiful flowers to the ground, my only regret was that I had not a Kodak to take a photograph of it.

We are often asked for a suitable shrub for cemetery planting, and for years I have most strongly recommended *Hydrangea*, for it is as hardy as the common *Lilac*. As a proof of this, after the severe winter in Central New York last year, I saw *Lilacs* and *Syringas* ten feet high, killed to the ground, and the *Hydrangea* came through with very little harm.

It seems to thrive in any soil, and will stand the drought better than any shrub I know of. H. YOUELL.

Of all the popular flowering shrubs none more justly deserves the position it has gained than the *Hydrangea*. The freedom with which it produces its flower heads, and their large dimensions combine to compel the notice of all, and added to these qualifications are the good nature of the plant itself; it will grow almost anywhere, is decidedly hardy, and well withstands drought. Some idea of what an established specimen of this shrub may look like, is given in the accompanying illustration, reproduced from a photograph of a grand specimen in the nurseries of E. Sheppard & Sons, Lowell, Mass. The plant shown measures 18 feet in each direction, and is spoken of as "the pride of New England." Though perhaps there may be older plants, there can be few such since the cutting was brought from Flushing, N. Y., when the plant was yet a rarity; but at all events none could be of finer development nor more perfect beauty.

A Native Lawn Shrubbery.

It has been truly said that all our garden wealth is wild stuff somewhere—native to some country, of course. But, glad though we are, to pay tribute to each in exchange for some of her floral wealth, there are those among us who cannot afford to do it for themselves. The purse is too lean.

Shall such, therefore, be starved for want of beauty near at hand, or dependent on the possible generosity of a richer neighbor? The last is by no means to be despised, if it be available. But our own woods and opens furnish enough material for half a dozen different shrubberies, and for an equal number of herbaceous plots nearer at hand. It is, indeed, a delight to range field and wood for floral treasure; yet much of this possible pleasure is lost through lack of time or other hindrance.

Not all portions of the country enjoy the same beauties of shrub and under-shrub. Within easy reach of the dwellers in my own neighborhood, however, may be found no less than ten or a dozen showy, shrubby species, while those less showy but still desirable would swell the number considerably. These would give bloom in pink, in white, in rosy red, in pink and white, in pale yellow, in deep yellow, but not in blue or purple.

Earliest of all, perhaps, and both pretty and showy enough to take the place of the favorite *Weigela rosea*, is the pink *Azalea*, or pinxter bloom. As these are chance seedlings, they vary much, ranging in color from nearly white to deep, rosy red. Thus, by selecting specimens, one may have a most beautiful and varied clump of them to usher in the season, and as they bloom before the leaves are developed, one gets the full benefit of the flowers. They also bloom when very young, and they have a delightful fragrance. Surely here are enough good qualities to insure

the plant a welcome on any grounds, no matter how ambitious.

Late in May, or lapping into June, according to location and exposure, are the *sassafras*, the wild cherry, and the tulip tree. The *sassafras* is delightful to have wherever there is sufficient room for a tall shrub which may reach 20 feet with age. The wild cherry and the tulip tree can be used only where there is considerable room, when they may be placed well back in the grounds. If the grounds are large enough for small trees, but will not admit the use of larger ones, these may be grown until they become troublesome or unsatisfactory, to be then dispensed with at the owner's pleasure.

A peculiar tree, native to the Middle and Western States, is the Red-bud, or Japan Judas, which few, comparatively, know to be one of our own. Its masses of rosy bloom of the pea order, coming before the leaves, make it a very noticeable specimen for the lawn, and with years it attains pretty good size. It blooms very early with the magnolias.

Both May and June give us a Dogwood. The earlier of these is one of the most beautiful flowering trees which a lawn may boast during its season. All who know it as it grows wild knew how it enhances the beauty of the fringing woodlands. But in the open lawn it far surpasses its best under wild conditions, and when in battle with taller growth.

In June comes the overpowering fragrance and delicate bloom of the white swamp *Azalea*. This may need special conditions, but it is well worth every effort to secure it as a denizen of the home acre. In close company with it one would be happier to see the wild Rose of May, the shining Rose, with its twin-like flowers of pale red generally in pairs. To be sure this last prefers the upland glades, while the *Azalea* is pre-supposed to be native to the swamps. Moist woods would be a preferable term to apply to the preferred habitat of the latter, however, and it grows in the edges of the drier woods at times with apparent nonchalance.

One of the *Andromedas* has sometimes been catalogued of late as the "lily-of-the-valley shrub." *Andromeda racemosa*, a 6-foot shrub of our woods here, and as far west as Kentucky, might lay good claim to the name. Its racemes are of 12 to 20 pretty white bells, all turned downward. Though not showy, it is very dainty and pretty, and a shrub to be coveted until obtained.

The most popular gem of the June woodlands is doubtless the *Kalmia*, or Mountain Laurel. For formal beauty, nothing can eclipse its sheeted masses of pink and white. And if one closely examine a single blossom he is made to marvel at the rarity and interest of its form. Its colors are of the most popular, its foliage of the most beautiful, and it lacks only the slender grace, which is the chief charm of many plants less beautiful in other ways.

It seems passing strange that so few—so very few of those who own grounds sufficiently large to contain good-sized shrubs should fail to recognize the decorative possibilities of the sumach. Both in its fruit and in its autumn dress is it so glowing that it seems a gardening sin to neglect or ignore it. As early as June it begins to add to beauty of form in foliage, bit by bit, its famous colorings. The few plants of it seen on lawns have been among their finest ornaments.

Among groups of low-growing shrubby stuff, with small clusters of white bloom, July gives us the Jersey Tea, *Ceanothus Americanus*, a Dog-bane, and the Button-bush, with its pretty globes of blos-

som. This last sometimes attains a height of six feet. Another pink Wild Rose is on hand to form a pretty contrast with these, and yet we have not touched the most delightful of all, the Sweet-Pepper Bush, *Clethra alnifolia*, very few of our foreign-born garden shrubs are superior to this; many of them are much less desirable. It comes into notice when our best catalogued shrubs are past, and adds to its other charms, fragrance delightful and length of season, as it lasts well toward fall. The pretty pink Hard-tack, too, will form a fine fringe to the taller stuff at this season.

As the season wanes and herbaceous things follow one another in jostling haste, the list of seasonable shrubs grows shorter. The Wild *Sarsaparilla* and the American *Senna* (*Cassia marilandica*) are about all we can name for this month. The former is not very showy, and is too tall to use near the front; but the *Cassia* is the most brilliant of the whole season's offerings in shrubs, so long as the gleaming yellow bloom lasts. The clusters are large, the color strong, the foliage fine.

Although not a shrub proper, the *Clematis* fairly belongs to us in this enumeration, as it is a woody climber, and it were to show ourselves ungrateful for Nature's best gifts not to seize upon so good an addition to the beauties of the wild or native shrubbery. Beautiful in its August dress of gleaming white, it is almost equally beautiful thereafter, in misty, waving plumes. Upon the *Clematis*, wherever it can be made effective, and upon the sumachs, must the reputation of our shrubbery largely depend at the end of the season.

Grouping of these shrubs must hinge largely upon their habits. In all the list mentioned there is no glaring inharmonies of color. Perhaps the *Cassia* would be better with white, but aside from the *Clematis* there is little chance to give it company. There is something to be said in favor of massing those kinds which bloom at the same season; but, on the other hand, if each group has a shrub for each season, there will always be touches of color here and there. I think my own preference would be for the former method. Tall growing stuff must not be allowed to hide that of lower growth, and irregularity rather than symmetry in grouping pleases the eye better.

I wish I could make people understand how much better this list of plants is than many that might be selected from the nurserymen's catalogues; though, for that matter, there are firms now who deal almost solely in our native shrubs, and in whose lists all, or nearly all, the things mentioned above may be found. Perhaps no other argument of such force could be used in favor of our native friends—at least with some habits of mind. C. S. VALENTINE.

Freezing of the Roots of Fruit Trees.—Prof. Craig (Canada), speaking lately on the matter, said he expected a great loss of trees in consequence of the snowless winter. As a means of preventing a recurrence of this condition of things, he advocated the planting of clover in the orchard. This would serve two objects. Firstly, it would provide nitrogen for the soil, and, secondly, serve to protect the roots of the trees from the frost. The variety of clover recommended was the Mammoth Red, a species which was at once hardy and prolific.

Best of All.

Out of all the papers, I have received the best results from yours this year.—W. C. BABCOCK, Bridgman, Mich.



PRINTED BY THE PHOTO-COLOTYPE CO., N. Y. FOR A. T. DE LA MARE PTG. & PUB. CO. LIMITED, N. Y.

Copyright, 1897, by Helmecht & Son, New York.

A TRIO OF NEW CANNAS

REDUCED TO LESS THAN USUAL NATURAL SIZE.

What to Plant.

In our issue of Nov. 14, last year (page 725) the artistic treatment of a Corner Lot was discussed. Two plans were shown, the one formal in the extreme, the other having graceful outlines to the suggested beds.

The argument then presented in detail need not now be enlarged upon, but in now giving detailed directions for the plantings of the beds then laid out, we have reproduced in fig 86 a portion of the sketch previously published, so as to render the following remarks more easily understood:

The outline of beds here given is pleasing, without reference to what the beds may be occupied with. In other words cut such beds into the lawn, round them over nicely with spade and rake to have the central parts slightly crowning, and if there was not a thing growing in them, they would yet impress the eye favorably. That is the advantage of employing a pleasing design as a beginning. As to the manner of stocking the beds to be handsome, there is a field for a variety of tastes. In the use of seed-grown plants I am sure a plan something as follows would be satisfactory:

Suppose in the center there was a margin of two or three feet wide. Pansies extending around the margin. Within the pansies I suggest a kind of plants for short flowering, the plant may be a variety of flowers, they flower a shorter period of bloom, excellent. In Asters, better than a variety.

If plants with ornamental value are preferred, I would suggest *Amaranthus tricolor*. For the bed, suppose we start with a line of *Portulaca* along the entire edge, suppose *Petunias* be planted in the rowest part, just back of the *Portulaca*. The end part beyond the *Petunias* might have a line of dwarf *Larkspur*. *Lupines* back of the *Portulaca* line, and in the remaining space a mass of such tall growing plants as *Castor oil bean*, *Hollyhocks*, and *Gladiolus*. The remainder of the bed towards the seats might be planted with a mixture of choice annuals. I would suggest that the third or short side bed be edged with sweet *Alyssum*, and back of this a line of *Dwarf Nasturtiums*, with the space back of this occupied with an assortment of annuals. If mixed annuals were grown elsewhere, I would think well of planting the short side bed back of the margin wholly with *Verbenas*; the long side bed with *Petunias* throughout.

Supposing that the same beds were to be devoted to hardy flowering shrubs. In that case an arrangement that occurs to me, would be to plant the center bed with the hardy panicled *Hydrangea*, *Hydrangea paniculata grandiflora*. The long side bed might receive some *Weigelas*, in different varieties, at the narrowest part. Beyond this, in the widest part, there might be a front line of dwarf variegated-leaved *Weigelas*, and within this line an assortment of hardy shrubs, such as flowering *Almonds* and *Currants*, bush *Honeysuckles*, *Lilacs*, *Forsythias*, etc., with a blood-leaved *Japan Plum* (*Prunus pissardi*) central. I suggest edging the short side bed, assuming on shrubs throughout, with the beautiful dwarf *Thunberg's Berberry*, and within this edging setting out an assortment of shrubs; here I would include *Deutzia gracilis*, *Japan Viburnum* and others, with a variegated-leaved *Cornelian Cherry* at the center.—E. A. LONG.

The Fruit Garden.

The Planting of New Stock should be finished by this time for the results to be satisfactory. If annoyed by the non-arrival of stock, remember that the nurseryman is not always in fault, and that late orders make late shipping, especially with first-class firms who are generally badly rushed at the end of the season, if genial weather begin early in April.

Spraying.—Don't spray the trees when in flower, for the reason that our friends, the bees, play an important part in the fertilization of our fruits; but try to get in the second spraying of Bordeaux and insecticide on apples, pears, and quinces within ten days after the flowers have fallen.

Quince.—Apply Bordeaux and London purple mixture for fruit spot and the codlin moth; see that there is plenty of lime in the mixture.

Gooseberries.—Watch for mildew, which shows at first on the leaves like hoar frost in spots, and which, if neglected, spreads rapidly, soon becoming a dirty brown. Industry and Downing are comparatively free

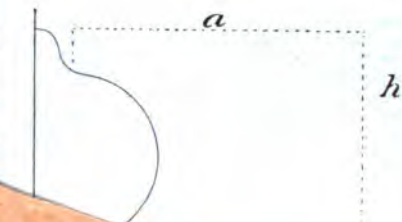


FIG.

from this disease. A thick mulching will protect the bushes in summer.

Peaches and Nectarines are loquacious. Now look after the borers and repel them with tar paper with new paper and wood ash. If you must spray the trees with Bordeaux for fruit rot and leaf curl, make sure there is an excess of lime and that it is thoroughly stirred from the bottom while being applied.

Plum and Cherry.—Although the foliage is not so tender as that of the peach, spraying for leaf blight has to be very carefully done.

Dependence on Automatic Stirring apparatus has made many doubt the efficacy of Bordeaux mixture. J. HOLLOWAY, N. Y.

Won't You Too?

I have received the premium Rose bushes which arrived in excellent condition. I expect to send for another dozen in a few days with a new name.—C. C., Guelph, Ont.

I get a great deal of solid information from AMERICAN GARDENING, and find it a great pruner of many descriptions in the numerous vegetable and fruit catalogues.—J. T. G., Va.

The Vegetable Garden.

Radish.—Sow for succession, in rich moist soil.

Lettuce.—For a regular supply of lettuce during the hot months, sow thinly where they are to remain, in drills 12 to 14 inches apart, plants to be gradually thinned out to 6 or 8 inches apart. This method allows the tap root to penetrate undisturbed into the soil, thus securing moisture and coolness, and does not induce surface roots, which also lessens their tendency to bolt to seed in hot dry weather—an advantage worth securing. Golden Queen, Big Boston, and Trianon Cos are excellent varieties for general use.

Corn.—Plant now for succession, Early Cory for early, Amber Queen for second, and Stowell's Evergreen to follow for main crop. At least two varieties should be grown that will not mature together.

Peas, for general crop, should now be sown, if not already done. By the selection of suitable varieties and frequent plantings, a constant supply of the right age may easily be secured. If a sowing of early, intermediate, and late sorts be made at the one time, they will come in successively.

Beans.—Sow for succession Early Valentine and Golden Wax for early. The Scarlet Runner is an old favorite pole bean, unsurpassed for its beauty and gorgeousness while in bloom, and very useful for culinary purposes. The London Horticultural is a fine bean useful either green or shelled. As soon as the ground is warm and dry make a sowing of the Pole Lima, the poles should be in position previous to sowing; in setting them make the rows to run north and south 5 to 6 feet apart. Drive the poles slanting at an angle to the north; the tops of the poles need not be more than 6 feet from the ground. In this way the vines will climb up much better than if the poles are vertical, and the pods hanging clear from the ground are more attractive and easily gathered. Anderson's Bush Lima made a sowing of the Pole Lima, the poles should be in position previous to sowing; in setting them make the rows to run north and south 5 to 6 feet apart. Drive the poles slanting at an angle to the north; the tops of the poles need not be more than 6 feet from the ground. In this way the vines will climb up much better than if the poles are vertical, and the pods hanging clear from the ground are more attractive and easily gathered.

If not already done, in the vegetable garden, if the ground is dry, compact by the use of a roller.

Turnip, Parsnip, should now be sown. As a preventive of the turnip root rot, as soon as the onions are up, apply in the mornings on a dressing of air-slacked lime, every few days, which will be agreeable that the onion fly will not lay its eggs. Prevention is better than cure, in this as in every case.

Turnips.—Sow early turnips. As soon as the turnips are up, if the ground is dry, dusted with soot or lime to prevent ravages of the turnip fly.

Cabbage and Cauliflower.—In locations where they are subject to club root, or stem maggots, try dipping the roots in lime water before transplanting, or water with lime water.

The Vegetable Marrow is a fine vegetable if grown quickly on rich ground, and used when young; it succeeds if treated similarly to squash, and is desirable for variety.

Celery.—Sow now for winter use. Celery should now be transplanted for early use, on well-enriched deeply dug soil, plant in double rows ten inches apart, for convenience in their care and cultivation. This method gives larger crops and better satisfaction than the old method of planting and growing in trenches. The Golden Self Blanching, and Henderson's White Plume and Pink Plume, are the best for early. Give plenty of water in dry weather.

W. M. EDWARDS, N. Y.

Salads.

Water Cress (*Nasturtium Officinale*).—It seems astonishing that this most health-giving and blood-purifying vegetable is not more widely known and cultivated. I am aware that in some of our large cities (chiefly in New York and Philadelphia) it is now used to a very large extent, but in other places I see very little. Now enough of this nutritious salad may be grown on a cool greenhouse bench in a space 6x4 feet to supply the needs of a very large family, and it is one of the easiest things to grow. As compared with lettuce, it is, I think, equally as good to the taste. One method of growing it is in a good rich sandy soil 4 or 5 inches deep, either in a solid or raised bench, scattering the seed lightly and evenly over the surface, and covering with fine soil to about its own depth, then carefully water, and keep on the damp side, until the little plants have made good roots, when the whole must be thoroughly saturated with clear, cold water (the colder the better) at least three times a week. Should the seedlings appear too thickly, they may be allowed to grow until large enough to eat, when they can be thinned out till the remainder are left 3 inches apart, the remaining ones at the same time being topped or pinched off to the second leaf, and will then spread all over the vacant surface. The brown or copper-colored leaved variety is the best in flavor, and these should be left in preference to the pure green. It can also be grown from cuttings, 2 inches long, which should be inserted in the bench, where they are to grow, at 3 inches apart, and the bench kept saturated as stated before, and also slightly shaded until they begin to grow. The temperature should never be allowed to rise above 55° at night, and 40° would be better, and the house kept as cool as possible during the day. Spring, fall, and winter are the only months it can be grown under glass.

As to the method for outdoor culture it can easily be grown in any running stream of good clean water or on any swampy land, or land that can be flooded, but I have always seen it growing best on sandy or gravelly bottoms.

Let us suppose for instance, we have a small piece of land, near some large city with a small stream of clean water running through it, and no matter how large or small the stream, or land which is nearly always wet, and has been thought useless. Now, provided the weeds and brush (if any) are cleared off, and the soil just loosened up with a cultivator, hoe, or even an iron rake, the seed should be scattered lightly over the surface, and will very quickly germinate, and when the plants have roots enough to hold them in place, the stream can be dammed up and the ground flooded so as to thoroughly saturate it, but should the ground be always wet, this will not be necessary. Hundreds of dollars may thus be made by people who thought their land useless. It may safely be said that in the vicinity of the two cities above-named, many men make more money from one-eighth of an acre of water-cress, than from twenty acres of farming land. I have seen it grown in some places in nicely kept beds six feet wide, with eighteen inch walks between, to enable the pickers to get at it without treading on the plants.

The picking is very simple, when about four inches or so in length, it is just pinched off, leaving the roots, and a small piece attached, in the soil, the plucked pieces can then either be thrown into baskets and sold by the peck, or nicely bunched, as I have many times seen it, and sold for five cents per bunch. These words may not interest those in the immediate neighborhood of New York City, but should, I fancy, open the eyes of many, in the swampy districts, not far from Boston, where as yet very little water-cress is grown, and by the majority, entirely unknown.

Indian Cress (*Tropaeolum*).—This plant is known as the common garden Nasturtium, and although probably grown in nearly every garden, is not so often used in salads as it should be. I have seen people walk miles after a few pecks of Dandelion greens, and yet had in their own little garden, quantities of *Nasturtium*, which they were not aware could be made into salad, and one which is perhaps quite as wholesome and

pleasant to the taste. The leaves and young shoots are used, just cut up fresh and green as picked. The seeds of this plant when green also make a first-class pickle.

Lepidium Sativum or common garden pepper cress. This makes a very delicious salad, and should be grown in every garden. It is probably the easiest and quickest grown of any cress, and should be sown in drills in the garden, or better, in boxes in the greenhouse or window every week or two, for a constant supply. The seed when sown in boxes need not be covered, as the soil is liable to make the cress gritty. It is cut when two inches high either with a sharp knife or scissors, and eaten fresh when cut, is very appetizing. I have also grown it as an ornament for the table in various shapes. One good way being to take a large soup plate, placing a shapely flower vase, or bottle, in the center, and covering the whole with common white muslin, which, when thoroughly wetted with water, is covered with the pepper cress seed, and never allowed to get dry, by keeping the vase or bottle just overflowing with fresh water daily. If put in a dark, warm closet for a few days, the seeds germinate, and may then be brought into the light of a window or greenhouse, and in two or three weeks, will be ready for use. The dish or plate can then be placed on the table, and the cress cut as needed at each meal. Growing it in this way on muslin, many pretty effects can be had, and, besides, the cress is always cleaner and entirely free from grit of any kind. It needs plenty of water when grown in any way.

W. L. PALMER, Mass.

Novel Premium Offers.

Through the kindness of one who is deeply interested in horticulture, the Horticultural Society of Northern Illinois is enabled to make the following offers:

Five dollars in cash for the best paper written by a boy or girl under 18 years of age, describing the growth and development of any fruit, vegetable, ornamental plant, or tree, planted and cared for by him or her during the season of 1897. Five dollars in cash will be given for the best report received of the exercises held at any school on Arbor Day, 1897.

Competition for these prizes limited to those living in the twenty-three most northern counties of Illinois (District of the Horticultural Society of Northern Illinois.)

Fifteen dollars in cash to the person writing a paper best answering the question, "Why and How Should Horticulture be Taught in our Rural Schools?" Competition open to the world.

Papers should be plainly written on one side of the paper only, and be enclosed in an envelope with the name and address of the writer on a separate slip of paper, and be in the hands of the secretary as below, not later than November 1, 1897.

The prize-winning essays will be read at the annual meeting of the Society to be held at De Kalb, December 1 and 2, 1897.

Those competing for the five dollar prizes and who enclose a two cent stamp, will receive some valuable new variety of flower or vegetable seed, or fruit plant, during the fall of 1897, or spring of 1898, seeds and plants will be furnished by reliable growers of Northern Illinois. Address all communications to the secretary, Dwight Herrick, Rochelle, Illinois.

Death.—John Lane, the veteran plow manufacturer of Chicago, Ill., died at his home in that city on April 17th. He was in his 74th year.

I have much pleasure in saying that of the four horticultural journals used by me this season, "American Gardening" brought me more orders than the other three.—H. H. GROFF, Ontario.

Am very much pleased with paper and am always anxious looking for each successive copy.—W. C. L.

How to Grow Celery.

As a celery grower of fifteen years experience, I may be able to give my brother truckers a few practical hints, that would give them a good return for money invested.

You may say, "yes, but it requires experience to raise good marketable celery, and this involves time, labor and expense."

Years ago, before the advent of the self-blanching sorts, I will admit that this was in a measure true, but since the introduction of the Golden Self-Blanching, White Plume, and Giant Pascal (and right here I would say, there are no better sorts), it requires but little more experience to grow a good crop of celery than it does to produce one of cabbage or beet.

First begin properly by buying seed of some reliable seedsman. Now select a plot of fine loamy soil, if black, all the better. Spade this to a depth of at least one foot, as early in the spring as the ground can be worked, then with a steel-toothed rake level off smoothly, and lay out beds two feet wide, but do not raise them more than can be helped. If the ground is not very rich, now is the time to make it so, by applying some good brand of superphosphate, say a peck to each rod of bed, this must be raked in to a depth of five or six inches, then again carefully rake the beds lengthwise. This done, draw marks crosswise, these must be very shallow, and eight inches apart; seed may now be sown quite thickly, and covered by sifting fine earth over it so as just to hide the seeds. Firm down either with light roller or otherwise.

As celery seed requires a long time to germinate, the beds must be sprinkled once a day if the weather be dry. If this preliminary work has been well done, in about three weeks you will have a fine bed of plants, which may be thinned to about one inch apart in the row.

All the attention now required will be to keep the beds free from weeds, and give water when dry until about the first of July, when the plants should be removed to the field.

A reclaimed swamp muck is undoubtedly the best and most natural ground on which to grow celery. It should be well drained and made very rich, and be well fitted. The rows should be made four feet apart, and it is well to sink the rows an inch or two. Holes for receiving the plants should be made six or eight inches apart with a dibble. The plants should be set firmly and the soil if dry, pressed with the feet; the plants must be watered until established.

Nothing more need be done for six weeks, except to keep all well cultivated and free from weeds; by that time the plants will have attained about one foot of growth, and banking must begin. This branch of celery culture has until recently been a slow and tedious operation. The push scraper is now used by all progressive growers; this is a simple little tool and easily made by any one in a few minutes. Take a board six inches wide, fifteen inches long, three-fourths of an inch thick, bore a hole in the center and insert a handle (a rake handle is just the thing), sloping back at a convenient angle, now brace it and you have a push scraper.

It now requires two men with "push scrapers" one each side of row; the earth should be pushed gently against the plants, this makes a banking of about six inches, and gets no more dirt in the hearts than the old time handling, and is much more expeditious; besides, the plants are in better shape for banking proper, which can be done with hoe or spade, as the operator may see fit. The earth should be drawn nearly to the top of plants, and if the self-blanching sorts have been used, this will be all the banking required, and in about three weeks there will be a fine crop of celery.

M. E. D., Erie Co., Pa.

Books.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 5c. stamp.

Destructive Insects and Methods for Controlling Them.—V.

PROF. W. G. JOHNSON.

The San Jose Scale.

Of all the injurious insects that have attracted public attention during recent years, none has been so conspicuous as the San José scale (pronounced San Hozay). It has been the subject of extended discussion at nearly all horticultural meetings throughout the United States and Canada during the past year; and many bulletins regarding it have been issued by various Experiment Stations. Several States have enacted laws for its suppression and control, and there is at present a bill before Congress dealing with international and national legislation against this and other pests.

Its Past History.

The scale was first discovered and described by Prof. J. H. Comstock, now of Cornell University, in 1880. He was then the entomologist of the United States Department of Agriculture, and made a special trip to California to investigate the pests, especially scale insects, infesting fruit trees. In the Santa Clara Valley, in the vicinity of the city of San José, he found an insect which he pronounced the most pernicious scale known in this country, and gave it the suggestive specific name of *perniciosus*. He proposed to call it the "pernicious scale," but by popular usage the old name has been superseded by "San José scale."

Until August, 1893, it was supposed that this pest had not established itself in any place in the United States outside of California. At this time it was discovered at Charlottesville, Virginia, and was traced to the nursery from which the trees came. It is now widely distributed throughout the United States and a few other countries.

Its Life History.

If a twig infested with this scale is examined under a hand-lens or a compound microscope, it appears as if the surface were covered with very minute snails or shells; in fact, it looks like a pile pest covered with barnacles, as shown in the accompanying illustration (after Howard and Marlatt in Bull. No. 3, n. s. Div. Ent., U. S. Dept. Agr.). If one of the large scabs is lifted with the point of a knife during the summer, an oval, orange colored, wax-like mass, less than half the size of a pin's head, will be seen. This is the mature female. It is a very degraded form of insect life, having lost its legs during the course of its transformation. Her mouth parts, digestive tract, and reproductive organs are retained in a highly developed condition. The adult male, on the other hand, has six well-formed legs, and is winged, but has no mouth, and having no use for a digestive tract, nature has not taken the trouble to supply one. Where the mouth ought to be there is a supplementary pair of eyes, so the male has four eyes instead of two. The male is very small, indeed is rarely ever seen by the average horticulturist. It usually emerges at night and lives only a few hours, its sole function being the propagation of the species.

The young, unlike most scale insects, are not produced from eggs, but are born alive. When first born they are mere specks, resembling lice, at which time

the two sexes cannot be distinguished. After crawling about the tree for a few hours they settle, insert their lance-like beaks, and begin their work of destruction, by the constant pumping of the sap. As soon as settled, the insect begins to excrete a cottony mass, and is soon concealed beneath a whitish scale, which becomes darker with age. About the twelfth day the young molt, or cast their skins. The sexes are now distinguishable; the males are rather larger than the females, and have large purplish eyes, while the females have lost theirs entirely. About the twentieth day, the female undergoes a second molt. This form of molting is common to scales of this kind. At each molt the old skin splits around the edge of the body, the upper half adhering to the covering, and the lower forming a sort of ventral scale next the bark. The mature male appears in about twenty-five days. It takes about a month for the female to develop. The progeny of a single female from early spring to late fall has been estimated by Dr. Howard

During the breeding season, the young lice are blown considerable distances; and may readily float upon water, or twigs, chips or rubbish of any kind. Birds alighting upon scale-infested trees, get their feet and legs covered with the minute lice, and fly long distances, transferring them to other trees; insects, especially the predaceous ones, transfer the pest in the same way.

Remedies.

Although the scale has many natural enemies, they play a very insignificant part in its check and reduction. We have, therefore, to depend upon artificial measures for its destruction. First of all and most important, is prevention. Watch your nursery stock, and be sure that it is all right before you accept it! Take nothing that looks suspicious. If the pest is accidentally introduced and becomes established in your orchard, every possible effort should be resorted to for its extermination. Badly infested trees should be dug up and burned as soon as detected, and the others should

be thoroughly sprayed late in the fall, after the leaves have fallen, with whale oil soap, at the rate of two pounds to a gallon of water. Care should be taken not to have the wash stronger than this, as there is great danger of injuring the fruit buds. Several cases have come under my observation recently where the soap was used at $2\frac{1}{2}$ and $2\frac{3}{4}$ pounds to a gallon, and from a third to two-thirds of the fruit buds have been killed. The most thorough spraying, however, with whale oil soap two years in succession, has shown that the scale is not completely exterminated; but a very large percentage is destroyed. By the persistent application of this material, year after year, it is possible to keep the pest in check, even in old bearing orchards. Capt. R. S. Emory, one of Maryland's most energetic and successful fruit growers, and who first suggested and used the whale oil soap as a remedy for the San José scale, has, during the past fall and winter, used over 5000 pounds of this soap in his extensive pear orchards. By his constant fighting he is keeping this "orchard scourge" in check.

Whale oil soap made with potash lye is very much better than that made with caustic soda. It is very difficult, however, to obtain a grade of soap that is just right; usually, there are as many brands as there are orders, and consequently there is much variation in the results. The lye soap leaves the tree in a bright, clean condition, while the soda soap leaves a residue on the tree, giving it the appearance of having been whitewashed.

Hydrocyanic gas, made by combining potassium cyanide, sulphuric acid, and water, is used extensively in California on bearing trees and nursery stock, for the destruction of the pest. This method has also been adopted by some nurserymen in the East, and "gas houses," holding from eight to thirty thousand trees, according to their size, have been constructed, and all incoming and outgoing nursery stock is thoroughly fumigated. Judging from the outcome of some recent experiments with this gas on badly infested trees, I am not at all certain that this method is infallible.

MY! WHAT LARGE and fine raspberries where we mulched with straw just before picking.

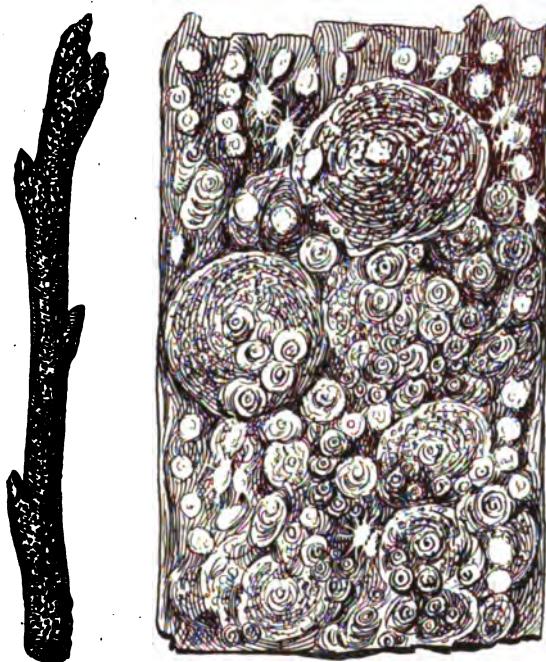


FIG. 87.—THE SAN JOSÉ SCALE. Natural Size and Magnified.

and Mr. Marlatt as 3,216,080,400. When this enormous aggregation of "life suckers" is considered, it is not surprising that in the "struggle for existence" our favorite fruit trees soon find they are not fit to survive.

Food Plants and Distribution.

Practically, all our deciduous fruit trees are attacked more or less by this pest. Even currant, "gooseberry" and blackberry bushes are often seriously infested, and it is not rare to find it upon shade trees, ornamental shrubs and grasses. Pear, peach, plum, apple, and cherry seem to be the favorite food plants.

It is totally unable to transport itself any very great distance. As already stated, the female is wingless, and during her migratory period, crawls only a few feet at the most. It would only be when trees are planted very close together, and when the limbs interlace, that it could possibly pass from tree to tree on foot. Such instances would be rare, except in nurseries. Its transportation long distances upon nursery stock of all kinds, including buds, grafts, etc., is not uncommon. It is locally distributed by winds, water, birds, and insects.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 13, 1896.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.

ROSE AND DUANE STS.

RHINELANDER BUILDING, NEW YORK.

Telephone, 3154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

(Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Economic Objects

ARBORDAY! How few know its meaning and purpose!

How few realize that this simple and beautiful festival, filling the impressionable with sentiment and emotion for the beauty of the budding spring, is to be the means of working up a great economic reform; that it is not, like most of our festivals, a celebration of past achievements but of future hopes.

The world is moved by sentiment: whoever wants to succeed in advancing it must play upon the emotions of his fellowmen, rather than upon their reasoning, no matter how much more forcible reasons could or should be. Hence, religious movements, which have to deal only with emotions, are capable of so much easier accomplishment, than any economic reforms.

Here is Arborday! a day set aside for the sentimental lever of nature to indulge himself in the pastime of setting

out trees for adornment or shade, to have the children declaim poetry and patriotic songs, to stir in them a love for trees and shrubs and the beauty of a leafy bower. And yet the object for which this day was originally designed was a very different one and the object to which it is ultimately to tend is economic rather than æsthetic and sentimental.

The need of shelter in the treeless expanse of our Western plains suggested it. To stimulate the heart of the settler (if his head was at fault) to a desire for such improvement of the untoward climatic conditions, a special day was set aside in Nebraska, in the belief that by concentrating the thought of a whole community on the subject a concentration of action in planting trees could also be secured. Emulation and the desire to outdo each other, stimulated by premiums for the largest number planted, had its effect.

When another section of the country, originally abundantly supplied with forest shelter, grew apprehensive of its possible loss, and the American Forestry Association was formed in the interest of forest preservation and rational forest treatment, a wise educator conceived the idea of transplanting Arborday from the prairie to the forest region, as a means of stimulating sentiment and interest on behalf of tree growth from an economic point of view. He realized that emotion as the word itself suggests, sets the world in motion, that feeling comes first, thinking afterward and action from both. With this in view, sixty thousand school children of Cincinnati, in April, 1882, marched forth to Eden Park, to plant groves, dedicate trees to the memory of poets, authors, patriots, poured forth songs of praise of the forest and listened to addresses by wise men on the necessity of forest preservation.

How many of those, who participated in this first Arborday in the East, fifteen years ago, have forgotten the lesson: There should be a goodly number who by this time ought to have translated the emotion stimulated that day, into active measures, participating in the struggle to secure a rational use of our forest resource. But we get our education slowly, much too slowly to bear fruit in proper season.

Leaving the emotional and sentimental side of Arborday, which has its use and justification, let us briefly look at its economic object as presented, at our request, by Dr. B. E. Fernow, of the Division of Forestry, U. S. Dep't. of Agriculture:

Forests grow to be cut—and we have cut them. But we have not done so judiciously; we have not treated them rationally. Where good agricultural soil is occupied by forest growth it is proper that it should make place for agricultural crops; but the mountain tops and slopes, rocky sites, thin and sandy or gravelly soils, too poor for agricultural use, should always bear a forest crop. This does not mean that the stores of wood material accumulated for centuries should

not be used, but should be so used that a good aftergrowth of useful kinds take the place of the harvested old growth and re-occupy the ground. This is desirable not only because we need in our civilization the wood that such areas can furnish, but in such situations, on such soils, the wood crop is the most profitable one, and, moreover, in such situations its existence is most needful to prevent a deterioration of the soil and deleterious influence on the waterflow.

There are a few things that the layman must know to appreciate the situation: First, he must realize that wood is a most necessary material to civilization, and is consumed by us in much greater quantities than any other materials except food. Our agricultural products amounted during the census year in value to nearly 2½ billion dollars, while the value of forest products amounted in that year to round 1½ billion dollars, and all our mineral products represented only 600 million dollars. From these figures the great importance of forest supplies is apparent, so that we can say that a wood famine would come nearest to a food famine in imperiling our civilization.

Next he must know that it is not wood of any description, but wood of certain kind and size, that is so needful. There are weeds among the trees, as there are among the lower vegetable world. Just as a field of wild sunflowers in the Western prairies would to the ignorant appear as a probable food crop, so to the ignorant much of the tree growth covering our mountains may appear as a source of wood supply, but except for poor firewood it may be entirely useless: it is tree weed growth occupying ground that might and should be occupied by a useful forest crop. There are certain kinds which furnish us serviceable material. In the first rank stand the coniferous woods, the pines, spruces, hemlocks, cypress, cedar, etc. Of all the lumber that we use, two-thirds to three-quarters is of these kinds, because they combine qualities that make them useful beyond any others. These, therefore, we have cut most lavishly, until now there is actually in the East not more than 15 to 20 years' supply of this most needful material in sight. To be sure, there is some young growth coming on in spite of the fires, which are preventing it, but since it takes 100 years to grow a good-sized pine—the lumberman at present prefers a tree of 150 to 200 years and more—this aftergrowth, indifferent and neglected, struggling against the weeds (tree weeds with which it has to compete for the occupancy of the soil), is not promising. It is then not trees, but logs of useful kinds, that we need, and a continuous supply of them.

The hardwoods, like the oak and ash, the elm and maple, the birch and beech, reproduce themselves with much greater ease; they can sprout from the stump if need be; but the conifers, the most useful tribe of trees, can only reproduce by seed; they grow slowly when young and hence require more favorable conditions to reproduce themselves in the wild woods, especially when man does everything he can to render their reproduction difficult.

The question of wood supplies—not firewood but wood fit for manufacturing and building purposes—is sufficiently pressing to let us wish for results from the sentiment that Arborday was created to stir up. But there is another aspect of the question of forest preservation which has been talked about enough, it would seem, to incite decisive action; the influence which forests exercise on soil and water conditions.

There is a certain jingo patriotism cultivated in our schools and even churches, by our orators and authors, which resolves itself into conceit and pride of what we are. I have no fault to find with a proper self appreciation, but I like to inquire as to the basis of it, and whether in comparison to our opportunities our achievements are what they could or should have been. To have used and improved our opportunities to their full extent appears to me to be the only proper basis for self appreciation, and to bend our energies to secure the best use of our opportunities is true patriotism.

If this be a proper definition, then we have failed in one direction, at least, utterly in active patriotism. We have squandered our natural resources and especially our forest resources, we have turned into wastes and brush deserts, thousands of acres of land that would have been capable of sup-

plying us continuously with useful material. We have disturbed our waterflow, and we take the floods in their frequency and excessiveness as necessary evils; the annual drying up of springs and brooks as unavoidable and uncontrollable conditions; and this has come about not by legitimate use but by shameful abuse of our forests and of our opportunities.

When will the result of Arborescence education become visible in that kind of patriotism which does not exhaust itself in self laudation, but in improvement?

We have been lavish with our heritage to the extreme, curtailing it for our children. Let us stop firing the woods with our more judiciously; let us reduce the amount of wood material we use for our mushroom civilization—we use 600 feet of wood per capita as against 150 which the Germans get along with; let us build a stable and permanent civilization of stone, brick and iron to take the place of our perishable and dangerous wooden structures. Let us take care of the remnants of our forest resource to avoid the disasters by flood, erosion, sand blowing, etc., which other nations have experienced, to supply us with necessary wood material and to make useful the rough and otherwise waste spots of our great country.

Members of Congress could do much to benefit the country if they would distribute to each State, trees for planting on Arborescence. Vegetable and flower seeds grow and pass away, leaving the country none the richer. If the money now squandered on free seeds were to be expended in supplying trees on the respective Arborescences, some real and permanent benefit would ensue.

Every night when we retire, there are 25,000 acres less of forests than there were in the morning when we arose. How many acres are planted in every 24 hours?

On the average, the American uses only $\frac{1}{4}$ of each tree cut down, in Europe $\frac{3}{4}$ is used. Therefore we waste five times as much of a tree's growth as do the Europeans.

The faithful observance of Arborescence should be instilled into the mind of youth. At each school in the country something should be done on the duly appointed day to impress upon our children the sacred duty they owe to posterity.

The First Copy?

If this be the first copy of AMERICAN GARDENING that a reader has seen, we ask him (or her) to read these few words.

Any one issue of a paper does not present a complete idea of what the regular readers get in its perusal week after week, and in order to the better enable a possible subscriber to have a more thorough appreciation of the caliber of the paper, arrangements have been made to send the paper for a trial term of three months, and at the end of that time a fair conclusion can be reached. A reader for three months always a reader!

Privileges of Three Months' Trial Subscribers.

These are duly entitled to a premium if they take out a yearly subscription. As the season for planting is fully upon us, it would be best policy for those amongst our trial subscribers who intend taking AMERICAN GARDENING for a further twelve months, to send in their subscriptions now so as to avail themselves of one of our Premium offers at the best time for planting. In entering such subscriptions on our books all unexpired time on the trial subscription will be duly credited.

A Trio of New Cannas.

[SEE COLORED PLATE SUPPLEMENT.]

On several occasions we have in previous issues written of the three varieties of Canna which form the subject of our colored supplement this week. The so-called "Orchid Canna," of which Austria and Italia are types, will undoubtedly be very extensively tried in gardens this year. They have passed through the experimental stage, and while in floriferousness many other varieties of the better known types lead easily, yet the fact that a fresh bloom opens each day (the spike carrying seven to nine in all) is a full compensation. The coloring of these two remarkable flowers is so exquisitely gorgeous and the individual flower so large, as to excite the admiration of all beholders. The spikes and flowers act somewhat differently from those of other Cannas in their habit and style of expansion, behaving in reality more like the Gladiolus and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our otherwise good Cannas.

These two varieties were grown by us last year and gave great satisfaction, the largest individual bloom measured $5\frac{1}{2}$ inches across, with an average size of $4\frac{1}{4}$ inches. The fact that Italia and Austria do not demand rich soil, and that they will also withstand drought to a considerable degree, and last well when cut, are points in their favor.

The remaining variety represented in our colored plate—Mrs. Fairman Rogers—has very aptly been described as an improved Mme. Crozy. Its chief characteristics of note are the glowing intensity of color, the very great freedom of flower and the almost fixed branching of the flower spike. This Canna is of American origin and was raised in Newport, R. I., on the estate of Mrs. F. Rogers by Mr. J. S. Cowles, her gardener. The plant has been in existence several years now, but not in any great quantity. The variety has been well accepted wherever it has been put on exhibition, and has also been awarded a silver medal at Boston.

This season the three foregoing Cannas are offered for the first time in quantity, and our thanks are due to Siebrecht & Son, New Rochelle, N. Y., the chief holders, for the opportunity of presenting the accompanying plate.

Notes on Cannas.

The Canna is one of our most ornamental plants both for lawn and conservatory use. It has of late years been received with more favor each season, but is by no means a new plant; it was already known at the close of the 16th century, but it is only through the successful work of the modern hybridizers that it has attained its present popularity.

It is said that all plants becoming popular have only a limited time to serve mankind, and soon will have to make room for something else, but as far as the Canna is concerned, I think it has come to stay with us on account of its far-reaching usefulness, and it certainly deserves for all times to come a prominent place in our gardens for the beauty of its foliage and for its gorgeous flowers.

The question might arise regarding its place in the smaller gardens, but when here a single plant or a small clump in some obscure corner of the porch or in a box on the veranda is certainly very becoming, or is there not an undesirable piece of fence or corner that should be hidden? And what other plant can do this better and more neatly than the Canna?

Consider also the little care it takes to carry over the roots from one year to the other, the easy propagation either

through division of the roots or through seeds; the first way being the surest, and is the only way to maintain the variety true, but the latter affords much pleasure from the great mixtures of varieties obtained, though only in very rare instances are they as good as the parent plant.

Good varieties are secured by using the pollen of a plant of merit on another equally good variety, but to be successful usually requires knowledge to plant structure, and experience.

From insect attacks the canna is pretty safe. In some instances complaint has been made, and especially from Southern States that the larvae of a butterfly eats holes in the young leaves before unfolding.

March is the time to start the Canna roots, cutting them back to one or two eyes, and potting off into 4-inch pots. Plunged into a hotbed, or in the house, they will soon break. About the first of June in the North (that is when all danger of frost is over), they are planted out and have at that time attained the required height, which is desirable to make a bed or group showy from the start. Large circular beds are not recommended, and I should make twenty feet diameter the limit. One variety in each bed is, at all events, preferable, and is the only way to produce "effect."

The Canna will make its own border, but if for variety's sake some other plants are desirable for edging, only coarse foliaged plants or ornamental grasses should be used.

The beds should be dug out to about two feet at least, and filled in with rich soil, with a heavy mixture of well rotted cow manure. Cannas are great lovers of moisture, and must be well supplied with water if good results are wanted.

As soon as frost has scorched the foliage in fall, the roots are to be taken up, part of the dirt shaken off them and stored away in a frost proof cellar or any other place where they can remain dormant.

An endless number of varieties is now on the market, all of some merit, and most of them desirable for a collection. Where only a few varieties are wanted, the following twelve are from my own observation among the best for general purposes:

1. Chicago, vermilion-scarlet.
2. Florence Vaughan, yellow, dotted with red.
3. Egandale, currant red, purple foliage.
4. Mme. Crozy, vermilion, gold border.
5. Flamingo, crimson.
6. Alphonse Bouvier, bright crimson.
7. Paul Marquant, salmon, shaded orange.
8. Midway, rich vermilion.
9. J. C. Vaughan, vermilion-orange, purple foliage.
10. Queen Charlotte, crimson, wide gold border.
11. Columbia, rich red.
12. M. Mesnier, salmon, slightly streaked with red, and a narrow rim of yellow.

The three new varieties, Austria, Italia, and Burbank are certainly very attractive as individual plants, but their merits as bedders are yet to be tried. Another novelty for 1897 is the "John White," with variegated foliage. Variation in foliage will be a new departure for the Canna grower, and in all probability the next few years will see Canna foliage equal to that of Marantas, Bertelonias, Draceras, Heliconias, Alocasias, etc.

JAS. JENSEN.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Waterproofing Cotton Cloth.—Will some reader please give in AMERICAN GARDENING a recipe for waterproofing cotton cloth with alum and sugar of lead.—PETER S. COUCH, W. Va.

Ants on Lawn.—In your issue of April 3, J. C. asks to get rid of ants on his lawn. I have used a powder in the greenhouse and on cantaloupe hills, and it banished them. It is sold by Henry F. Michell, 1018 Market street, Philadelphia, it is called Brown's Exterminator. Would be pleased to learn through your paper how J. C. succeeds, it will take from four to six weeks to know how it will do.—R. B.

Quickly Made Hedge.—Referring to the sketch and article (on page 218) for making a quick hedge for wire net, I suggest the red trumpet flowered honeysuckle. It is almost an evergreen, and blooms nearly the whole year, the vine is very pretty, and when covered with its clusters of scarlet-yellow throated flowers and red waxy seed balls, it is one of the handsomest of our native vines. As early as February, it can be seen in the woods and on fences, flaunting its scarlet banners, which soon attract the humming birds and orioles, both of which are very fond of the flowers. The humming birds are not destructive, but the orioles snap the flower off to get at the sweets.—MARGARET E. CAMPBELL, Louisiana.

Covering Old Trees, Etc.—The Wistarias, too, are good to cover old trees, hedges or fences. They are such lovely things early in spring, when covered with flowers, and again in the fall they bloom quite freely. I have seen big dead trees a sheet of purple with these flowers. I think China claims them, but they are natives of Louisiana. Many a time I have climbed for them on the banks of the creeks and bayous; there is a native white variety also. The farmers call them devil's shoestrings, as they are so hard to plough out of new ground and if ploughed in, each bit of root will grow. Few people here call them Wistaria, but "Cornucopia" from shape of the clusters of flowers.—MARGARET E. CAMPBELL, Louisiana.

Moles and Rats in Cold Frames.—Referring to the inquiry of H. C. C. M. in your issue of April, if he will drop a camphor ball here and there into the runs of the moles and the rats, the intruders will trouble him very little afterward.—JAS. HOLLOWAY, L. I.

A Fine Hardy Crab.—I consider Bechtel's Double Flowering Crab the finest flowering tree that is hardy in this latitude. It is a variety of our Wild Crab (*P. Augustifolia*), forming a symmetrical, conical tree of rather small size. It blooms here in May. The flowers are much the form, size and color of a La France Rose, with the most delightful fragrance, scenting the air for a great distance. Very small trees bloom freely. I have seen grafts less than a foot long loaded with bloom. I have never known the bloom buds destroyed by cold.—E. Y. T., Irvington, Ind.

Mending Broken Pipes.—I must take exception to your statement in answer to inquiry how to repair a broken hot-water pipe from B. Ross, Ohio, in April 17 issue. I had a large piece out of a bend of a 4-inch pipe, due to the water in pipe having been frozen. After many inquiries, and being told that the expansion and contraction would prevent it being repaired, I came across a new cement made by Vreeland Tompkins, 333 Communipaw ave., Jersey City, called Smooth On Joints, which being put on oxidises and thus turning into iron became itself a part of the pipe. It was repaired last fall, and the fire has been kept up in boiler, and there is no sign of a leak. It was in my favor that the piece came out whole, but the cement put over turned into iron.—JAMES H. CORNELL.

Japanese Morning Glories.—Replying to the inquiry in "All about the home plot" (March 27). Yes, the Japanese Morning Glories will bloom in pots; cut a tiny bit off the seed, soak a few hours in warm water, stick in a pot filled and firmed of rather poor soil, set in a sunny window, in four days the seed will be up, and in from four to five weeks the vines will be in bloom. After they begin blooming give liquid manure once a week. I have handled vines of many sorts for many years, and find that the Japanese Morning Glory vines bloom much earlier than any other vine. One must not think that because they begin blooming so young that the blooming period is short. They keep on blooming and branching as long as the old common sorts, and in such a grand display as to shame the old familiar glories of our childhood. Among my collection of over 300 varieties are a few with flowers split in five sections to the throat, and these almost refuse to climb. Put one in a pot and set it on a stand, it will droop over, and in a little while almost cover the pot and hide the foliage with its odd split flowers. This variety makes very few seed, and the few are quite small.

Now I want to tell you more of the Japanese Morning Glories. There are now, April 15, hundreds of little plants not a foot high from self-sown seed, and in bloom, many of them carrying four open flowers; as the weather is quite cool the flowers remain open all day. The first open flower was on the 27th of March, a large flat white, almost covered with blue spots and with a deep pink throat. I have just sent a few plants to the editor, and hope they will keep on blooming. Unless one has seen these vines in bloom they can scarcely believe half that is said of them. In 1863 Professor Goodell brought these strange new beauties to America, and a cousin of his, L. W. Goodell, of Dwight, Mass., had about a quarter of an acre covered with about 300 varieties. He sent me a few seed of each variety. I found the second year's crop had many very different from the original ones, and many of the new ones were very handsome. In my three years handling them I have not found one common one. It really makes me feel bad to have to pull up and throw away as weeds such handsome plants, but, unless one had a farm just for Glories, they must be sacrificed. Do not think this an "ad." I have never sold a vine yet, but if any of you want a hundred or so come some evening (afternoon you call it), bring a basket and take as many as you want just for thanks.

Many have written to me of failure with the Japanese Morning Glory seed. It may not be the fault of the seedsmen; sometimes they are blameless. I know of five seedsmen who handle the true seed, for I have tried them and find them of the true Japanese Morning Glories. Of course I do not give the names of these seedsmen, as it would appear too much like an advertisement.—MARGARET E. CAMPBELL, Louisiana.

Crops in S. C.—Peaches are not over half a crop; plums also light. There are not as many watermelons planted as heretofore. Cotton, all that can be planted. Corn acreage small.—W. T., Aikea, S. C.

GERANIUMS FROM SEED.

The would-be flower grower from the seed foundation can scarcely begin with any one thing more likely to insure success than the Geranium. To be sure, it is fashionable in some quarters to cast aspersions and sneering looks at the old favorite, but the novice can hardly afford to consider this. The seeds are large—a specially good point for the beginner—and they germinate well. The young plants are sturdy and most interesting from the moment when they first appear above the soil. In time, the grower is sure to get bloom, and if especial care has been taken of the more delicate of the seedlings, there may be a fine new sort as a reward for faithful work. The earliest, and most rank of the lot of little plants are pretty sure to resemble the old red sorts. But even an ordinary plant of one's own growing holds more of delight than a half dozen from the dealers.

Impure Air Blood

Eating rich and hearty food, sweets and fat in winter, close confinement and breathing vitiated air in office, store, shop, house, factory or school-room. **Take** necessarily makes the blood impure, and eruptions, boils, pimples, humors, are the result. Dizziness, indigestion and many other troubles are also caused by impure blood.

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier.

Hood's Pills cure nausea, indigestion, biliousness. 25 cents.

FREE ILLUSTRATED CATALOGUE

Ornamental Trees, Evergreens and Plants. Prices reduced for 1897. Japan Ivy, 3 years, \$6.00 per 100. E. S. PETERSON, Montrose, New York. Montrose Nurseries.

Mention American Gardening when you write.

ALL THE LATEST NOVELTIES AND PLANTS THAT CAN'T BE HAD ELSEWHERE. Cammas, Italia and Austria, at \$1 each. New Roses, New Fruits, New Shrubs, New Bulbs. 10 Cents for \$1.—\$ for 50 cts. Book on Cacti 25 pages, 120 cts., 50 cts. Catalogues of New and Rare Plants, Cacti and Bulbs free. A. BLANC & CO., Philadelphia.

Mention American Gardening when you write.

MAULE'S SEEDS

Prices Cut in Half for '97.

The most complete and most beautifully illustrated Seed and Plant Book of the year, free to all gardeners who mention this paper. Address

W. M. HENRY MAULE, 1711 Filbert Street, Philadelphia, Pa.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

MANWELL STRAWBERRY

The verdict given by competent judges. Prof. Budd, Iowa Hort. Station, says: "Have fruited two seasons, its perfect foliage and capacity to resist drought, makes it very desirable. It bore more good fruit than Parker Earle, Beder Wood, Warfield or Haviland." John Wragg & Sons, Wankee, Iowa, says: "There is no doubt it will be one of our very best varieties for shipping, and I think it the richest berry I have eaten of over a dozen of our best varieties; the plants are fine." R. M. Kellogg, Mich., says: "I am fully persuaded you have a grand berry, it is surely taking a lead in my trial plot; the quality and the color of the berries are superb and the vigor of the plants is simply splendid." C. G. Patton, Nurseryman, Iowa, says: "Its good size, bright color, firmness and quality combined give it high rank among strawberries, and being a strongly staminal variety, with the bearing quality that it has, makes it just what we have been looking for."

Send for catalogue of plants and runner cuttings. ALLEN D. MANWELL, P. O. Box 504, Vinton, Ia. Mention American Gardening when you write.

The Strawberry Beds.

Blank Plants Do Not Produce Blanks.

In every section of the country where the very excessive wetness prevailed on the latter part of last summer and autumn, if a drought should occur now, or at any time before the fruit is gathered, there is liable to be considerable damage done to the strawberry beds, where they are not well mulched. The very frequent rains at the time the little rootlets (which are the main support of the plant), were being formed, kept the earth constantly moist to the very surface and a crust almost constantly formed; so that the whole surface within a foot of the plants was completely filled with a network of these hair-like feeders scarcely under the upper layer of earth. Last fall, I anticipated there was liable to be much damage during the winter, by a long-continued cold spell while the ground would be bare, which would freeze out the moisture from the upper soil, and thus the sap from the roots of the plants, causing them to perish from the same effects as they would if they were thrown out by the action of the frost; so I gave my plants extra protection. Happily, however, for those who did not give their plants good protection, the winter was not a bad one in this respect. But there is almost always a dry spell during the spring or early summer months, against which it is well to provide.

If this probable drought is properly provided for by a good coating of mulch I am going to predict a very large crop, for certainly, all other conditions thus far, have been exceedingly favorable. One of the most favorable conditions, in my way of thinking, is the fact that last season was naturally an off one for most of the best varieties; and, as with all tree and bush fruits, after a year of comparative rest from the exhaustive process of fruit-producing, you may naturally look for a great crop the succeeding year. Blank strawberry plants are not the special products of blank plants as some of those theoretic (?) hobbyists would have you believe, but are the result of a local cause over which the special fruiting ability of any particular plant or plants have no control. These hobbyists will sometime get held of the wrong end of a theory, and hang on to it, while it leads them with wide-open eyes right past Nature's laws, and right over many years of experience, which should have demonstrated to them their error; unless their error is only for the print—a scheme of indirect advertising that will attract the attention of the credulous and draw money into their pockets at the expense of teaching error to the general public.

I have grown the varieties Haverland and Bubach for a matter of eight years and during that time till this last year. I do not believe that I could have set five blank plants of them; for the reason that I always selected to set in the spring the largest, strongest plants I could find—plants that would, in all other years save this last one, have sent up from one to five fruit-stems to a plant—yet, though my beds last year were given the best cultivation and the largest amount of potash I ever gave them—plant-making restricted and every known method practised to induce the formation of fruit-buds—nearly a fourth part were blanks, and all showed very much reduced fruiting powers. On examining

my neighbor's beds, I found even a larger proportion of blanks among these same varieties; and, as far as I can learn, it was the same over a large range of the country. How can all this be laid to the setting of blanks? I have nearly one-half acre set wholly to blanks to fruit this season. What will the harvest be? Well, I will report later.—E. W. WOOSTER, Hancock, Maine.

Second Crop Strawberries.

A gardener living near me has, in favorable seasons, grown a second crop of strawberries from his plants. He gets only a few bushels on an acre in September and October, but he obtains a large price for them—I think about \$1 per quart. I became interested, and, after trying some experiments on small plants, I am satisfied that there is something in it for some gardeners.

The method of growing this second crop of strawberries, which experiments have shown to give good results, is as follows:

Immediately after the first crop is picked—perhaps it is not best to wait until the last blossoms have ripened fruit—mow the plants as close to the ground as possible. It is very important to mow them so close that there are but few little green stems or weeds left. On large beds a mowing machine may be used, while on small ones the work can best be done with a lawn mower.

After the leaves have become dry burn over the bed. In order to do this it may be sometimes necessary to spread straw or other dry material over it. After it is well burned over give a dressing of well-rotted manure, spreading it evenly on the bed one or two inches deep to retain moisture. As soon as mulched the bed should be irrigated and kept wet through July, August and September and the weeds kept down.

The new foliage will soon start and make a very rapid growth. New fruit stems and blossoms will appear, which, if not injured by frost, will ripen fruit. I hardly think the plan will do in localities where hard frosts come before the last of October. Small beds can be protected with glass or plant bed cloth.

All varieties of strawberries are not adapted to producing a second crop. Some of the best results have been obtained with the Enhance and Crawford.

Probably some one will ask: Will not two crops of strawberries in one year exhaust the plants so much that they cannot bear a full crop the second year? I think this will depend upon how well you feed them, how much water and fertilizers you apply to the bed, and in some places it may be more profitable to grow the two crops in one year than in two years. It occurs to me that there are possibilities connected with this plan in greenhouse culture. In localities where the season is too short to ripen a second crop before the time for frosts the plants could be taken up in sods and drawn to the greenhouse and planted under the glass, where the heat and moisture could be given them necessary to fully ripen all the fruit.

Most people who have had experience in growing strawberries have found blossoms on their plants in the fall. Has it ever occurred to them that by giving special culture a second crop of ripe berries could be obtained? I only offer this as a suggestion.

W. H. JENKINS, Delaware Co., N. Y.

Always
on
hand

producing a constant sense of security, ready for all emergency cases of sudden illness, particularly in the country home far away from the physician and the drug store should be kept a bottle of that favorite remedy

Warner's
Safe Cure

As a general system renovator it has no equal, as it acts directly upon the Liver and Kidneys. It is an unfailing remedy for

**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

It is a purely vegetable compound and may be taken into the weakest stomach without any harmful results. Beware of substitutes. There is nothing "just as good" as Warner's Safe Cure.

ASTER SEED Leading kind, best kind for bedding and cut flower at low price. **PANSY PLANTS**, 5 cts. each, large plants, too large to send by mail. English Ivy, 4 ft. high, 15 cts. Hensy'suckle, 3 years old, sweet scented, each 10 cts., by express. Carnations, rooted cuttings, etc.

HENRI BEAULIEU, Woodhaven, N. Y.
Mention American Gardening when you write.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 665, ALBANY, N. Y.
Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 20 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America. A printed list sent on application. Sales made at reasonable prices.

E. CORNING.
Mention American Gardening when you write.



We have the largest and finest Collection of **PALMS, ORCHIDS, FERNS and FOLIAGE PLANTS** for Conservatories, Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting Places and furnishing stock (free).

SIEBRECHT & SON'S,
Rice Hill Nurseries, New Rochelle, N. Y.
Mention American Gardening when you write.



LOTUS OF THE HILL.
Mention American Gardening when you write.

AQUATIC GARDENING

WATER LILIES. Leaf-let free. Egyptian and Japan Lotus, Victoria Regia. We carry a full line of Aquatic and things needed in water gardening. Japan Irises, Bamboos, and hardy ornamental Reeds, Grasses and Perennials. Plans and estimates furnished, and selections of varieties made upon request. See annual calendar.

HENRY A. DREER,
Philadelphia, Pa.

Market Gardeners

SHOULD TRY OUR

W. & D.'s Self-Blanching Celery
W. & D.'s "Bennett's" White Spine Cucumber
W. & D.'s Improved Am. H. Crown Parsnip
W. & D.'s American Beauty Pea
W. & D.'s Deep Scarlet Forcing Radish
W. & D.'s Improved White Bush Squash

Descriptive Catalogue Free, by mail.

WEEBER & DON, Seed Merchants and Growers
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, May 4, 11 A.M.

A choice assortment of Roses, in bundles of ten, in ten varieties. A large quantity of well budded Ghent Asaleas, also Hardy Rhododendrons. Spring Bulbs of all kinds will also be offered.

Friday, May 7, 11 A.M.

Roses, Nursery Stock, Gladioli, Tuberoses, Caladiums, 500 Lillium Giganteum.
At each sale will be offered a choice assortment of house plants, Ferns, Palms, etc., and a full line of Bedding stock.
Goods on view morning of sales. Catalogues free.

Mention American Gardening when you write.

CLEARY & CO., 60 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on

Tuesday, May 4, at 11 A.M., with a complete assortment of Irish Grown Roses, Nursery Stock, Tuberoses, Caladiums, Dahlias, Cannas, Roots, Gladioli, also Holland grown Roses, Rhododendrons, Asaleas, Viburnum, etc. Also flowering and bedding plants.

Tuesday a special sale of Hydrangeas.
Sales every Tuesday and Friday hereafter.
Catalogue on application.

Mention American Gardening when you write.

R. M. GARDNER & CO., 199 Fulton Street, NEW YORK.

Will sell every **TUESDAY** and **FRIDAY** at their rooms at 11 a.m., a general line of Nursery Stock and Spring Bulbs and a large assortment of Bedding plants.

Catalogue on application.

Mention American Gardening when you write.

FLOWERING PLANTS—CHEAP. BY MAIL.

Healthy young stock, average prices from one to two cents each. Send for Price List.

E. FRYER, R. R. Ave. and Hill St., BROOKLYN, N.Y.
Mention American Gardening when you write.

Borberry, California Privet and Japan Quince
For Ornamental

HEDGES.

HARDY ROSES ON OWN ROOTS.

Write for Prices to
FAIR OAKS NURSERY, OAK PARK, ILL.

Mention American Gardening when you write.

ROSES

\$5.00 per doz.; \$50.00 per 100.

Large 3-year old, field-grown plants of Hybrid Perpetual, Hybrid Tea, Moss and Climbing Roses. All the best varieties true to name. Write for catalogue.
W. E. WALLACE, Nurseryman, Hartford, Conn.

Mention American Gardening when you write.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

E. W. Hopwood, of the family of Hopwood & Sons, Nurserymen, England, is now in New York, and seeks an under gardener's position.

John McAllister, formerly for seven years with James Harper Smith, Somerville, N. J., is now with H. P. Loomis, Ringwood, N. J.

Mr. William Thompson, formerly of the N. Y. State Experimental Station, has engaged with W. Smith, of Geneva, N. Y., to assist in the laying out of a new city park for Geneva. The land for the park comprises 27 acres, and has been generously presented by Mr. Smith, the nurseryman, and a well-known resident.

Mr. James Scott, lately gardener to General J. Marshall Brown, Falmouth, Me., has taken charge of the new estate of Chas. D. Sias, Esq., Wincham Depot, Mass.

Meetings.

Monday, May 1.—N. J. Floricultural Society at Orange.

Wednesday, May 5.—Dutchess Co. Society at Poughkeepsie.

Friday, May 7.—Monmouth Co. (N. J.) Society at Oceanic.

Saturday, May 8.—N. Y. Gardeners' Society, at 86 Madison Ave., New York City.

Auction Sales.

Tuesday, May 4.—Hardy Roses, Standard Roses, Lilacs, Hydrangeas. Nursery Stock, Spring Bulbs and Bedding plants, at Elliott's Rooms, New York.

Roses, General Nursery Stock, Bulbs, Rhododendrons, Asaleas, and Bedding plants, at Cleary's Rooms, New York.

Ponies, Flowering Shrubs, Bulbs, and Bedding plants, at Gardners' Rooms, New York.

Friday, May 7.—Sales will also be held as indicated above.

No Imported Help.

In perusing a copy of AMERICAN GARDENING, dated April 10, I find it stated that I have imported my assistance for this establishment, this statement I beg to say is absolutely untrue. I have imported no assistance whatever, nor have I any wish or intention of doing so. I trust you will correct the false impression.—CHAS. MAYNARD, Langwater Gardens, North Easton, Mass.

Newport, R. I.

Regular meetings of the Newport Horticultural Society are held on the second and fourth Wednesday evenings of each month. At the meeting held on April 28, Mr. J. N. May, of Summit, N. J., read an interesting paper on "Flowers and Gardens." At the meeting held on the 14th ult., Mr. Robert Lawrie, gardener for C. Vanderbilt, Esq., exhibited a specimen of a new plant, Streptocarpus Wendlandii, which, while of undoubted value as a novelty on a private place, would be useless as a commercial plant.

Salt Lake City, Utah.

We have established a florists' and gardeners' society here, with about 35 members (The Salt Lake City Florists' and Gardeners' Society). John Reading, president; Stephen Wanford, vice-president; G. Barrows, treasurer; B. Morris, recording-secretary; Hugh Connor, corresponding secretary; P. T. Huddart, sergeant-at-arms; S. Wanford, trustee, 3 years; P. T. Huddart, trustee, 2 years; R. Evans, trustee, 1 year. We have had four very successful meetings, and already it shows that this is a step in the right direction.

At the last meeting, Thursday night, a Chrysanthemum show to be held this fall was discussed at some length, and a special meeting has been called for Thursday night next, April 8, at the Huddart Floral Co.'s place, with the object of finally deciding about the show, and if it is found advisable to hold one, to take such steps as to make a success of the same.—HUGH CONNOR.

The 'Private Gardener's Position.

In reply to C. Barson (page 265) I would say "that a Rose by any other name would smell as sweet." Although Mr. O'Mara's paper on "The Gardener's Mission in Horticulture" might not have been read with such interest if it had been signed by any other name, still the paper itself would have been equally valuable.

But our object is not to hunt the end of an article or paper read before a society to find the name of its author, so as to see if it be worth reading—it is to set gardening on a basis that will compel those who aspire to the position of gardener to thoroughly learn the profession and honorably get to that coveted position. We must not run after the star and forget the sun. Unfortunately there are too many in the profession of gardening that carry only a wool mark, and when that is taken off in the clipping they have to try and get another, which by hook or by crook they do manage to obtain, and so keep the worthy gardener out in the cold.

Come now, friend Barson, be a bit charitable, and let the young men who are working hard for their living and experience be paid for it when they have qualified to use the name of Gardener, and be a treasure for their employer; and if you are desirous of knowing who "Timber Topper" is, you will find him by calling here and asking for RICHARD LEWIS, Cruger's Island, Barrytown, N. Y.

Lenox, Mass.

As reported in these columns at the time Mr. J. N. May, of Summit, N. J., recently addressed the members of the Horticultural Society having as his title, "Horticulture." In the course of his remarks, the speaker alluded to the beauty of the natural surroundings of the place, and remarked that "in many sections the most beautiful features of the landscape have been utterly destroyed for the want of careful judgment in cutting away the beautiful trees, etc., which nature had already planted there. This has often been done from mere carelessness; in other cases from want of knowledge of what constitutes the true features of a beautiful landscape. With many the idea seems to have been that all natural undulations must be leveled down so as to have a broad lawn extending as far as practicable, with a few poor little infant trees dotted around at regular distances, with some planted in straight rows, and the whole clipped or trimmed into formal shape, looking more like a lot of toys than anything which nature intended to grow into ornaments." He had been shown several such places evidently with a good deal of pride by those who thought they had done a grand piece of picturesque landscaping, and as often had he sighed with considerable relief after having gotten away from it and beheld, possibly in close proximity, a grand piece of natural scenery.

In planting trees the future must have a large share of consideration, as it is the grand effect will be best seen. No better illustration of this can be found than in some of the older places in Europe, one in particular, Dropmore in England, was the scene of many pleasant days of his earliest experience in gardening, here was gathered together probably the grandest collection of evergreen trees of any place in Europe. All were planted with due consideration for their future development, not massed together, but judiciously blended with the natural trees and shrubbery.

The transition from this planted garden to the world-famed Burnham Beeches is but a very short distance, but one scarcely realizes it till he begins to estimate the number of simply wonderful Beech trees surrounding him on all sides, many of them with histories of six or seven hundred years.

Where nature's own trees are already growing on the ground, great care should be exercised in selecting the position for the dwelling house, and for stable or other necessary outbuildings; the carriage drives and all other roads should be so located that they have the easiest grades and fewest short turns possible; always bearing in mind

[Continued on page 324.]

SIEBRECHT & SON,

ROSE HILL NURSERIES, NEW ROCHELLE, N. Y.]

NEW CANNAS for 1897.

Our Colored Plate gives but a faint idea of the full beauty of the magnificent *trio* shown, it being very hard to do the subject full justice.

MRS. FAIRMAN ROGERS, an American Hybrid, and, without a doubt, the grandest Canna ever originated and placed on the market. It is a seedling of Mme. Crozy, but in every way superior to that famous variety. The individual petals are much larger, more rounded, of better texture, and the color is a brilliant scarlet, bordered with a pronounced broad band of gold. It is the finest flowering variety ever introduced, carrying immense spikes of dense bloom, which are showy beyond description, and as it stands exposure admirably in all weathers, it thus becomes the finest Canna procurable for bedding purposes. Mrs. Fairman Rogers is truly the *Queen of Cannas*. It has received medals and certificates wherever exhibited. We hold nearly the entire stock. (See colored plate.) Price, \$1.00 each; \$10.00 per doz.

ORCHID-FLOWERING VARIETIES.

ITALIA. The individual petals are clear scarlet, deeply bordered with golden yellow, the illustrated plate herewith showing the distribution of the colors. (See colored plate.) Price 75 cents each.

AUSTRIA. Is of the clearest canary-yellow, with a few red specks in the throat, so faint that it is safe to call it a perfectly yellow Canna. (See colored plate.) Price 50 cents each.

Both of the above constitute a distinct break from existing forms, and though the improvement in Cannas has been most marked in recent years, none of the newer varieties are to be classed with the above for size of flowers and effectiveness of color, hence the title, "orchid-flowering." Single blooms have measured $5\frac{1}{4}$ inches across, and the average should exceed $4\frac{1}{4}$ inches. The shading is the most gorgeous and exquisite imaginable. They do well in very poor soil, and stands a gale better than most sorts. As a cut flower for house use they have few equals. Each spike will average from seven to nine blooms.

THE ROSE HILL "TRIO."

Read the greatest offer ever made to flower lovers in the history of floriculture:

MRS. FAIRMAN ROGERS,
The Queen of Cannas.

ITALIA and AUSTRIA,
The giant orchid-flowering varieties.

The set of three (3) strong plants, which will flower early in the season, for only \$2.00.

Orders Booked in Strict Rotation.

CANNAS—Of Grand Standing and Merit.

Our Selection of the finest Varieties:

- I. **COLUMBIA.** A gem among Cannas; an American seedling. It has an entirely distinct habit of growth, and the character of the flower is equally distinct; color rich cardinal red. It is a very strong grower, but very short and stocky, with abundant foliage. The most peculiar characteristic of the plant is its branching habit, sometimes having three to four trusses of bloom on the same spike, all open at the same time, producing a mass of bloom of an even height. The petals have remarkable substance, flowers remaining good for weeks at a time—wind and rain having little effect upon them, which is a long step forward in this direction. What is wanted in Cannas is flowers that have the ability to stand wind and rain, and that are not easily marred. 25 cts. each; \$2.50 per doz.
- II. **QUEEN CHARLOTTE.** This excellent variety has proved itself to be worthy of the reputation it held when sent out. Unquestionably a grand addition to the list of Cannas. The centre of the flower is bright scarlet, bordered with a deep band of pure gold, producing a distinct, novel, and beautiful effect. A dwarf grower. 25 cts. each; \$2.50 per doz.
- III. **EGANDALE.** Foliage dark maroon and green, very similar in coloring to the old *Robusta Perfecta*, although more erect in habit; very compact, throwing up numerous heads of bloom which rank with the best in quality, both in size of the heads and quality of the flower; color bright cherry. It is undoubtedly the finest blooming dark-leaved sort at the present time for outdoor bedding. Bronze Medal awarded for this at World's Fair, Chicago, 1893. 25 cts. each; \$2.50 per doz.
- IV. **CHARLES HENDERSON.** A splendid, compact, dwarf grower, throwing up erect, compact heads of bloom of immense size. The individual flowers are among the very largest; color, dark crimson, centre of the flower marked with golden pencillings. This is one of the very handsomest varieties. 25 cts. each; \$2.50 per doz.
- V. **PAPA.** M. Crozy claims this variety as his finest variety to date, and it certainly is a grand addition to the already gorgeous array of red Cannas. It grows about three feet high, and bears immense spikes of flowers, the florets being of the grandest size and finest form. In color, it is a brilliant orange-scarlet. A good many who have tested this variety extensively claim that it is one of the very finest, if not the finest red variety, but its claim to supremacy can only be determined by future tests. The new varieties that have been introduced lately are raising the standard very high. 35 cts. each; \$3.50 per doz.

VI. **ELDORADO.** This variety is all that was claimed for it last year. It is by far the best yellow Canna that has yet been introduced; none of the others come near it. The flower is not a pure yellow, but so nearly so as to show no trace of any other color at a short distance. Upon close examination it is finely speckled with the lightest red, but this only seems to intensify the yellow a few feet away. The flowers do not fade as some yellows do. When past perfection they drop, making room for the others, leaving the plant always bright and clean. It throws up an immense spike of bloom, very compact, and blooms very freely. Petals are very broad and finely formed. Habit all that can be desired. At the Canna Show in New York this variety received a certificate of merit. 25 cts. each; \$2.50 per doz.

VII. **ALPHONSE BOUVIER.** This variety is beyond all question the finest of the tall-growing crimson sorts. It is the tallest of all the varieties. Under good cultivation it grows from seven to eight feet high. The heads of bloom are of the largest size, and are very effective. Where a tall grower is desired, nothing surpasses this variety. Bronze Medal awarded for this at World's Fair, Chicago, 1893. 25 cts. each; \$2.50 per doz.

VIII. **MILLERIE.** A new and truly distinct variety, and the best yellow bedding Canna to date. In the way of *Eldorado*, but much superior. 30 cts. each; \$3.00 per doz.

IX. **MONUMENT DU CARNOT.** Flower spikes rich crimson; of great size and substance. In the way of *A. Bouvier*, but with bronze foliage. 30 cts. each; \$3.00 per doz.

The above collection comprises the cream of all the Cannas. We offer one each of these nine grand varieties, together with one each of the three greatest novelties for 1897: Mrs. FAIRMAN ROGERS, and the giant orchid-flowering varieties ITALIA and AUSTRIA; the entire set of twelve (12) Cannas, all strong plants, of flowering size, which would cost \$4.70 if bought separately, for \$4.00.

JOHN WHITE—This is a distinct novelty in the way of Cannas, growing about three feet in height, with reddish stems, light green foliage, beautifully striped with white, yellow, and rose, edged with red, the combination of which produces a grand effect, and on account of which it will be valuable for sub-tropical borders and beds, and for other purposes, where fine foliage plants are in demand. The flowers are small and of a bright red color, succeeded by red fruit, which enhances its appearance. Ready now. Price, \$5.00 per doz.; \$35.00 per 100.

SIEBRECHT & SON, New Rochelle, N. Y.

NEW YORK OFFICE,
409 FIFTH AVE.

that it is so much easier to leave a good tree growing than to replace it by another after its removal. Broad stretches of lawn judiciously laid out are absolutely necessary, but the natural undulations of the land should be as little interfered with as possible in making the lawns. The margins of the clumps of natural timber can often be utilized to introduce some grand features by planting flowering shrubs, of which there is an endless variety.

Water in most forms is a desideratum in any landscape. The garden proper should be selected with due regard to a suitable position and where it is not in full view if possible, from the dwelling house; it should be of adequate size for the purpose designed. Here the gardener will have to use his best skill every day in the year, for the simple reason that every employer to-day expects to have his own product from his garden or farm, fully equal to the best which can be found on his neighbors, and generally expects to have it better. No gentleman's place is complete to-day without a well appointed range of glass, with regard to which Mr. May said, "In the general planning and constructing of a range of glass suitable for the requirements of any given establishment, the gardeners as a body are not equal to the task. I think this branch of our business should be more fully studied, not alone as location, but in the actual planning of the same in detail. What can be more humiliating to a gardener than when he is asked to submit a proposition for building the greenhouse which may be required, to have to acknowledge that for information on this particular branch, his employer must go to the horticultural builder for plans, etc. How much more creditable if he could himself prepare sketch and specifications, showing what would be most suitable, and then, if necessary, when the builders had prepared estimates on such specifications, to be able to oversee and correct all errors. What an endless amount of trouble it would save the gardener, and often a great amount of annoyance to the employer. No builders can possibly be as well able to say what are the sizes and requirements of any gentleman's family, as can the gardener who has continually to study the wants and wishes.

And in connection herewith, I wish to give a piece of wholesome advice, and that is, never advise your employer to put up a very large amount of greenhouses at any one time, for if you do, you will be very apt to be told in a year or two that they find the same so much more expensive to maintain and the product so much more than is needed for home use, that you must sell the surplus produce to pay the running expenses. A great many places are being so run to-day, and who is to blame? Simply the gardener who advocates a large block of greenhouses, because he thought it would sound big to have it said "so and so has a fine range of houses there, they intend going in for Black Orchids, Vermilion grapes, Indigo peaches, Blue Roses, Green Carnations, Yellow Violets, etc., on a grand scale." The first laudation may sound very flattering to the ears of the ambitious, but the discontent in the future, quickly dispels the glittering glory, leaving one face to face with discomfort.

In conclusion Mr. May put in an eloquent plea for hardy flowers and natural gardens. In nearly every place of any considerable size, there are pieces of out of the way places—where a wild garden can be arranged; the word wild may not be poetical, but it is pertinent.

Accept my thanks for the ten Chrysanthemums offered as a premium, which I received in good condition.—JNO. M. D., Washington, D. C.

WANTED.

Taking a representative interest in them, we seek information concerning the work of

Horticultural Societies.

and will much appreciate prompt favors from readers, who, being connected therewith, can furnish such information as will enable us to keep the public thoroughly posted in the sayings and doings of the above societies.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

GROWING BOUVARDIAS.

Though these beautiful plants need some care as to summer handling, they are not difficult to obtain from root cuttings. Pieces of ordinary knitting-needle size are cut into two-inch lengths, and sown on a pan of light, sandy compost. These are covered with half an inch of the same compost, and kept in a temperature of 65 to 75 degrees. When the pushing eyes are about two inches high, the new-formed plants may be potted off separately. Through the heat of summer, all Bouvardias are better grown on a spent hotbed, or in the open, than in pots. In spring, if the old plants have been cut back after bloom, and placed in a good, growing heat, the young shoots will make good soft-wood cuttings, to be rooted in sandy compost, without too much air. Those who succeed fairly with miscellaneous plants are missing a part of their birthright if they have not grown Bouvardias.

SELECTION OF WINDOW ROSES.

Not all who essay to grow roses in the window will succeed. But the number who fail will be greatly lessened, if conditions and varieties are well studied in advance. She who can command only hot rooms, with but a little sunshine, must put roses at once out of mind, if she would not court failure. She who has cool and sunny windows, and who has leisure and pluck for the battle with insects, and strength of mind sufficient to learn the secrets of fresh air may fairly count on good return for her pains, in beauty and fragrance, provided good varieties are chosen. Clothilde Soupert is thankful for moderate favors; roses of the Hermosa type are good, though rather tall, and not of the first order of beauty; Snowflake and Marie Van Houtte are excellent for bloom, and Marion Dinglee and Princess Bonnie are said to be excellent red sorts. The fancy novelties, which are alleged to outdo everything heretofore known, will be more cheaply tried by another than by the average window gardener.

GETTING EARLY CHICKS.

For that portion of the home market included within the family, early chicks are a delightful luxury. Never during the year do any others taste so good as these first ones. If wanted to sell for high prices, however, they are not only a luxury, but a necessity. The pullets for early fall eggs must also come early. We must, it seems, get early chicks. But how? For one thing, drop the meat from the bill of fare of those hens needed for sitters, and allow them more corn. When the hens become broody, if it be still early, do not be so greedy for the early chicks as to forget that a large nestful is an invitation to failure to come into the camp. Test the incubated eggs, to make sure that the hens are not wasting time; and if eggs are broken in the nests lose no time in making them clean again by the use of water at blood heat.

THE VILLAGE HENNER.

Failure to follow some of the plainest conditions of success is the key to most of the discouragement and disgust of many a small poultry raiser. And multiplication of the same errors causes the same, or a worse state of mind and pocket in the larger handler of the work. In close quarters, it is insisted that work must take the place of room and range. This is the principle, though perhaps never before formally laid down. Green food, for instance, must be supplied, and that with some approach to the abundance and regularity with which it is available under more nearly natural conditions. Fresh, uncontaminated soil must be had for runs, either by upturning or by substitution. Failure to apprehend this need accounts for later failures of those at first successful. As stock increases, quarters are almost invariably crowded. Hardly a raiser but sins more or less in this particular. The simple fact is: Poultry culture on small lots (and else-

Heles in Your Health.

What does that mean? Suppose you are taking in money all day, and drop it into a pocket with holes; you will find yourself a loser instead of a gainer by the day's business. Same with your health. You eat and drink and sleep, yet lose instead of gain strength. There's a hole in your health. Some blood disease, probably, sapping your vitality. You can't begin, too soon, to take the great blood purifier,

Ayer's Sarsaparilla.

where) is declared a failure because, and often only because there was not sufficient will power to overcome the ever-present hindrances to doing exactly as told. Nearly every poultry raiser can confirm this, since, strange to say, even the successful have usually gone some distance along this wrong road. But they went back to the forks.

MYRA V. NORVA.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

A practical working gardener, good Rose grower, wants situation on private place, good references, strictly temperate. Address Gardener, 21 East Avenue, Rochester, N. Y.

WANTED—private situation, for my thoroughly experienced gardener, especially good rose grower, strictly temperate, moderate wages, married. Address G. H. Perkins, East Avenue, Rochester, N. Y.

SITUATION wanted by a thorough practical English gardener, 20 years' experience, 12 years in America, around New York, 5 1/2 years on one place in Boston, in all branches. Roses, and chrysanthemums a specialty, moderate wages, strictly temperate, married, one baby girl. Address Palmer, 28 Gardiner Park, Rochester, N. Y.

HEAD GARDENERS.—We have constantly on hand Gardeners of all kinds, single and married—men competent to take charge of grapevines, greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 25 & 27 Cortlandt St., New York.

INCUBATORS \$25, \$15, \$10 each. Brooders, 1 style, \$5. Fowls, eggs, Ill. dir., 30, J. A. Chilton, Fairmont, Md. Mention American Gardening when you write.

HATCH Chickens BY SYSTEM

EXCELSIOR Incubator
 Simple, Perfect, Safe, Reliable.
 Single, Thermometer in constant operation. No work, perfect first-class hatching machine.
 Circulars free. Send 10c. for Illus. Catalogue.
 GEO. H. STANT,
 114 to 122 E. 6th St., Chicago, Ill.

Mention American Gardening when you write.

CALIFORNIA LANDS ARE HERE

and only \$25 to \$50 per acre AT \$25000000. Grow the orange, lemons, olives, grapes, apples, hay, grain, etc. Best summer and winter climate in U. S. Send stamp for illus. pamphlet to Santa Clara Land & Town Co. at Broomfield, Los Angeles or San Diego, Cal.

Mention American Gardening when you write.

BLINDNESS PREVENTED

The Absorption Treatment a Success. Hundreds successfully treated for all diseases of the eyes or life without knife or risk at their homes and at our Sanitarium, the largest and most successful institution in America. "Don't wait to be blind." Pamphlet Free. THE BEMIS EYE SANITARIUM, Glen Falls, N. Y. Mention American Gardening when you write.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

•• We cannot undertake to reply by mail.

BOOKS.

(To R.E.I.)—Chrysanthemums and their culture, Molyneux, price 50c.; or Morton's Chrysanthemum Culture for America, \$1 cloth, 60c., paper.

ENGLISH POTATOES.

(To Several Correspondents.)—We are not able to supply seed of Hyatt's Ashleaf potato, nor of anything else for that matter, as we are not in the seed or plant business.

FERTILIZERS FOR MELONS.

(Please state best method of growing melons with the following (a) rotted hen manure, (b) wood ashes, (c) nitrate of potash. The land is sandy loam (gravelly), and has had a coat of stable manure. Have started plants in 4-inch pots in hotbed. Last year I applied in each hill $\frac{1}{2}$ bushel of stable manure, one peck hen manure and a quart of wood ashes, also scattered about each hill a tablespoonful of nitrate of potash. The melon plants made plenty of vine, but the fruit was very small and of poor flavor (except Emerald Gem and Grand Rapids), what was the cause?—H. C. NEFF.)

—The materials added to each hill contained approximately: Nitrogen, $\frac{1}{4}$ of a pound; potash, $\frac{1}{2}$ of a pound; phosphoric acid, $\frac{1}{4}$ of a pound. A crop of 300 pounds of "melons" (muskmelons, we presume), would require for its growth but little more than this amount of plant food. The manure applied contained so much nitrogen that the production of melons was retarded. Hen manure and wood ashes, one quart of each, and no nitrate of potash, to each hill, on soil that has had a good coating of stable manure, would seem to be a combination that should give good results. A change in the direction of more ashes and less hen manure is preferable to the reverse. Sulphate of potash, one tablespoonful to the hill, may be used to replace the wood ashes in case the supply of the latter runs short. As a general rule hen manure, stable manure, etc., when applied in large amounts, tend to give a vigorous growth of vine and but little fruit. Wood ashes supply the potash and phosphoric acid which are needed by the plants when fruiting time comes.

(Will you state how much potash, nitrogen and phosphoric acid that chamber lye contains, also state strength it should be used for forwarding melon plants, and to what stage of growth to apply it.—H. G. N.)

—An average sample of human urine (if that is what is meant by "chamber lye") contains in each hundred pounds: Nitrogen, 0.6 pounds; potash, 0.2 pounds; phosphoric acid, 0.2 pounds, in addition to numerous other matters, particularly chlorine, which is present in large amounts. The nitrogen exists in fresh urine, as urea, which readily undergoes fermentation and is changed to ammonium carbonate. I should not care to advise the use of fresh urine for forcing melons. It would seem that an overproduction of this commodity could be better utilized by pouring it over a compost heap plentifully sprinkled with gypsum.

LATE IN SPRAYING.

(On account of the long continued rains I was unable to spray my trees at the proper time; that is, before the buds begin to swell. I now have trees (old and young) in all stages; from hardly swelled buds to well-opened leaves and blooms. When had I better spray and with what? If with Bordeaux, how strong, and should I also use Paris green?—CHAS. A. PEPPE.)

—The first spraying you can now make will be within two weeks after the blossoms drop, and before the young fruits become pendulous (See directions in "The Fruit Garden" in this issue), using Bordeaux mixture and an insecticide, either London purple, or Paris green. For further details see AMERICAN GARDENING for April 17 last.

PEACH YELLOW.

(To Amateur.)—The nature of the disease known as peach yellows is not yet understood, but the balance of evidence goes to prove that it does most certainly spread from tree to tree, and, therefore, your seedlings are likely to become infected. If you have any public spirit about you, letting alone your own interests, grub up the diseased tree and burn it, root and branch.

FORCING LETTUCE AND RADISH.

(Would the following described answer a good purpose in growing lettuce and radishes in the winter season? Make an excavation 50 feet long 20 feet wide, 4 feet deep. Two feet from the bottom lay a plank floor on joists and

(Continued on next page.)

HARDY CHRYSANTHEMUMS

These Chrysanthemums, though in no way new, have not received in past years the attention they deserve, especially for planting in private gardens where many of the large flowered varieties do not mature their flowers before the cold weather sets in. We have made extensive trials, securing the best that could be found in Europe, Japan and this country, and offer a set of thirty-six selected varieties.

15c. each; \$1.50 per dozen. The set of three dozen for \$3.50.

PITCHER & MANDA, JOHN N. MAY, Short Hills, N. J.

Mention American Gardening when you write.

"JADOO" FIBRE.

A NEW POTTING MATERIAL.

A PERFECT SUBSTITUTE FOR EARTH.

Advantages of Growing Plants and Seeds in "Jadoo" Fibre:

Seeds germinate much more quickly in Jadoo than in earth.
Greater perfection easily attained.
Suits all kinds of plants.
Is much lighter than earth.
Less frequent watering is required.

The flowers are larger, of richer color, and last longer.
No soil to mix; no manures required.
Immense saving of labor to plant growers.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

Simply Invaluable in Pot Culture.

For Prices and . . . **THE AMERICAN JADOO CO.**

811-813-815 Fairmount Avenue, PHILADELPHIA, PENNA.

Mention American Gardening when you write.

If you have a piece of ground as large as a parlor floor, it will pay you to have *The Rural New Yorker*. Send for a free sample copy to New York, and see. We will send it and AMERICAN GARDENING both one year for \$1.80.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. See original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1897, New York City.

HALL'S FAVORITE. THE COMING NEW *des competition; the best introduced for years.* Forty other kinds pedigree plants. Raspberries, Blackberries, Asparagus roots, etc. Headquarters for Second Crop Seed Potatoes, double crop and earlier than other seed.

Descriptive Catalogue Free.

J. W. HALL, - - Marlon Station, Md.

Mention American Gardening when you write

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write

THE MANWARRING TRANSPLANTER

successfully transplants from three to four acres of Tobacco, Cabbage, Tomatoes, Sweet Potatoes, Strawberries, and all plants of like nature, watering them in, and doing it much better than it can be done by hand. Prices to suit the times. Send for circular.

A. D. PECK, Jordan, N. Y.

Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the
Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

FLOWER QUERIES.

A book written in Questions and Answers, discussing 500 topics on flower culture, in ten chapters as follows: Chap. I.—Soil and general cultivation. Chap. II.—Bulbous Plants. Chap. III.—Lilies, Culture and Management. Chap. IV.—Roses. Chap. V.—Vines or Climbers. Chap. VI.—Shrubs. Chap. VII.—Ferns and Palms. Chap. VIII.—Insects and Diseases. Chap. IX.—Miscellaneous Queries. Chap. X.—Floral Hints. Every one who loves and cultivates flowers needs it. PRICE 25 CENTS.

THE COURIER, Chatham, N. Y.

Mention American Gardening when you write.

PROFITABLE

FRUIT CULTURE

finds an important adjunct and a valuable assistant in

GOULDS' "POMONA"

A new Spray Pump which embodies new and distinct features of great value. The

Plunger, Plunger Connections, Gland, Valves,

Valve Seats and Strainer are all made from best brass and are

practically indestructible. Every

stroke of the handle works the agitator as will be seen in cut. Long

handle makes it work easy. Will supply 1 or 3 loads of

hose. Valuable book on "How & When to Spray," FREE.

THE GOULDS MFG. CO.

11 Ovid St., SENECA FALLS, N. Y.

Mention American Gardening when you write.



cover with two feet of earth, then place a frame and cover with glass in greenhouse manner. In the cavity underneath, and at one end place a furnace with flue extending two-thirds the length of the building, and at the other end place a smokestack. The space above the glass to be heated by two oil lamps?—CHAS. B. RUMBLE.)

—Such an arrangement may give you an early spring crop of lettuce, but hardly a mid-winter one, and it is very questionable whether you could do much with radish in that way, even if they grew there would be danger of the leaves damping off in the cold winter days. To successfully force lettuce and radish during the winter months, light, and a sweet atmosphere are both absolutely essential elements in addition to the proper temperature (48 to 55 degrees). When it is simply intended to winter over plants which are to be brought out mainly by natural heat in the spring, the plants are not kept so active during the cold dark winter days, and a lower temperature with less light will then suffice.

TOMATO PLANTS DYING OFF.

(What causes, and how can I prevent tomato plants from being killed by fungus? Have them started in bench of greenhouse, but they do not get second leaves before they are cut down. Used same earth last year, and never had one plant killed, have noticed when digging in bench a white substance looking like spider webs only pure white, is that what does it?—W. C. L.)

—If our correspondent had sent specimens we could perhaps have given a definite answer—as it is, however, we are not able to do more than say possibly there is a fungus in the soil that does the damage. The "white substance" may be the mycelium of some fungus, but whether or not it does the injury spoken of we do not know. Young tomato plants are liable to "go off" in the seed bed.

NAMES OF PLANTS.

(To H. Conn.)—The shrubby plant is *Cuphea hyssopifolia*, the other, *Centradenia grandifolia*.

(To Mrs. A. E. C.)—After much enquiry we are only able to say that the small seeds are of some curcubitaceous plant; the larger specimen cannot be determined. Send plants later on.

ROSES AND CARNATIONS DISEASED.

(To Enquirer)—It is impossible to satisfactorily diagnose the diseases from your remarks. Send specimens of each, and we will do what we can.

NITRATE OF SODA.

(Is nitrate of soda any use in hurrying along young plants of tomatoes, cabbage and cauliflower? If so, what strength should be applied? Also, is it good for any other vegetable as sown in garden?—W. C. L.)

—Nitrate of soda is a forcing manure, and is, therefore, valuable on crops grown for their leafy parts—cabbages, onions, celery, etc., to which it can be applied at the rate of 200 to 300 pounds per acre. Tomatoes do not demand nitrogen as a rule; they generally can make all the growth necessary—usually too much, indeed. In any case, tomatoes can only take fertilizers in the very early stage. Many cultivators do not agree with giving any.

(Where can I secure nitrate of soda in quantities, and what ought it to be worth by the hundredweight? I want to use it on my coming cabbage crop. Could you advise me a better fertilizer for cabbage than nitrate of soda, and in what quantities should nitrate of soda be applied?—C. B. RUMBLE.)

—Almost any of the firms who offer fertilizers in our advertising columns would be glad to quote you a price on nitrate of soda in bulk. Nitrate of soda is an excellent fertilizer for cabbage. The most economical method of applying is to wait until the plants have attained a good size, and then dust the fertilizer onto the soil on either side of the row with the manure, using not quite enough to cover the surface, then cultivate the soil close up to the plants. If this operation could be done immediately before rain so much the better. Three to four hundred pounds per acre is the quantity usually applied.

CLEARING GROUND OF HORSE RADISH.

(I have a piece of ground that has been devoted to horse radish culture. I wish to rid the ground of horse radish and devote it to celery. Can you tell me how I may successfully destroy all the horse radish and leave my ground clear?—C. B. R.)

—Horse radish can only be cleaned from the ground by thorough and persistent cultivation and hand picking. Plow up deeply, and have enough heavy follow the plow to pick up all pieces exposed before the next furrow is turned. Repeat the operation, then follow with harrow, still maintaining the hand picking.

SELECT ORNAMENTAL VINES.

(What two or three kinds of ornamental vines of rapid growth would you suggest for a summer shade? I want them to run on poles, dead tree limbs, etc. Can I do much with Moon flower seed last of this month in that line?—AMATEUR.)

—For a rapid growing shade vine the Japanese Morning Glory is perhaps the best; others suggest themselves—viz., variegated hops, several of the gourds, *Cobaea scandens*, *Aristolochia siphon*, etc.

Lawn Sprinklers.

The "Twin Comet" and "Little Giant" lawn sprinklers, manufactured and advertised by the E. Stebbins Manfg. Co., of Springfield, Mass., have merits particularly their own, which impress those who have watched them at work, as being as near to the ideal as it is possible to bring machines of this description. The globe, or body, of the Twin Comet Lawn Sprinkler is made in two parts, and by means of the swiftly revolving arms and intermediate gears, the upper half is made to revolve slowly, carrying the hose nozzle, from which a full stream of water is thrown far out beyond the sprinkle of the arms, thereby covering a much larger space than any other stationary sprinkler. With an ordinary pressure of water, 20 pounds or upwards, it will thoroughly sprinkle an area 80 feet in diameter. The nozzle and the tips on end of



FIG. 88.—NEW EMULSION SPRAYER.

arms are adjustable and can be set so as to sprinkle any desired space, or the nozzle can be set perpendicular to send the water upwards in a straight stream like a fountain. A perforated disc, or rosette, comes with each machine, and can be attached in place of the nozzle tip, discharging instead of a solid straight stream a very fine mist at the center of the sprinkle of the revolving arms.

The "Little Giant" traveling lawn sprinkler is an ingenious, efficient and wonderful machine. Under an ordinary water pressure of 80 pounds or upwards, it will drag 100 feet of garden hose and propel itself slowly and continuously in either a straight line or a circle of any desired diameter, while its speed may be varied at will from 15 to 500 feet per hour. By means of a figured dial plate it may be set to travel any desired distance. A moment suffices to change its speed from the highest to the lowest, and it may be gauged to distribute a spray effectively over a swath varying in width from 5 to 50 feet, while by simply throwing it out of gear it is instantly converted into a stationary sprinkler of exceptional efficiency. The propelling force is supplied by back pressure of water in the arms causing them to revolve with force and rapidity, while at the same time they throw out a fine spray or mist.

Spraying Simplified.

One of the most ingenious contrivances in the line of spraying apparatus that has been brought to our notice for a long time is the new Emulsion Sprayer made by the Deming Co., Salem, Ohio, an illustration of which accompanies this (fig. 88).

Preparing and applying Kerosene emulsion according to the oil method is a very laborious operation, while with this machine the old and water are thoroughly mixed automatically in any desired proportions while pumping. The apparatus can be used to spray in the usual way by detaching the kerosene tank. All working parts are of brass, the oil tank being made of copper.

Kerosene is an effective destroyer of plant lice, caterpillars and their larva, scale insects on leaves and bark, mites in poultry houses, lice and ticks on domestic animals, etc. An indicator with gauge plate shows the proportions of oil and water for various purposes.

\$100 REWARD \$100

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO., Toledo, O

Sold by Druggists, 75c.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the ad., and each initial, or a number, counts as one word. No cuts or display type allowed.

DAHLIAS. 500 varieties. H. F. Burt, Taunton, Mass.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York

THE "RIDGEWAY."—A new strawberry of great merit. For price of plants and free catalogue address M. H. Ridgeway, Wabash City, Ind.

EARLY FORTUNE POTATO—Unexcelled for earliness and productiveness. Bushel, \$1.20; Barrel, \$3.75. R. C. Breck, Bridgewater, Mass.

THE "IRON AGE" Garden Tools are light, strong and work "just right." High steel wheels, tubular frame, malleable castings. Write for catalogue. Bateman Mfg. Co., Box 206, Glenloch, N. J.

EGYPTIAN or Top Onion sets cheap; one dollar per bushel in any quantity; purchaser to pay freight. W. W. Thompson & Sons, Station D, Milwaukee, Wis.

VIOLETS.—A few thousand left, young well-rooted plants Lady Campbell, the sweetest double violet. Flowers seven months in the year, succeeds everywhere. \$1.00 per 100 postpaid. C. E. Price, Smithtown Branch, N. Y.

PROGRESS and Palmer Black Raspberries, Cuthbert red, Snyder Blackberry plants; immense stock, low cash prices, or will exchange for strawberry plants; cold frame wintered cabbages and choice seed potatoes. Ct. Valley Orchard Co., Berlin, Ct.

CALIFORNIA PRIVET makes the finest ornamental hedge and are perfectly hardy. Strong plants one to three dollars per hundred. Atlantic Coast Nursery, James H. Cornell, Proprietor, 606 4th Ave., Asbury Park, N. J. Reference 1st National Bank of Asbury Park.

FOR SALE, a market garden and vegetable forcing business: five acres, five hot-houses, containing 7000 feet of glass; hotbed sash, dwelling, barn, delivery wagon, two horses, tools, stock in house and outdoors; everything complete. Good location, large demand. Price \$3000. A genuine bargain, \$1500 down, balance on time to suit at 6 per cent interest. Reason given. Address Harry W. Lee, Alexandria, Ind.

WHOLESALE MARKET REPORT

New York.

The latter part of the week, and up to Monday, April 26, the market in vegetables and fruit was good, on the last-mentioned day especially; on Wednesday, the effects of the holiday were noticeable, and business generally was very slow, with an abundance of stock on hand.

Hothouse strawberries are now feeling the effect of a higher grade of Southern berries; some of these are now equal to the former in size and flavor. Sales are being made as low as 50c. per quart for No. 1, unless of a very superior flavor.

Cucumbers, No. 1, 50c. to 75c. per dozen. Tomatoes, 30c. per pound if very extra. Mushrooms, 20c. to 35c. per pound. Radishes, \$1.50 to \$2.50 per 100 bunches. Cauliflowers, \$2.25 to \$2.50 per dozen each.

Hothouse lettuce, 20c. to 50c. per dozen extra quality; other, or inferior grades, 1.50 to \$2 per barrel. Frame lettuce, \$1.50 to \$2.50 per barrel.

Asparagus, Monmouth County, if nice, 3 per dozen; other marks, \$1.50 to \$3 per dozen.

Rhubarb, \$3 to \$5 per 100 bundles.

Hothouse grapes (American) new crop, 2.50 per pound for good quality; inferior, 0 figures possible. The grapes on the market this week are a great improvement on those seen last week.

Apples.

len. Davis, cold storage, fancy.....\$2 50—\$3 00
Northern Spy, cold storage, fancy... 3 00—3 50
usual holdings, fancy..... 2 25—2 75
led fruit, cold storage, fair to prime 1 75—2 25
Baldwin, w'n N. Y., choice, per bbl. 2 25—2 50
-west'n N. Y., average, prime..... 1 75—2 00
-up-river, per barrel..... 1 75—2 25
Lambert, Roxbury, State, per barrel. 2 00—2 50
-Golden, State, per barrel..... 1 75—2 25
-up-river, per barrel..... 1 50—2 00

Strawberries.

North Carolina, choice, per quart... 14—15
Charleston, prime to fancy..... 20—22

Asparagus, Ch'n, Colossal, per doz. bchs. 4 50—5 00
Ch'n, choice, per doz. bchs. 3 25—3 75
Norfolk, fair to choice, doz..... 2 50—3 50
N. C., fair to prime, doz..... 2 50—3 25
sets, Florida, new, per bush. crate 75—100
Fla. bunches, per bbl. crate..... 1 00—2 00
Charleston, per 100 bunches..... 5 00—8 00
bunches, Savannah, per bbl. crate 2 00—2 50
Charleston, per bbl. crate..... 2 00—2 50
N. C., per bbl. crate..... 2 00—2 50
Florida, per bbl. crate..... 1 50—2 00
Mary. Fla., large to extra, doz. stalks 75—125
Fla., com. to med., per doz..... 25—100
Fla., very small and inferior..... 10—20
Cucumbers, Fla., fancy, per crate... 2 00—2 25
Fla., poor to good..... 1 25—1 75
pe plants, Fla., per 1/2 bbl. box... 2 00—3 00
ale, Baltim. re, per barrel..... 25—35
ettuce, Charleston, per bush. bask. 50—100
Norfolk, per basket..... 50—75
Norfolk, per barrel..... 1 50—2 00
N. C., per barrel crate..... 1 50—2 40
eastern, per dozen..... 40—50
mons, Bermuda, per crate..... 25
uppers, Florida, per carrier..... 1 00—1 25
bas, Charleston, per basket..... 1 50—1 75
N. C., per bushel package..... 1 50—2 00
radishes, Norfolk, per barrel..... 1 50—2 00
rhubarb, per 100 bunches..... 1 50—2 50
string beans, Fla., round wax, per bk do do per crate 75—25
binach, Norfolk, per bbl..... 75—100
Baltimore, per barrel..... 60—75
squash, Fla., white, per bush. crate 1 00—1 25
Fla., yellow, per bush. crate..... 1 00—1 25
tomatoes, Fla., choice, ripe, per car. 3 50—4 00
Fla., green and mixed, carrier.... 1 75—2 50

Philadelphia.

The market has been somewhat depressed his past few days, and nothing appears to be moving as it should.

Strawberries are now very plentiful, those now arriving are from Charleston, and a few from North Carolina. First quality have sold at 20c. to 25c. per quart, seconds, 10c. to 20c.

Apples are held firm, but few demands remain for these now. Fancy Baldwins have sold during the past few days at as high a rate as \$2.50 per barrel; Ohio Russets are very good, and sell at \$2 to \$2.25 per barrel.

Asparagus has dropped in price owing to larger receipts from New Jersey; this stock is now selling at from \$2.50 to \$3.25 per dozen bunches; North Carolina \$1.50 to \$2.

Potatoes, the only new on the market this

ARMSTRONG & McKEE	Pittsburgh.
REYMER-BAUMAN	Pittsburgh.
DAVIS-CHAMBERS	Pittsburgh.
FAHNESTOCK	Pittsburgh.
AMOROS	Cincinnati.
ROCKSTEIN	Cincinnati.
ATLANTIC	Cincinnati.
BRADLEY	Cincinnati.
BROOKLYN	New York.
JEWETT	New York.
VLSTER	New York.
UNION	New York.
SOUTHERN	Chicago.
KNIPMAN	Chicago.
OOLITE	Chicago.
MISSOURI	St. Louis.
RED SEAL	St. Louis.
SOUTHERN	St. Louis.
JOHN T. LEWIS & BROS CO	Philadelphia.
MORLEY	Cleveland.
RALEIGH	Cleveland.
OSWELL	Salem, Mass.
KENTUCKY	Buffalo.
	Louisville.

IGNORANCE in regard to paint materials or painting would seem in this age to be inexcusable, when full information can be had free. If interested, it will pay to get pamphlet and color cards, also twelve pictures of houses painted in different shades or combinations of colors, free. Send your address.

National Lead Co., 1 Broadway, New York.
Mention American Gardening when you write.

BOWKER'S FERTILIZERS

for HOUSE PLANTS, LAWNS, GARDENS, FARM CROPS.

Catalogue free. State for what purpose fertilizer is wanted when writing.

BOWKER FERTILIZER CO.,

A book on "Window Gardening," and enough odorless fertilizer for thirty plants three months, sent by mail for

25c.

week are from Florida; No. 1 is selling at \$4 to \$4.50 per barrel; No. 2, \$3 to \$3.75 and even at these prices are moving slowly.

New cabbages are selling very well at \$1.75 to \$2.50 per crate; the quality is much improved over that of last week.

String Beans have dropped in price to \$1.50 to \$2 per crate; in many of the cases from North Carolina the beans have not been gathered early enough, and do not sell. Wax beans are selling at \$1.75 to \$2.25 per crate.

Peas, North Carolina, are arriving in rather poor condition, and the best price obtained has been \$2 to \$2.50 per bushel crate.

Cucumbers: Receipts are much larger, and stock has been moving very freely at \$2 to \$2.25 per crate; the quality is also much improved.

Lettuce is now very scarce; there does not appear to be so much nearby stock on hand this week; frame-grown has been selling at 30c. to 40c. per dozen; a few barrels of N. Carolina stock have been received, but this is of poor quality, and sold at \$1.50 to \$2 per barrel.

Tomatoes are rather scarce; Florida stock is held at \$2.50 to \$3.25 per crate; hothouse has been more plentiful, and sells at 20c. to 25c. per lb.

Both beets and radishes are over-plentiful, and in many cases scarcely pay freight charges.

Mushrooms have fallen off very much in both quantity and quality, and during the past week very few demands have been made for them; 20c. to 25c. per pound has been the best price obtained.

Boston.

The heretofore large demand for hothouse cucumbers was a little broken into last week by the very large arrivals of Florida stock which came in better than average shipments, still there is a good call for hothouse stock at 6c. to 8c. each, with Floridas \$2 to \$3 per crate.

Hothouse lettuce pleases general hotel trade at 50c. to 60c. per dozen.

Dandelion greens arriving in big quantities, owing to the recent warm weather—80° in shade Saturday and Sunday of last week. Even the fields began to show them; selling 50c. to 60c. bushel.

Mushrooms quiet, 75c. pound; some very fancy offered last Saturday, said to be the finest ever seen in this city.

Old cabbage gone, and Florida climbed to \$3 per crate. The necessary quantity of Hubbard squash appears daily; brings 24 to 25c. per pound. Some Florida summer squash here bringing \$1.50 per bushel crate.

Old onions gone, Bermudas higher, \$2.35 per crate; Egyptian firmer, \$3.25 per bag. Old beets, carrots, and turnips easier, and enough offered, so that shipments cannot be encouraged, unless it be St. Andrew's.

Limited demand for New Bermuda or Havana potatoes; old stock plentiful and lower; choice Maine Hebrons, 40c. to 43c.; Michigan stocks now seeking this market cannot be encouraged.

Hotbed rhubarb; good trade at 3c. to 4c., with Illinois stock finding as good a sale at 2 1/2c.

Everybody seems to be eating asparagus; N Carolina and Virginia stock about all coming; sells freely at \$3 to \$4.50 per dozen.

Leeks 60c. per dozen. Artichokes \$1.50 per bushel. Oyster plant \$1 per dozen.

Florida beans had a sharp rally on Wax at \$3.50 per bushel, while green moved fairly well at \$2.

First crate Virginia strawberries has arrived; brought 25c. General receipts coming from N. Carolina, and bring 20c. to 25c.

Hothouse tomatoes firm at 35c. per pound, with Florida a firm at \$3.50 to \$4 per carrier.

Apples: Repacked Baldwins, \$1.25; Spies, \$1.75; few bright red, \$3; Russets, \$1.50. Receipts very large for season of year.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

Twenty-five years of practical experience from picking berries for E. P. Roe, to conducting a large and constantly increasing nursery business, is the record of T. J. Dwyer, proprietor of the Orange Co. Nurseries, Cornwall, N. Y. His handsome 1897 catalogue will be mailed free to all who address him as above. It offers the stock to plant for profit at less than one-half the price asked by agents. Special discount for early orders.

OUR PREMIUMS ARE OFFERED

with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers. Every premium offered by **AMERICAN GARDENING** in 1897 will be select and valuable, and owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

THE THREE BEST CANNAS KNOWN.

Austria, Italia and Mrs. Fairman Rogers

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed *Madam Crozy* type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of *Mme. Crozy*, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{2} \times 1\frac{1}{2}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.

ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. *Austria* is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. *Italia* has flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the *Gladiolus*, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of *Austria* with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 33 growths, and attained a height of 42 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and *Italia* were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.



OTHER PREMIUMS NOT ADVERTISED HERE ARE:

Yellow Rambler Rose.

The Hardest Climbing Rose ever introduced, and the Novelty sensation of 1897. The demand for this new rose is something phenomenal; readers wishing one should be early with their subscription.

NEW HYBRID Sweet Briars.

Every garden should possess a group of these beautiful hardy Roses—prolific bloomers; sweetly scented; beautiful; hardy; vigorous growers; free from disease and the attacks of insects.

Strawberry Plants. The offers in this line embrace all the standard well established sorts and many Novelties. No garden should be without a strawberry bed, and in no way can a collection be obtained so easily.

IF YOU ARE INTERESTED IN ANY OF THESE OFFERS SEND US A POSTAL CARD FOR FULL DESCRIPTIONS.

Offer No. 45.

COLLECTION OF ROSES.

From Maryland. Strong 2-inch pot grown



plants. Delivery on and after April 1, postpaid.

One Crimson Rambler

One Perle
One Safrano
One Mme. Camille
One Marie Guillot
One Iphetos
One Nridesmaid

One Meteor
One Papa Gontier
One Hermosa
One La France
One Bride

Surely the good things of this earth are open to everyone who exhibits a little energy. Realize you can obtain the above set of Twelve Magnificent Roses as a premium for one new subscription to AMERICAN GARDENING, and that it will not take you more than a few minutes' work to accomplish this, then send and get your reward.

Offer No. 60.

CACTUS.

The following collection will be sent for one new subscription at \$1.00, with 85 cents additional to prepay express charges. The plants offered are worth \$2.00 at retail, and come from a noted collector.

One plant each of

Astrophytum myrtilloides.
Anhalonium Lewisii.
Mammillaria discolor.
Hederii.
Echinocactus setispinus.
Berlandieri.
Opuntia Engelmannii.
Senilis.

Offer No. 42.

For one NEW subscription at \$1.00, receiver to pay express charges, or by mail, postpaid, for \$1.25.

25 ONE YEAR OLD.... NIAGARA GRAPE VINES

Comment on this offer is unnecessary, beyond stating the fact never before was such an opportunity offered to start a vineyard at so small an outlay.

Offer No. 64.

POTATOES

One-half pound each of the four following varieties sent, postpaid, for one new subscription:

Early Michigan. Carman's No. 3.
Early Fortune. Livingston's Banner.

Two pounds or eight potatoes in all.

Option: One pound Early Michigan, or two pounds of any one of the other three varieties. Grown in Michigan.

Offer No. 53.

HARDY EVERGREENS.



Your choice of any one of the below offers of Hardy Evergreens for one NEW subscription. This is a great big offer for the money, and invaluable to any one wishing to set out a young plantation. Plants from Illinois.

A-50 Scotch Pine, 6 inches.
B-50 White Pine, 4 inches.
C-50 Norway Spruce, 3 to 4 inches.
D-50 American Arbor Vita, 4 inches.
E-25 Red Cedar, 4 inches.
F-25 Hemlock Spruce, 4 inches.
G-15 Blue Spruce, 4 inches.
H-25 Douglas Spruce, 4 inches.
J-15 Picea Concolor, 4 inches.

Offer No. 58.

CHRYSANTHEMUMS

This collection comprises a very fine assortment of eleven standard large flowering varieties, from 2 1/2-inch pots, good plants, and will be sent, postpaid, for one new subscription; plants grown in Maryland. Ready for delivery on and after April 15. These plants will do well outdoors in mild climate, whilst in more exposed sections to bring them to full maturity in the fall they should have partial shelter.

Mdme. F. Bergmann.—The earliest of all large varieties; color white, of great excellence.
Ivory.—A popular favorite; very dwarf and free flowering.
Miss Minnie Wanamaker.—Pure white Japanese; one of the standard varieties.
Golden Wedding.—The most exquisite yellow Japanese extant.
Eugene Dailledouze.—Monster flowers; yellow Japanese.
W. H. Lincoln.—The champion late flowering yellow; a grand variety.
Col. W. B. Smith.—Japanese incurved bronze.
Mrs. J. G. Whilldin.—Earliest of the Japanese yellows. In flower same time as Mdme. F. Bergmann, Oct. 4 to 7.
V. H. Hallock.—Color rosy pearl; Japanese.
Maud Dean.—The most charming pink Japanese ever introduced; a good market variety.
Cullingsfordii.—A reflexed variety of good reputation; color deepest crimson.

Offer No. 61.

COLLECTION OF

VEGETABLE SEEDS.



The following collection will be sent, postpaid, for one new subscription. It embraces ten 5 cent packets and seven 10 cent packets; valued in all at \$1.20. The varieties offered are all standard, the packets regular size, the seeds fresh and true to name, and reliable. We feel assured the grower will fill this order to your very complete satisfaction.

Best, Ellipse.
Bean, Bush Refugee.
Cabbage, Premium
Flat Dutch.
Carrot, Henderson's
Intermediate.
Celery, Henderson's
1/4 Dwarf.
Corn, Crosby.
Cucumber, White
Spine.
Lettuce, Tennis Ball.
Musk Melon, New
Hackensack.
Parsnip, Long
Smooth.
Peas, Alaska.
Radish, White Tipped
Turnip.
Spinach, Thick
Leaved.
Squash, Bush Crook
Neck, Yellow.
Squash, Boston Mar-
row.
Tomato, Early Ruby.
Burpee's Bush
Lima.

Offer No. 46.

THE CELEBRATED

GREEN MOUNTAIN GRAPE

One 2 or 8 year vine and one 1 year vine; two vines in all. Sent, postpaid, for one new subscription.



The Celebrated Green Mountain Grape is fast coming to the front and is bound to stay. It is acknowledged to be the earliest good grape on the market. It is the most delicate and delicious grape grown out of doors. It is a strong-growing, healthy vine, an enormous and early bearer, with well shouldered and handsome bunches.

No one grape possesses so many merits as the Green Mountain. The firm making this offer are headquarters for this vine and have over an acre out as a vineyard.

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE

CHRYSANTHEMUMS

NEWEST, EARLIEST, BEST.

In Splendid Assortment of Varieties,



Forms, Substance and Color.

Mrs. Higginbotham. Best of all Ostrich Plumes.
Gloriana. The pretty twisted petalled yellow.
Marie Louise. A grand white.
Pitcher and Manda. A variety of two colors.
Kate Brown. Earliest and best for the garden.
Pres. Smith. A robust pink.
Silver Cloud. Pale salmon.
G. W. Childs. Finest of the reds.
Major Henssaffon. The best yellow.
Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

OUR PREMIUMS ARE OFFERED with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by **AMERICAN GARDENING** in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

Our Premium Offers open the way to all who want a fine garden, but lack the means wherewith to buy.

Offer No. 35.



SENT postpaid, for **ONE NEW** subscription at **\$1.00**

....**BEAUTIFUL**....

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown especially for the purpose, from $\frac{3}{4}$ inch pots. This is our most popular collection and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Maman Cochet
Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Hermet

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

Offer No. 47.

Sent, Postpaid, for one **NEW** Subscription at **\$1.00.**

NEW GIANT FANCY COSMOS

(MRS. SHEPHERD'S STRAIN).



Mrs. Shepherd's New Fancy Cosmos was offered for the first time last season, but this is the first time they have been offered, put up in separate colors, as here described:

Of this strain, five packets of which are offered in this collection, the grower, Mrs. T. B. Shepherd, of Ventura, California, says:

"No one else grows it, and it is so distinct as to be readily recognized anywhere by one who has once seen the different varieties in bloom. I have been working with it so long that it has an individuality peculiarly its own."

One packet of the above, in splendid assortment, containing over 35 varieties of beautiful flowers, in all shades of red, pink, mauve, tinted and white... 15c.

Three packets of above, in separate colors, Red, Pink and White, one packet of each, at 15c..... 45c.

"Tints of Dawn," one packet of above, lovely tinted flowers, white ground, delicately tinted or flecked with pink or mauve in lighter or darker shades..... 15c.

Curled and Crested ZINNIAS, splendid mixed, one pkt..... 10c.

These are the gayest, brightest and most esthetic bedding flowers imaginable, all colors and shades, with petals daintily curled and crested, having none of the coarseness of other Zinnias.

IPOMCEA, Heavenly Blue, one pkt..... 10c.
A perfect dream of beauty.

SCABIOSA, New Large Flowering, red and pink varieties, mixed, one pkt..... 10c.
These are very beautiful.

Total Value..... \$1.05

The Choicest Collection of Seeds ever sent out for the money; a poem in flowers and a revelation in nature.

Offer No. 54.

THAT GRAND NEW SINGLE VIOLET PRINCESS of WALES



Away and beyond the best of all the single varieties lately introduced. The Queen of Single Violets. Fragrance equal to Marie Louise. Blooms very large, strong grower and productive. Grower, who is one of our most renowned violet experts, will send, postpaid, for one new subscription,

Eight (8) good rooted plants, with some flowers accompanying same; carefully packed for safe arrival. Plants ready for delivery now. Grown in New York.

Offer No. 43.

DAHLIAS

The recent revival of interest in this most worthy class of plants, coupled with the introduction of many new and interesting varieties, renders it incumbent on every one to see to it that their garden is supplied with the best obtainable.

Any one of the three collections here offered will be found up-to-date and choicest kinds, and as they come from celebrated growers and prize winners, we can assure our friends we are offering them a remarkably good thing and trust they will not be slow to take advantage of one or more of these offers:



A—Four Superb Cactus Dahlias.

One strong root each, Wm. Agnew, Oriental, Nymphaea and Zulu, by mail, postpaid, for one new subscription.

B—Four Show and Fancy Dahlias. (Dwarf)

One strong root each, New Double Tom Thumb, Arabella, Blumenfalter and Lucy Faucett, by mail, postpaid, for one new subscription.

C—Four Pompon or Bouquet Dahlias.

One strong root each, Elegant, Sprig, Ariel and Vivid, by mail, postpaid, for one new subscription.

Any one of these collections is worth over \$1.00 at retail, but will be sent postpaid, carefully packed, and guaranteed to arrive in first-class condition for one NEW subscription to **AMERICAN GARDENING** at \$1.00. Order by Offer No. and Letter.

Offer No. 56.

GLADIOLUS BULBS.

The following offers on Gladiolus Bulbs are well worth striving for. Your choice of one of the two collections offered for only one new subscription at \$1.00. Sent, postpaid, in neat pasteboard boxes. Order by Offer No. and Letter.



A.—6 Bulbs each of May, Bertha, Mabel, and Marie Lemoine.

May.—Large spike, well expanded flowers. White, edge of petals touched pink. A grand variety.

Bertha.—This is the finest variety of its color, which is a brilliant light scarlet. Makes a tall spike, with large side branches.

Mabel.—Dwarf, upright habit. Full spike open at one time. In color it is a blending of carmine, cherry and pink. One of the first to bloom.

Marie Lemoine.—Upper division of flowers of pale creamy color, flushed salmon lilac, the lower petals spotted purplish violet, bordered canary yellow. Peacock blotched.

B.—100 Cushman's High Grade Seedling Gladioli.

All blooming size. No two alike. Rivaling the floccelle silks in coloring and sheen.

Offer No. 69.

VEGETABLE SEEDS.

The following collection of Seeds is offered by a reliable dealer, with a view to introducing his stock. They are of precisely the same grade as is sold to market gardeners and all desiring the best. The entire collection of twenty named varieties will be sent, postpaid, for one new subscription at \$1.00.



One oz. Beet, Eclipse; one pkt. Cabbage, Early Wakefield; one pkt. Cabbage, Early Flat Dutch; one pkt. Cabbage, Savoy Early; one pkt. Cabbage, Savoy Late; one pkt. Cauliflower, Erfurt; one-half oz. Carrot, Half Long Nantes; one pkt. Celery, Paris Yellow; one oz. Sweet Corn, Early Mammoth; one pkt. Cucumber, White Spine; one pkt. Onions, Early Flat, Red or White; one pkt. Parsley, Double Curled; one pkt. Lettuce, Summer Blonde; one pkt. Radish, Early White Tipped; one pkt. Tomato, Acme; one pkt. Spinach, Viroflay; one pkt. Squash, Early Bush; one pkt. Turnip, Red Top; one pkt. Rutabaga, Champion; one pkt. New Victoria Spinach.

Offer No. 50.

VEGETABLE PLANTS.

All ready to set out.



All good plants. Grown in Maryland. Delivery April 15, postpaid. This is an offer we are not able to make our friends every week in the year, and we will be mistaken if this Bargain is not taken advantage of by thousands.

12 Peppers, two kinds.

12 Egg Plants.

12 Cauliflower Snowball.

12 Tomatoes, two kinds, select.

50 Cabbage or Sweet Potato Plants.

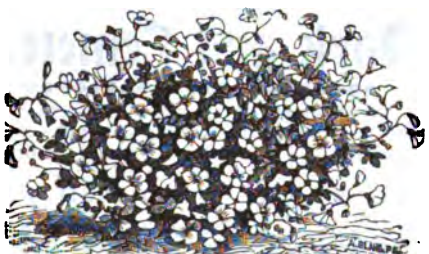
50 Lettuce, two kinds.

148 choice vegetable plants, and AMERICAN GARDENING one year, to a NEW name, for only \$1.00.

Offer No. 49.

Sent, postpaid, for ONE NEW subscription at \$1.

SUMMER BEDDING

150 OXALIS BULBS

These bulbs make beautiful borders for summer flower beds, as well as attractive pot plants. The collection includes 150 Bulbs in equal proportions of the four following varieties, named, and in separate packets:

OXALIS DEPPEI ALBA.—White.
OXALIS DEPPEI ROSEA.—Old rose or salmon.
OXALIS ERYTHILLA PURPUREA.—Purple.
OXALIS LASLANDRA.—Crimson. Tall, fine palmate leaves.

Offer No. 57.

CHRYSANTHEMUMS

For one new subscription and \$1.00, we will forward, postpaid,

A Collection of 36 Plants.

All different; prize-winning varieties, comprised in great part of last year's novelties, in all shades of color and types of bloom.

This offer comes from a noted grower, and we hope to receive a great many orders for this collection.



Offer No. 40.

FLOWERING PLANTS

All ready to set out.

This is a collection which everybody should be sure to obtain. It only requires one NEW subscription to become the possessor of all the plants here mentioned. Ready for delivery May 1st. Postpaid. Grown in Maryland. Save time growing from seed and get this lot all ready to set out.



10 Antirrhinums, choice mixed.

10 Asters, mixed.

10 China Pinks, mixed.

10 Cosmos, choice mixed.

10 Petunias, mixed.

10 Phlox Drummondii, mixed.

10 Marigold Eldora.

10 Scabiosa, mixed choice.

10 Zinnias, mixed choice.

10 Scarlet Sage.

100 Choice Flowering Plants and AMERICAN GARDENING, one year, to a NEW name, for only \$1.00.

Offer No. 59.

GRAPES

Every country and suburban home needs a vineyard, and those who avail themselves of the offer which follows will be well satisfied and pleased for years to come with the result. A grower offers:

Agawam,

Lindley,

Brighton,

Worden,

Niagara,

Moore's Early.

Your choice of Ten one-year vines, all of one variety, or three each of three of the above sorts, for only one new subscription. Forwarded postpaid.

Offer No. 52.

Collection of Flower Seeds

Sent, postpaid, for one new subscription to AMERICAN GARDENING. The following list embraces 16 varieties of choice flower seeds; fresh and true to name, eight of which are of 5 cent packets, six of 10 cent packets, and two of 15 cent packets valued in all at \$1.80. This collection is offered by a reliable grower, in whom we have full confidence.

Alyssum, Sweet
Asters, mixed
Cosmos, Large
Flowered
Calendula, Price of
Orange
Calliopsis, mixed
Datura, Double,
mixed
Carnation Marguerite, finest double
mixed
Mignonette Machet

Nasturtium, Dwarf
mixed
Poppy, Carnation
flowered, mixed
Sweet Peas, Eckford's mixed
Heliotrope
Larkspur, Dwarf
double
Cobaea Scandens
Zinnia, Double,
mixed
Lobelia compacta

Successful

growers of fruits, berries, and all kinds of vegetables, know that the largest yields and best quality are produced by the liberal use of fertilizers containing at least 10% of

Actual Potash.

Without the liberal use of Potash on sandy soils, it is impossible to grow fruits, berries and vegetables of a quality that will command the best prices.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.
GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.



Flood Sufferers—Attention.

Those who are so fortunate as to have Page fence in use will usually find it intact after the waters subside. If the posts are washed out, it will need re-stretching, and you should notify us at once. See April "Hustler" for latest flood test.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

...THE COMPLETE...

BOOK CATALOGUE.

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers
The Fruit Grower
The Nurseryman
The Private Gardener
The Market Gardener
The Seedsman
The Farmer
The Poultry Keeper
The Student of Botany, Entomology and Ornithology
and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE PTG. AND PUB. CO. Ltd.

P. O. Box 1697, New York.

The advance of civilization

U.S. USE SAPOLIO

is marked by the sale of SAPOLIO.

CLEANS. SCOURS. POLISHES

B.M. Watson, Jr.
Bussey Inst. South St.
Jamaica Plains



Park and Cemetery.

An illustrated monthly for the advancement of Art out of doors. Practical articles of permanent value by competent authorities on subjects of special interest to Commissioners, Trustees and Superintendents of Parks and Cemeteries, and those interested in Tree Planting and Town and Village Improvements. Plans of Parks or Cemeteries, and their architectural and landscape features, illustrated every month. Subscription \$1.00 a year. R. J. HAIGHT, Publisher, 334 Dearborn Street, Chicago.



Mention American Gardening when you write.

ASK YOUR SEED DEALER FOR

SLUG-SHOT

TO DESTROY

Currant and Cabbage Worms, Potato Bugs, Cucumber Fleas, Rose Lice and Slugs, Lice on Cattle, Fowls, Etc.

SLUG SHOT stands to-day the most successful general insecticide in the world for use on VEGETABLES, FRUITS OR FLOWERS. It is put up in various sized packages to suit all wants. We prepare all sorts of INSECTICIDES and FUNGICIDES for spraying or in powder. GRAPE DUST—Powder for destroying Mildew on Roses and Gooseberries. If you have trouble with Insects or Blights, write and we will try to help you. Send a postal for pamphlet to B. HAMMOND, Fishkill-on-Hudson, New York.

Mention American Gardening when you write.



TRADE MARK.

Before buying Seeds
you should write for

BURPEE'S FARM ANNUAL 1897
Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 124.
COMBINED SERIES VOL. LI.

NEW YORK, MAY 8, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Apple Market, The.....	338	Fruit Garden.....	335	Marketing Produce.....	335	Roses for Winter Bloom.....	347	Window Plants.....	344
Black Muck, Composition of.....	346	Fruit Prospects. 335, 337, 338, 339, 342		Novelties, Some of the.....	344	Scale Insects.....	339	Illustrations.	
Bounty Law.....	342	Gasoline as an Insecticide.....	337	Peach Growing, Notes on.....	340	Scale, Oyster Shell, Remedy for.....	346	Apple Tree, Badly Pruned.....	339
Cabbage, Fertilizers for.....	342	Grape, Brighton.....	338	Poultry Notes.....	340	Seeds, Effect of Cold on Societies' Reports.....	341	Aster, Semple's Branching.....	333
Charcoal, Use of.....	347	Grape, Campbell Early.....	342	Private Gardeners.....	341	Sugar Bounties.....	337	Floods, The Mississippi.....	337
Chrysanthemums.....	335	Hedge Plants.....	346	Pruning, Damage by Bad.....	339	Types in Plants.....	338	Grape, Campbell Early.....	343
Cinerarias.....	341	Home Plot, The.....	344	Questions Answered.....	346	Vegetable Garden.....	335	Marketing Wagon.....	335
Failures, Reasons of.....	335	Market Reports: N. Y., Phila., Boston.....	345	Readers Notes.....	338	Water Lilies, Germination of.....	347	Roof, Fireproof.....	340
Floods, The Mississippi.....	337			Roofing.....	340				
Flowers from Seed.....	333								

Flowers from Seed Sown Now.

Under the title of popular flowers which will bloom in the garden, this coming summer and autumn, from seeds sown from now to about June 1, Mr. H. F. Michell read before Pennsylvania Horticultural Society the following:

The popular Sweet Alyssum is an excellent border plant. The best variety is Little Gem, which grows only five inches high and forms a mass of white carpet-like effect. The seedlings should be thinned out considerably to give them the best chance of a dwarf, even growth. The soil must be sandy and rather poor if you wish to keep the variety true to name.

Asters are one of the most satisfactory garden flowers on account of the display they produce. They are very easily grown from seed sown in the garden. They, also, should be thinned out to stand a foot apart, to give them all the room they need for their proper development. I consider the variety called Semple's Chrysanthemum flowered or Branching (see fig. 89), the best all around outdoor Aster. The seed can now be had in separate colors, in shell pink, white, and red. The light blue is a

beautiful color, also found in this class, which is obtained by purchasing a packet of mixed Semple's Aster seed. Next to Semple's, the Truffaut's Pæony flowered variety is considered the best. This can be had in pink, white, blue, purple, and crimson. Semple's and Truffaut's are excellent, in fact, the best sorts for cutting, as they produce the blooms on long stems. The Victoria, Comet, and Jewel Asters are also very choice and should be sown where a good collection of Asters is wanted. Asters like a rich, well prepared soil and

plenty of water, after the seedlings are three or four inches high.

Balsams, or Lady Slippers are rather old fashioned, but they fill up space, and if the best strain is purchased they are quite beautiful.

Calendulas, or better known as English Pot Marigolds, give a bright effect in the flower garden. The flowers are very showy. The best sorts are Prince of Orange, Sulphurea and Grandiflora. It is a

very satisfactory plant to raise from seed and never fails.

Candytuft, the Giant Empress, bears very large trusses of pure white flowers and they are excellent for cutting. If you wish especially large spikes, disbud all but three to a plant, give them plenty of water and a small quantity of liquid manure once a week.

Carnations, the Marguerite class, will bloom profusely during September and October, if seed is sown now. The strain which is now sent out produces almost all very double flowers of every color, and will give good satisfaction as a garden flower.

Cockscomb, the comb type, is the most desirable for a good

effect. The best variety is the Empress, a rich crimson and the largest of all, Queen of the Dwarfs is also a very showy sort. Cockscombs do best in light sandy and rather poor soil.

Corn Flowers (*Centaurea Cyanus*), or sometimes called Blue Bottle, Bachelor's Button, and Ragged Robin, are very easily grown from seed. The best variety is the Emperor William, which is a beautiful rich blue. The other colors are pink, red, yellow, and white.

Chrysanthemum, the Painted Daisy variety, (C. Burridge-



FIG. 89.—SEMPLÉ'S CHRYSANTHEMUM FLOWERED ASTER.

anum) is a very showy and desirable flower to grow for cutting, and it blooms very freely from seed sown in May.

Cosmos.—This is, without a doubt, one of the most desirable flowers for autumn blooming. Seeds can be sown at any time before May 15th to have blooming plants in the autumn. Poor, sandy soil is most suitable for Cosmos, to produce plenty of flowers. A number of people complain of Cosmos growing too tall. One of the best ways to have Cosmos remain under five feet is to pinch or cut back the shoots continually until September 1st; another way is to bend the plants over, nearly touching the ground, and then pin them down with wires. They will root at nearly every joint, and bloom profusely in a dwarfer habit.

I have seen a row of 100 feet treated in this way, and the result was a display resembling a hedge four feet high, and trimmed in perfect even shape.

Calliopsis or **Coreopsis** is a free-flowering annual and is usually found in mixed or old-fashioned gardens. The "Golden Wave" variety is the most showy one, although the mixed sorts are very desirable for a varied color effect.

Cypress Vine is the neatest of all small foliage running vines. The seeds should be sown as early after April 15th as possible, because they germinate rather slowly.

Dahlias.—The single, large-flowering type gives the best results from seed, as they bloom eight weeks after the seed is sown. I would advise every owner of a large garden to have some of the new large-flowering single Dahlias. The effect is very pleasing, and they serve excellently as cut flowers, especially if they are cut before they are out in full bloom. The flowers last much longer if cut in that condition and placed in water.

Dianthus or **Pinks.**—The Japan varieties are the choicest in colors. The China are also very desirable on account of their free flowering qualities. They are very successfully and quickly grown from seed.

Everlasting Flowers, sometimes called **Immortelles**, are great favorites with some folks. The **Helichrysum** is the most satisfactory species and the **Acroclinium**, **Gomphrenas** and **Rhodanthes** make up the leaders in Everlasting Flowers.

Grasses.—The earliest and most satisfactory ones to raise from seed are the **Bromus**, **Briza**, **Pennisetum** and **Stipa**.

Gaillardia is a free flowering favorite, as it is a profuse bloomer, and can be used nicely as a cut flower. The **Picta** type is the annual variety, and blooms in about eight weeks from seed. The **Grandiflora** type is one of the very best all-around perennials we have, and will please everybody who grows it. Seed of the **Grandiflora** can be sown in September, and it will bloom the following summer.

Helianthus or **Sunflowers** have become great favorites, that is, the single black eyed sorts. The best up-to-date is **Cuc. Stella**, which produces plants of good form and covered with long-stemmed flowers which can be advantageously used for cut flowers. Sunflowers, as the name implies, should be grown in a sunny situation in the garden. They bloom about seven or eight weeks after the seed is sown, and will keep on blooming until late in the autumn.

Hollyhocks.—Seed should be sown in June and July to secure good strong plants to bloom the following summer.

Ipomoeas or large flowering **Morning Glories** have improved very much of late, especially the New Japanese sorts, which are really beautiful, and will be

sure to be used now extensively for covering verandas, porches, etc.

Marigolds.—Everybody knows them, but a large number of people object to them on account of their peculiar fragrance. They are, nevertheless, very showy and especially desirable for border for a vegetable garden. The African sorts usually grow tall. The French are the dwarfs. One of the very best Marigolds is the single variety called "Legion of Honor," which is very dwarf. The color of the flower is rich yellow with a large crimson blotch on each leaf. Marigolds must be grown in rather poor sandy soil.

Mignonette is very popular, easily grown from seed; and nearly everybody who has a flower garden has it. The very best for garden use is the **Machet**; it produces a large thick spike. Should you wish especially large spikes, treat it like **Candytuft**; that is, disbud the plant to three flowers stems. **Mignonettes** flourish in well prepared and rather rich deep soil.

Nasturtiums are divided into two classes. The tall or climbing species are used for vases, hanging baskets, trellises and fences. The **Madame Gunther Hybrids** are now considered the showiest and best, as the flowers are much larger and a greater assortment of colors is found amongst them than in the older type.

The **Dwarf** or **Tom Thumb Nasturtiums** are indispensable for the usual garden borders and beds. A great show can be had from them, and no annual will give more satisfactory results. **Nasturtiums** do best in a sandy and rather poor soil. They should also be planted where there is plenty of sun. The newest and dwarfest of the **Tom Thumbs** is the **Lilliput** species. They grow only about six inches high and are nearly covered with their beautiful richly colored blooms. **Nasturtiums** are considered to be the easiest flower to be raised from seed.

Nicotiana is a very showy annual. The flowers are very sweetly scented, pure white.

Pansies.—The best time to sow seed for early winter blooming is in July and August, in shaded frames. Sow the seed in September (in shaded frames, also) for early spring flowering. Seed may also be sown in February and March for June blooming. **Pansies** thrive best and produce the largest flowers if the soil is well prepared and enriched with manure. If you wish extra large blooms it is necessary to purchase seed of the "Giant" type only, from which, if properly handled, and the plants given a little liquid manure three times a week when the flower buds are about to develop, you can have the largest flowers possible to procure.

Petunia is a very free flowering and most satisfactory annual. The large flowering types, such as "Giants of California," **Giant Fringed** and **Mottled**, are considered to be the very best for vases, hanging baskets, and also for the garden. The **Dwarf** or **Inimitable** is an elegant plant for edgings or borders. The doubles are also very desirable on account of the large and perfect flowers they produce. **Petunias** are classed among the annuals which produce the greatest amount of blooms and therefore are very desirable. Do not have the soil rich for **Petunias**, as that would produce too much foliage and fewer flowers.

Phlox Drummondii, a very showy class of annuals, is well known to everybody. Sow seed of the **Grandiflora** varieties for a display and for cutting. The dwarf or compact sorts are excellent for borders or edgings. **Phloxes** do not

require rich soil if you wish plenty of flowers, but the soil should be well worked.

Poppies.—This great favorite annual is admired by every one. It blooms so profusely that it is never out of bloom from June until October. The best of the single sorts is the "Fayal," one of California's improvements on the well known "Shirley."

The "Tulip" Poppy is the best large scarlet annual variety; then we have the **Danebrog**, **Umbrosum**, and a large number of other single sorts. Of the double Poppies, the carnation-flowered species are the choicest; they come in all the colors imaginable.

The hardy perennial Poppies will give the greatest satisfaction to flower lovers, on account of their large size and brilliant effect. The best of this class is the **Iceland** or "Nudicaule" type, which is really very handsome, and no garden should be without it. The **Oriental** type is also very choice, and is of larger size than the **Nudicaule** or **Iceland**.

Seed of annual Poppies should be sown after April 15th, where they are intended to grow, as they cannot safely be transplanted; thin them out to avoid over-crowding. Seed of the perennial Poppies should be sown in September, in frames or in a sheltered position. The seedlings, before winter sets in, should be covered with straw or litter, which must be removed after danger of heavy frost is over.

Ricinus or **Castor Oil Bean** is a stately plant for effect in center of **Canna** and other large groups. The "Cambodia" is the showiest and best shaped; it is very brightly and richly colored. The very tall varieties are the "Borboniensis" and "Sanguineus." The "Zanzibar" is also a great addition; it is a very strong grower and attains a large size.

Salpiglossis is a beautiful annual, and will please all who grow it, on account of its fancy-marked flowers resembling a veined **Petunia**.

Scabiosa is one of my favorites. It grows very easily from seed, and is one of the most graceful flowers for using as a cut flower. They can be had in all the colors, pink, blue, yellow, white, maroon and variegated.

Sweet Peas should be sown early, say in March and April, in well prepared deep soil, which should be rather rich. Several systems of sowing the seed to achieve the best results are recommended. The best is shallow planting, say two inches deep. The soil of the trench should first be pressed down fairly well; in fact, it is best if trod down by the feet; then make the drill and sow the seed. The **Eckford's** varieties are the most satisfactory on account of their large flowers. The list of sorts is very large.

Zinnias or **Youth** and **Old Age** are a very showy and popular class of annuals, growing very easily from seed sown in April and May. The best varieties are the **Pomponne**, the **Giant** or **Robusta** and the **Zebra** or **Striped**, which all grow about 15 inches or over in height. The "Tom Thumb" Zinnias are a beautiful acquisition for border work, as they hardly ever grow over 12 inches in height.

In making a selection from the flowers above-mentioned, the amateur gardener is sure of success if reasonable care is exercised to sow the seeds in suitable and well prepared soil, and to treat according to directions. All blossom very freely and they all repay the care given them by a wealth of bloom that will prove a constant delight from their first flowering period until the approach of winter.

The Vegetable Garden.

Seed Beds.—For convenience, seed beds should now be prepared for the sowing of various seeds in order to secure plants for successional use.

Cauliflowers and Cabbage should be sown. Early Snowball is the best general-purpose cauliflower. Algiers is a fine variety for late use, as it grows to a large size. Early Summer and Henderson's Succession cabbages being excellent for second early and general crop, growing to a large size, hard and solid, making comparatively few leaves; and being planted closer than the larger sorts, will give more weight to the acre; and for winter use will keep better. A sowing should also be made of the Drum-head Savoy, a favorite with many, being excellent for use in the fall.

Brussels Sprouts.—The Dalkieth is the best variety of sprouts, and if planted upon ground that has been only moderately enriched, the best results will follow, the sprouts growing more solid and numerous.

Dwarf Green Curled Kale is a useful winter green, very hardy, and may, with slight protection, be kept outside all winter. It is a vegetable growing in popular favor for this purpose.

Celery for Winter.—Make a sowing now of suitable varieties for winter use. These will give plants for transplanting to follow some of the early crops in July and August. Sandringham White, Giant Pascal, and London Red are the best in our experience for keeping and eating qualities; being solid, crisp and of fine flavor. A moist cool situation should be selected for the celery seed bed. We prefer to sow the seed in drills one-half inch in depth, covering with clean sand or sandy soil, making compact by the use of the back of spade or small roller; the seeds will easily push through the sand, which will not bake hard, and any watering that may be done will penetrate quickly to the roots.

Cucumbers and Melons.—Make another sowing now to follow the first, and in case of failure of the latter for some reason, make another sowing in the same hills as the first, as advised in a previous issue.

Early Summer Squash.—These, if any were started for early in the hotbeds or greenhouse, should now be planted out. Some means should be convenient for their protection during cold weather, as we will be subject to cold snaps for some time yet. In the absence of plants, seeds should be sown in the same manner as cucumbers.

Cardoons.—Make a sowing where it is to remain, one or two good rows being usually sufficient for private use. Make drills four feet apart, to allow of enough space to earth up later.

Tender Plants.—These should now receive constant attention, being grown on steadily without check. Give air abundantly whenever the weather is warm, and protect from cold winds and weather.

W. M. EDWARDS, N. Y.

Fruit Prospects in Del.—David J. Cummings, one of the largest peach growers in Delaware, says that the peach trees of Delaware were hurt very little by the recent cold snap. "The orchards are full enough, and the fruit is apparently extra fine. The peaches now are pretty well out of danger in this section, and I expect a satisfactory yield."

Danville, N. Y.—The damage done here by the recent frost is not so extensive as was at first anticipated. Only a few of the early varieties of peaches and cherries suffered. Crawfords and all the late varieties of peaches are blossoming in great profusion. Pears, apricots, prunes and plums are heavily budded for blossoming. Growers, generally in this vicinity think the prospect for a large crop of the fruits mentioned is very fair.

Palmyra, N. Y.—It is believed that the peach crop will be very light on account of the recent cold wave.

For Marketing Produce.

Many gardeners and farmers have discovered that much more money is made by selling their produce at first hands from door to door than by selling to merchants or commission men. A convenient wagon is of the greatest importance if one is thus to market his produce. Such a wagon is shown in the cut given herewith (fig. 90). It is "low-hung," and has its lower part boxed in and floored over. Access is had to this enclosed space by raising the driver's seat in front by a door on each side in the middle, and by two doors in the rear. At one side two drawers are shown. One of these is most convenient for carrying the flat parchment covered prints of butter to market, carrying the drawer to the customer's door to avoid handling. The other can be used for eggs, using the ordinary pasteboard fillers placed one upon another. The rear can have drawers or not, according to the nature of the produce to be carried. Above the rear doors are two metal "open work" doors, that hold in the vegetables or other articles that are piled in loosely in the wagon's top. The center of this top space is easily reached from the canvas door in either side. The



FIG. 90.—A MARKETING WAGON.

top is, of course, covered with canvas, and should have the name of the farm painted upon each side, with the nature of the goods carried. This will advertise and enlarge one's trade. W. D.

Chrysanthemums.

Cuttings intended for bench work may be rooted any time from now for the next six weeks, though if the cuttings are in fit condition to be taken, the sooner the better. Fine flowers can be, and are, obtained from June cuttings, but many of the dwarf varieties, as Mrs. Jerome Jones, Sunderbrach, Zulinda, etc., seem to be benefited by a longer season of growth. Cuttings will root almost anywhere at this season. The cold frame is an excellent place if the glass be well shaded. Remove lights at night if the weather be not cold. Spray lightly, and the cuttings will pick up splendidly during the night.

Kernels of Advice.—Don't let your plants get dry. Don't let them get pale and sickly from too much water. Wage war to the death on every insect that comes along. Dust frequently with tobacco dust. Prevention is better than cure. Give abundance of air day and night. Aim to keep plants sturdy and strong. Syringe often without getting soil too wet. Attend right away to business when plants need attention. Never let anybody's plants look more healthy than your own.

CHAS. TOTTY, N. J.

In the Peach Belt.—A correspondent at South Haven, Mich., reports that inside of the so-called "peach belt" a strip of territory two to four miles in width bordering upon the lake, there will be a full crop with the exception of Crawfords and a few others of the half-hardy varieties, of which there will be only a quarter or half crop. Further away from lake influence, he says, there will be few peaches. Pears, cherries, plums, grapes and all small fruits promise a full crop.

The Fruit Garden.

Grapes.—Spray the vines with Bordeaux and London purple mixture, when the first leaves are half grown, for fungous diseases and for the grape vine flea beetle, which in some localities is a great pest.

Bagging Grapes.—There is no question about the value of bagging. Where bees are numerous, two-pound bags are what you need generally, although I have found it advisable to have a few of larger size for such bunches as the Brighton bears. Order the bags now and use them as soon as the berries are formed. Keep the ground well cultivated, and thus save water and labor. By "well cultivated," I mean persistently killing the weeds before they are large enough to be seen. If you do not use a horse cultivator a good man with an iron rake will cover a good-sized piece of land in a day.

Filberts and Hazel Nuts.—The most common of nuts, yet how many can describe the process of development from the flower to nut? The catkins or male flowers are prominent enough to be noticeable to the average passer-by, but I venture to say that not two in twenty would notice the exquisite formation of the female flowers. Keep removed all suckers from the roots, and shorten very strong shoots, so as to produce medium to small wood.

Labels.—Look over the new stock, and loosen the label wires. Why is it necessary (in the nurseries) to put the wire about the main stem, or one of the principal branches, and twist it until there is no more to twist? Someone seems to have more time to spare than wire to twist, or have the nurserymen an axe to grind?

Cherries.—Apply Bordeaux when the flowers have fallen, adding to 50 gallons of the mixture, 3 ounces of London purple, and three times that amount of lime (for curculio and fruit rot).

J. HOLLOWAY, L. I.

Why Some Fail.

Any one would think, if they saw the amount of stock shipped from the great nurseries, that the country would soon be flooded with all sorts of fruits, the fact of it is, that there is not more than about twenty-five per cent. that comes to bearing, the other seventy-five per cent. are a failure, and why? The majority who order stock have to depend entirely on the one ordered from, as he is supposed to know all about fruit-growing, and right here is where all disappointment comes in, seventy-five per cent. of those who take orders for nursery stock, know nothing about nursery work or fruit-growing, except what they pick up in catalogues, which little knowledge together with a glib tongue, and plenty of wind, makes such always ready with good (?) advice. Such a man always has trees for any location, and of bearing size, wonderful qualities, etc. Give him the order, and you will be sure of failure.

Nursery stock needs as much care as any crop put in the ground, without care or attention, failure will result, no matter how good the stock is. There has been such a thing as failure through kindness, but the percentage is so small that it is not worth mentioning.

There is a great deal of failure in getting a good price for the fruit. The cause of it is mostly in the handling and putting it on market, although the poor commission man is supposed to be blamed. Small unripe fruit, not graded, or over-ripe, the use of snide packages not filled are very good causes for failures.

I could give a great many more causes, but the better way is to get started aright—avoid cheap stock if you are not sure of the man you think of ordering from, it is far better to go 500 miles to get your stock, or order from some old established nursery, such can be depended on.—R. MORRILL.

Mechanicsburg, Pa.—The apricot and peach trees in this section have suffered more or less injury from the recent cold snap.

Growing and Marketing Strawberries from the Growers' Side.

Your readers, especially the city ones, no doubt often wonder where the great quantities of strawberries annually come from. Years ago, the "strawberry patch" was common, but to-day it has almost ceased to exist, and in its stead strawberries are grown by the field. To be sure, some growers have only a few acres, but the fields of 10, 15, 20, or 50 acres may be seen on all sides. One grower, at Bridgeville, Del., had a field of 40 acres last season, as fine as I ever looked at; this year he has 75. The planting, cultivation, and marketing, in such fields are of course on a big scale. Plants, in many instances, are set by a machine which is run by a man, two boys and a pair of horses. This sets a row of plants about as fast as the horses walk (at a slow gait), and the boys can feed in the plants. Each plant is watered, and the ground rolled and pressed tight around the plant.

The cultivation is with riding cultivator in many instances, but a good deal of hand hoeing, especially if the ground is filthy, must be done. The plants are allowed to make beds fifteen to eighteen inches wide. Constant cultivation until frost is given.

Some few growers mulch; it is not uncommon to see from 100 to 500 hands at work in a big strawberry field, and as a good many shipments must be made by the early express trains, the more help the more berries can be gotten off. Refrigerator cars are largely used, especially for the distant markets, which cannot be reached in one day, but for near by markets the plain fruit car is used entirely. Berries shipped by freight carry better than those sent by express, as they are not jostled about, as is the case when the express companies handle them.

The favorite package is the 32 quart crate, some gift, but more likely returnable. The cost has gotten to less than one cent per quart for packages now. Many growers use 60 quart cases.

The fruit is carefully picked and when a picker has his tray full (holding 8 to 10 quarts), he takes it to the packing shed, and receives a check for the number of quarts he has. These checks are paid off on Saturday always. Some growers use a tag, and punch it for the number of quarts.

The better class of fruit is assorted before it is placed in the crates, but the poorer grades are put in as they come from the pickers, as to handle them simply softens them.

A two-horse spring wagon, carrying 50 to 75 crates carries them to the station where they may be sold, or the grower can ship them on his own account, as he thinks best. The condition of the markets is known in time by telegraph each day, so that the shipper can be guided in the matter. I have seen first-class Bubach berries, early in the season, sell at the station for 15c. a quart. Often the buyer gets them for 3c. or 4c., and at this price the profit is on the wrong side of the sheet.

Last year, I made a careful calculation of what a quart of fair strawberries costs the man who ate them, and what the man who grew them had left for his work:

A plate of strawberries in the average restaurant costs 15c.; a quart makes about four plates—equals 60c. The restaurant man pays about 15c. a quart for these at a retail grocery, the latter buying them of the commission man for

9c. or 10c. a quart. Freight, commission, and cartage will be from 2c. to 4c., according to the market, thus leaving 6c. for the grower. He pays 1½c. a quart for picking, and about 1c. per quart for the package. So you see, the man who grows the berries does not begin to figure with the man who eats them, and I have said nothing of cultivation, etc., or even mentioned the lower prices that are often obtained.

It seems a hardship for the city buyer to have to pay such a big price for his luxury, and the producer to get the smallest sum of the whole number of these who are engaged in the production and marketing.

Don't understand me to say that this is what all growers receive, but it is an estimate of the average crop, and we all know average crops, as a rule, don't pay. It is the man who steps out for himself, who grows only the best berries on the least number of acres, and gives high culture, who obtains the best prices and makes the money.

One grower near here netted 9c. a quart for his entire crop last season, and when it is remembered that an acre of first-class strawberries will yield 2,000 and often 3,000 quarts under field culture, it will be seen it is a paying crop.

I sometimes think we need irrigation for strawberries. Rains do not always come when they are most needed, and manure or cultivation will not take their place. I have seen whole crops ruined for the want of a little rain; and then again a hard beating rain will so sand the berries as to make them almost unsalable.

We seldom have to pick more than half or two-thirds of a crop, because toward the end of the season prices drop below the cost of production.

The acreage under strawberries this year is very heavy, and the varieties set cover the whole list of plants.

Bubach is still a favorite with many growers, but of late years it has become such a poor grower, that it does not make good beds. Haverland is still a favorite with some planters. Greenville is an immense yielder of bright red fine looking berries, and the plants are all that can be desired. Tennessee is coming to the front very rapidly. Lovett, Gandy, Crescent, and Sharpless still have many admirers, while Michel's Early is regarded as the best very early sort. Lady Thompson has not "panned out" in most patches as we expected it to do. Week's Early is a far better sort, but lacks productiveness.

Of the more recent introductions, Brandywine is one of the very best, and Marshall is equally good, but the plant of this latter sort almost refuses to reproduce itself, hence the yield is light, but the fruit is immense. Timbrell is an utter failure. Tubbs is planted by many growers. It is a good all purpose variety. Ideal is not so good a grower as we would like, but the berry is a beauty. Oriole makes a good growth, though fruit is not of as regular form as Ideal. Enormous is a good grower, fine plant, and I expect a good berry. I had only a few in bearing last year, as they were dug for plants, but it is a big fellow.

Bismarck, Wm. Belt, Satisfaction, Evans, Plow City, Eclipse, Loomis, Anna Kennedy, Sparta, Michigan, and many others show a good strong plant growth, and certainly look promising. Giant is a poor plant maker. Leader is one of the very best medium early varieties, but won't make much growth, otherwise I like it. We have set considerably over 100,000 plants.

The list of new varieties this spring is

a long one, but we must try them. Margaret, Nic Ohmer, Avery, King Worthy, Perfection, Earliest, Mastodon, Ridgeway, and Ruby are some of them. Mr. Crawford says we are on the eve of better berries, and I hope his prediction is correct. CHAS. WRIGHT, Del.

Crops in Va.—The recent frost killed nearly all of the peaches and pears in Prince George county, and some damage was done to apples. A gentleman who resides in Dinwiddie county says all of his strawberry plants were killed by the frost.

Frost in the Hudson Valley.—A Poughkeepsie fruit grower reports that his cherry buds are all killed, and it is feared that this is true of the whole Hudson Valley cherry crop. Mr. S. B. Husted, of Blauvelt, N. Y., corroborates the foregoing.

Fruit in N. W. Ohio.—Reports before the N. W. Ohio Society at the last meeting tend to show that there will be no peach crop this year. Other fruit and berries are reported fair.

Keeping Tab on Berry Pickers.

The most practical as well as the very best system that can be devised for keeping track of the quantity of berries picked, as well as of the amount due each individual picker, is that illustrated herewith:

Date.....

Strawberry Grove

BERRY PICKER'S CARD.

Name.....

NOT TRANSFERABLE.

4 Qts.	4 Qts.	4 Qts.	2 Qts.	1 Qt.

Exact size of Tally Card.

We furnish these tags (manilla stock), to exact size shown herewith, with your name and address printed thereon, express prepaid, as follows, cash with order:

500.....\$1.00
1000..... 1.80

And \$1.25 for each additional thousand after first thousand.

Punches furnished at 50c. to 75c. each.

The form of Tally Card here submitted has proved much superior to the old method, and it cannot be counterfeited.

A stand holds say four quarts. When a picker is started to work, one of these cards, with the name written on it, is tied to the handle of the basket. The rule is that the picker must deliver the berries to the packer. When the picker has filled his four quarts, he must pass by the boss in charge of the work in the field, who inspects the berries, and if all right, tallies the four quarts on his card, by punching out one 4 qt. section, using a conductor's punch for this purpose, after which the picker delivers the berries at the packing house. At noon all picking baskets are delivered to the boss, who has charge of them until work commences after dinner. When starting them to work, the boss calls off the name on the cards, each one receiving his own basket. At quitting time the field boss takes charge of all tickets until next day. As soon as a ticket has been tallied out it is given to the owner, who keeps it until pay day; the boss giving credit for one card to the owner in Field Account Book.

Sugar Bounties.

The present burden which the sugar-bounty system entails upon the taxpayers of Europe is estimated at about \$25,000,000 per annum, while the excise tax on sugar in Germany, France, and Austria is said to amount to \$100,000,000 per annum. On the sugar consumed by the people of the continental nations of Europe which have adopted the bounty policy there is no bounty, but on the contrary an excise tax; the result of which legislation is to make exported sugars very cheap and home consumption abnormally dear. This is demonstrated by reference to the statistics of the comparative consumption of different countries. Thus in England, whose policy since 1874 has been to give her people sugar free of taxation, the per capita consumption has risen from 56 pounds in that year to 86 pounds in 1896, while the saving to the British people from the reduction of the cost of this one item of their living has been estimated to be at least \$30,000,000 per annum. The great reduction in the price of sugar has also given a remarkable impetus to the British industry of manufacturing sweets, in the form of confectionery, preserves, jams, marmalades, etc., which last to a considerable extent, have undoubtedly supplanted the use of butter. The present annual average consumption of sugar in Germany is reported to be about 27 pounds per capita. In France the declining consumption of sugar has been made the subject of recent debate in the Chamber of Deputies, where the question was pertinently asked by one of the deputies (M. Méry) if the object of the existing governmental policy in respect to sugar "was mainly to produce it or to have and enjoy it." The Agricultural Society of France has also recently unanimously indorsed a demand of the French sugar makers and refiners that the Government should increase the present bounty on the export of sugar to an extent equivalent to the combined or aggregate bounties allowed in Austria and Germany.—HON. DAVID A. WELLS, in *Appleton's Popular Science Monthly* for May.

Good Roads in the Schools.

A novel feature of the good roads movement in New Jersey is the proposition to introduce instruction on road building into the common schools. The State report says: "The ignorance that prevails among the average rural residents regarding the proper manner of repairing even the common roads shows a striking necessity for some kind of technical instruction, guided by which our ordinary township authorities will be able to make the best use of the ever present materials for keeping the roads in proper repair."

The Acorns of the Live Oak of the South

often sprout before they fall, says Meehan's *Monthly*. The process of germinating is among the most remarkable of all American trees. The root pushes out from the acorn to a distance of many inches before it enters the ground, the root then goes into the earth while the bud or plumule ascends to form the incipient tree trunk. The young tree of the live oak will frequently be a distance of six inches from the acorn. In this respect the behavior of this species of Oak corresponds nearly with what is always universal in monocotyledonous seeds.

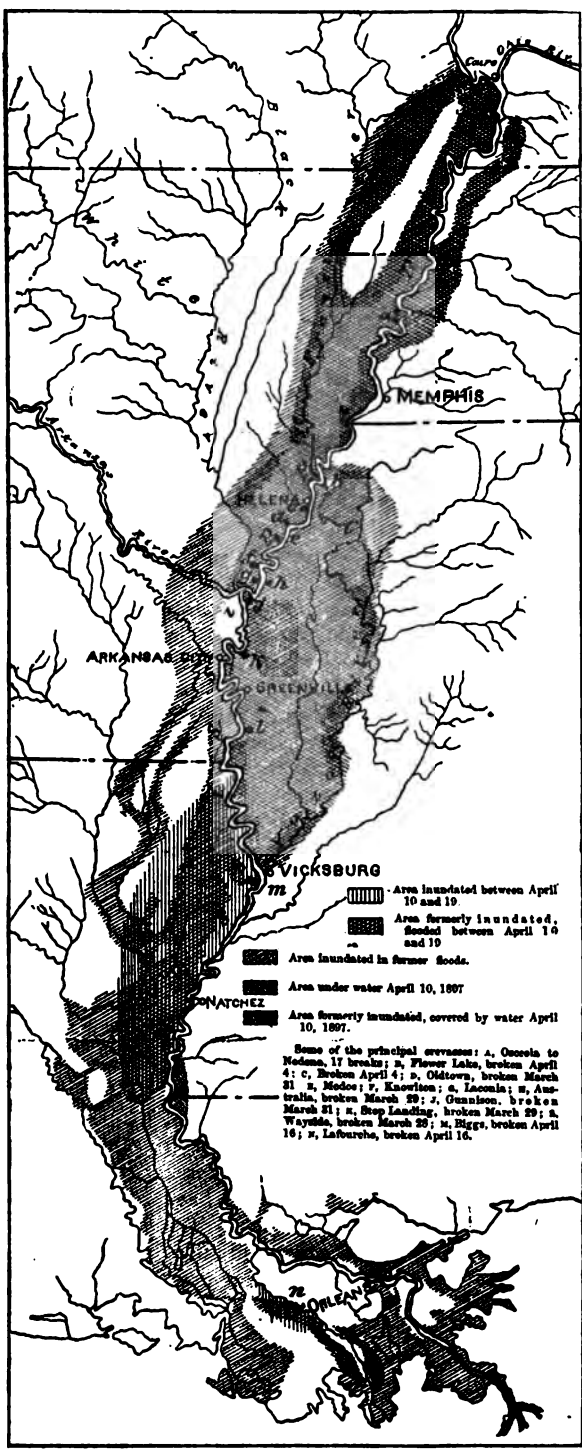


FIG. 91.—THE MISSISSIPPI FLOODS.

Railroads and Taxes.

The Iowa senate has decided that railway companies shall be exempt from city taxes on lines running through agricultural and horticultural lands inside cities and incorporated towns, except in tracts of less than ten acres. The vote in the senate upon this decision stood 23 to 18.

Crop Prospects in Del.

The peach growers are now able to form some definite estimate of the damage done to the peach crop by the recent cold snap. In Sussex county the frosts killed about three-fifths of the buds of the late varieties and about one-half of the early kinds. This will leave a crop sufficiently large to make it a paying one for the growers, unless the buds now alive shall be greatly affected by the June drop. Nearly all the plums and pears are killed, but the apple crop will be the largest for years. Berries of all kinds will be plentiful, but a little late.

Horticultural Books.

We have facilities which enable us to supply any horticultural book published in this country or Europe. Send stamp for our new catalogue.

The Recent Floods.

The very serious floods that have occurred in the Mississippi Valley, and which have been much discussed in the lay press, have devastated large tracts devoted to agricultural interests. The areas affected are seen by a reference to the accompanying map reproduced from a late Government bulletin on the subject.

The total area submerged at this time is over 20,000 square miles. It contained at the last census 46,935 farms, with a total area of 4,904,466 acres, nearly one-half of which was improved, and a total population, agricultural and other, of 462,041. If, to the value of its farms, farm buildings and farm machinery, according to the census of 1890, there be added the value of its live stock on January 1 last (\$9,174,636), and of its products of last season still on hand on March 1 last (\$4,595,179), the total of \$90,176,177 will represent the approximate value of the agricultural property of the submerged region. Among the products of this region last year were 466,056 bales of cotton, worth \$16,312,000; 12,525,645 bushels of corn, worth \$3,995,278, and 9,033,878 pounds of sugar, worth \$271,016, the total production, including minor crops, representing a value of \$21,782,180 on the plantation.

Good Insecticide.

A most excellent insecticide is gasoline. The housewife can easily rid her carpets of moths and fleas by its use. For such purpose take a common watering pot with a fine rose, and having raised the windows and opened the doors of the room so the fumes may readily pass out, for they are explosive, sprinkle copiously around the margin of the carpets and then more lightly over the whole. Every insect and every egg of an insect that is touched will be destroyed as if by fire.

In the garden it is no less useful. Perhaps the best way to apply to plants standing in the ground is with a brush, an old paint brush answers the purpose well. Take any convenient dish or pot and fill two-thirds with water and the balance with gasoline. The water will retard evaporation and assist in spreading the gasoline to every infected portion when the brush is applied. Most kinds of scale are killed effectually with one application.

For ridding plants in pots of insects, fill a tub or other deep vessel nearly full of water and pour a little gasoline on surface, then dip the plant top downwards, and at once withdraw. Every portion will be touched with the gasoline, and it will do its perfect work. I have not tried it on tender plants, and should hesitate to do so till a trial should be first made on a leaf or two, as a test.

I save my seed peas from the weevil by first letting them get dry, when they are put into a convenient dish, covered with water into which has been poured a little gasoline, say a cupful to half a peck. The peas are then thoroughly stirred for some minutes, when they are drained off and put away. A second application is rarely necessary. In this case the gasoline has to penetrate the peas and kill the eggs of the weevil, and it does it most effectually.—H. G. P.

Prospects in Wash.

Mr. J. F. Cass, secretary of the State Board of Horticulture, who has made a trip to Skagit county, reports fruit crops uninjured, so far as he has heard, by the frost of several nights ago. All growers in the Skagit valley are busy seeding and a fine crop is promised. Wheat and barley in the Whidby island is growing well. Fruit trees in the White and Puyallup valleys are in full bloom.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 15, 1896.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.

ROSE AND DUANE BYS.

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

(Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per agate line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Types in Plants. A CORRESPONDENT writes that he is confused by the many varieties of Dianthus, Pinks, and Carnations, as listed in the seed catalogues, and further asks how to distinguish between Clove Pinks, German Carnations, and Perpetual or Tree Carnations? Are the Carnations grown by florists, such as Daybreak, Wm. Scott, etc., a distinct class from these, and if so, what special name is used to designate them? There is also in some seed lists Florists' Pinks.

That our correspondent should be somewhat bewildered is not to be marvelled at. Sometimes it is well nigh impossible to unravel the tangle of popular titles given to garden strains of plants. But in the case of the Carnation and its allies, the difficulty is not great. The question opens up a line of thought of much interest, and one to which we have often referred in these columns, namely, the creation of distinct types—

we had almost said species—by the horticulturist. Any one whose interests cause him to watch the development of our garden denizens, or who has occasion to trace back to its origin some plant, or a type of it, cannot fail to be impressed with the marvelously plastic nature of such things. In very many of our garden flowers, fruits, and vegetables which are known to be "developed" (convenient word) from a given point, there are differences far greater than those which are allowed between the species of the botanist. Verily, a species is a judgment, as Asa Gray said—and all judgments are liable to error.

Dianthus is the name of a genus of plants which embraces several species found in our gardens. Thus the Sweet William is *D. barbatus*; the Chinese Pink is *D. sinensis*; the Maiden Pink is *D. deltoides*; and so on. The botanical distinction of all these could be found in any review of the genus *Dianthus*. The Garden Pinks are all varieties of one species, *Dianthus plumarius*, and are dwarfer and more hardy than the Carnations; the exact origin of these latter is not positively known, but our ideas lean toward the belief that they (in all their sections) are merely divergent forms of one species, *Dianthus Caryophyllus*.

Any two seedlings of any given plant will differ from one another in their individuality, and if the cultivator, by careful selection along special lines, enforces some one feature at the expense of others, a new strain, and later a "type," is produced. Examples of this can easily be seen in the various types of Chinese Primrose, of which one, called *Stellata*, was recently figured in these pages (AMERICAN GARDENING, March 20, page 201). In that instance we have proof positive that a distinct type—it is more than a strain—has grown up under the cultivators' careful handling in preservation of such individuals as were in line with his requirements, and by the suppression of all that showed divergence or retroaction—in other words, selection along special lines.

The "clove" Carnation is perhaps the oldest and best fixed self-colored double type of the species, *Dianthus Caryophyllus*, and undoubtedly has its title simply from its fragrance. The Perpetual or Tree Carnations are another type quite distinct, yet undeniably a mere form of the species just referred to; they differ from the cloves or ordinary double selfs in their power of winter flowering and in the long extended period of flower.

It would seem that the American Carnation is yet another type of the same species—certain it is that the class which embraces Daybreak, Wm. Scott, etc., is a perfectly distinct one, and must be designated American. On page 35 of the present volume will be found further information on this point.

The title Florists' Pink properly be-

longs to the varieties of *D. plumarius*. What is meant by German Carnation we do not know, unless it be German grown seed of the border or clove.

The Apple Market.

At the present time Boston is the lowest apple market in the United States; while we have been shipping a good many to England, there have been many carloads sent to some of the western and southwestern cities. There are no large quantities held in New England, but quite a good many of our Maine and New Hampshire farmers have 50 to 60 bbls. each still in bins, which they are offering for sale at 60c. to 75c. at country points. For some unknown reason they have not heard of the late advance. As an illustration, this week, Ben Davis apples were bringing \$3 in Minneapolis, \$2.50 in Philadelphia and Chicago, and only \$1.50 in Boston.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

The Brighton Grape.—I noticed that C. C. N., in AMERICAN GARDENING for Apr. 24, recommends the Brighton grape for a red one. He could not have made a better selection. It is quite early, sweet and tender in flesh, bunches and berry of good size—I have had a cluster that weighed nineteen ounces—an abundant bearer, a vigorous grower, and hardy enough to endure any temperature we ever have in eastern Massachusetts. But in one very important point it is weak. And no recommendation of the vine should ever omit this fact. *It will not do well if grown alone.* It is so deficient in pollen that large and very promising clusters will mature very few grapes unless some other variety, blooming at the same time, and abundantly provided with pollen, is grown in such close proximity to it, that it can borrow of its neighbor the pollen so necessary for fructification. In a word, then, if any of your readers wish to raise one of the most delicious grapes that can be grown out of doors, let him plant a Brighton. But if he would not be sadly disappointed at the meagerness of his crop when the fruit comes to ripen, let him not fail to set, in its immediate vicinity, a Concord or a Worden, or some such vigorous pollenizer.—W. H. W.

Manhattan (Kansas) Horticultural Society met at the house of Prof. Willard, in Manhattan, on Apr. 22, and listened to two very good papers; one by Mr. J. S. C. Thompson on "Aquatics for the Amateur;" and the other, by Mr. L. R. Elliott, on "Trees." The latter paper was an earnest plea for the planting and care of trees, and the preservation of our natural forests. The standing committee on entomology reported that canker worms were hatching and working in neglected orchards, but very few were to be seen where trees had been well sprayed last year.

Crops in Oklahoma.—Prospects for an abundant crop of fruit are exceedingly bright in Oklahoma. A light frost early in April, followed by two weeks of moderately cool weather, served to thin out the fruit, and there is now left an ideal setting on both peach and apricot trees. Before the end of May they will begin to be marketed, and an uninterrupted supply of fruit will then continue until October. Garden crops promise well.—JOHN FIELDS, Stillwater, Okla.

The Best Dewberry.—Between *Lucretia* and *Austin's Improved*, which is the better?—M. W. SMITH, Vt.

Early Spring in Newport, R. I.—Vegetation is about one week ahead of what it was last year at this time. *Begonias* of the *Vernon* type are being grown in unusual quantities here this year, in many cases largely displacing *Alternantheras* for carpet bedding.—ALEXANDER MACLELLAN.

Scale Insects.—A number of my apple and pear trees were covered this spring with what was claimed to be the *San José* scale. There were small white patches, no larger than a pin-head, close together all over the trunks and branches, which on pressure of a knife-blade showed a red exudation like blood. I sprayed them thoroughly, before the buds appeared, with a mixture of 5 lbs. whale-oil soap, 5 lbs. caustic soda and about a gallon of coal oil, in a barrel of water, which seems to have destroyed a great many, as now, on pressure, they mostly drop off like specks of whitewash. Is this the real *San José* scale, and have I taken the proper course? I can hardly conceive how such an insignificant looking ailment could be fatal to trees which I have read the *San José* scale is.—K., Phila.

[From your description we should judge that your trees are attacked by the pernicious *San José* scale, but could not give a positive statement without seeing some specimens; we should be glad to examine such for you. In last issue (page 317) is a full description of this pest, and the reason of its being so injurious is discussed. Your remedy seems to have been effective, and so long as it has not hurt the buds, persist in it year by year—or else dig up and burn the trees.—Ed.]

Apple and other Trees Damaged by Bad Pruning.

It is a perfectly safe conclusion, I think, that if never a saw or knife came to our apple and many other trees, they would be better off than by the bad pruning that generally prevails. Trees like the one here figured, or even worse, are much too numerous about our country homes, trees with long leaning trunks, bearing many a scar from the battle with the ax, trees with a small head, and showing a lack of vigor and fruitfulness, trees that are rather a blemish than an attraction to the farms on which they grow, and which in effectiveness as wind-breaks to the buildings were not what they might be.

Against these put some apple trees that are almost as nature made them, neglected seemingly, but in many respects fine in their neglect. I know one orchard that had never a saw or knife used in it from the day of planting. Bushy headed? Yes, rather, but withal, great vigor and fruitage; straight, stout trunked, well balanced, handsome in verdure, effective as shelter from the wind.

With such object lessons before me, it is easy to question whether nine-tenths of the tree pruning that is going on all over our country is not worse than wasted effort.

Beginning with the trunk, let me say that your poor orchard, as a rule, is one in which long trunks secured by pruning are much in evidence. What is the objection to the denuded trunk? will be asked. It is this: Nature has provided in the low-branching habit of the apple that the trunk is benefited by the shade it derives from the tree. The wise orchardist does not despise the lesson. The intense rays of the sun on the bark affects its functions as related to sap flow in a way that is not most favorable to the tree. If the tree is carelessly set so that it soon leans, bad effects of the sun on the bark are greatly aggravated, for leaning in most

places to the northeastward, away from prevailing winds, the sun just after noon strikes the trunk almost squarely with great force. So, in proportion as the branches are lower and the head more spreading, the trunk is the better protected from the sun.

It is not rare to find apple trees with large scars like those shown in the engraving, and sometimes even worse. The history of such scars in many cases is about as follows: The trees are received from the nursery having the lower branches about four or five feet high. At the time the trees are set no special attention is given beyond seeing that the head of the tree is about right—as, in fact, it is. But after some years of growth the lower branches appear so prominent, and seem so much in the way of man and team that the owner decides to cut them. In many cases a stump of such length is left that the bark cannot grow over it and this always leads to ultimate decay and a hole in the trunk, which is some measure of

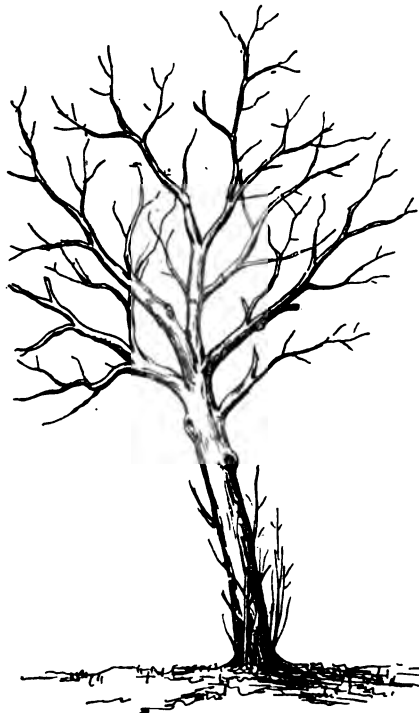


FIG. 92.—APPLE TREE A VICTIM OF BAD PRUNING.

weakness. The removal of the lower branches, in addition, subjects the trunk to increased sun exposure; another source of weakness.

Next comes the opening of the head to let in light and sunshine, as prescribed by many instructors. Long experience shows that this, in American orchards, is much less needed than is commonly supposed. As between our intense sunshine and the frequency of winds that sway the branches, there is no special lack of sunlight in trees that may not happen to be trimmed to admit the same. As for providing an abundance of room for the picker to move around on the top, this is of little moment because the fruit can be picked to better advantage from the outside of the tree by the use of proper ladders than in any other way. The point of the entire matter is that if we cut away a number of the lower branches and then additional ones in the top, we are working away from nature, and in the direction of shortened life and usefulness.

Sometimes, again, the pruner has some fanciful notion about preserving the symmetry of a tree, and off may go a thrifty, bearing branch, leaving some half dying branch to stand because tending to better shapeliness. This is a great mistake, especially in a tree already somewhat impaired by bad pruning, and it is on such trees usually, that unthrifty branches the soonest appear.

Cutting away a branch, say two inches in length, in a small tree that may have a trunk diameter of three or four inches, is a more serious matter than to cut one of the same size from an old tree, with large trunk and branches. In older trees I sometimes cut back branches that have become stunted by several heavy crops of fruit, taking them off down where some vigorous laterals start out. Under the circumstances, there appears to be no detriment to the tree, while its bearing power is maintained.

Dead branches, of course, must come out. In cutting these, or in any other case of pruning, the place to cut is just where the swelling of the bark of a limb begins. Cut back of this and the size of the scar is increased unnecessarily; leave more stump and the bark may never grow over, because of the stub of wood in the way. ELIAS A. LONG.

The Effect of Cold on Seeds.

Wrapping seeds of wheat, oats, fennel, and the sensitive plant in packages of tinued paper and inclosing the whole in a sheet iron box, hermetically sealed, I placed them under the cover of a wooden box in a compressed air refrigerator for meats, where they were exposed for a hundred and eighteen days to repeated but not continuous refrigerations, most of which lasted twenty hours each. The lowest temperature reached was -53.8°C . (-65°F .); the highest, -37.78°C . (-36°F .); and the mean, -41.93°C . (-43.4°F .). After each refrigeration the temperature rose to that of the interior of the receiver, but slowly, while the refrigerations were rapid. After the conclusion of the experiment, when taken out of the refrigerator and planted, the wheat, oats, and fennel came up promptly; only thirteen out of sixty seeds of sensitive plants germinated, and of *Lobelia* seeds, which were too small to be counted, only ten. The failures of the sensitive plant seeds could not all be attributed to the cold, for others of the same species which were not refrigerated did but little better. The *Lobelia* seeds were, however, certainly killed by the cold, for the control seeds germinated abundantly. It is safe, too, to infer that seeds can remain inert and unharmed in a medium unsuitable for respiration, provided nothing is present to injure their protoplasm through chemical action. Such a medium, for example, would be an atmosphere of carbonic acid.—M. C. DE CANDOLLE, in *Appleton's Popular Science Monthly* for May.

Fruit Growers Surprised.—Old fruit growers of Western New York say that they are surprised at the backwardness of a spring that opened with such promise, and that it is probable there will be considerable disappointment over the fruit crop this year, both as regards quantity and quality. The cheering feature of the situation is that the later varieties of fruit are said to be all right. The early fruit and the peach trees have been badly damaged by the late April frost.

Fruit Prospects in Michigan.—At the April meeting of the Grand River Valley Horticultural Society reports on the prospects for the fruit crop this year were made by Thomas Wild, of Herrington; H. O. Brayman, of Grand Rapids township; A. A. Wilder, of Walker; H. H. Hayes, of Talmadge; Charles W. Garfield and representatives from Hart and Benzie counties, all these gentlemen said that the prospects are good and that the peach crop promises far better than had been feared.

Notes on Peach Growing.

As an experiment to reach the people more completely, the Farmer's Institute, of Shelbyville, Mich., K. L. Butterfield, Supt., arranged with Mr. R. Morrill, of Benton Harbor, to give a series of lectures on the subject of Peach Culture. Mr. Morrill is well known to every fruit-grower in West Michigan, and is recognized as one of the most successful peach-growers in the country.

He advised planters to select high rolling land, with good fertile sandy soil and not too hard subsoil; never plant on the north-east side of a hill. Cold air was compared with water, as it will run down hill and settle in the valleys if there be no outlet; always see that there is air drainage as well as water drainage. Never plant large or over-grown trees, and not more than one year old. Before planting, be sure to have land well ploughed and harrowed; mark with a common corn marker twenty feet each way. With five men one can plant 1000 trees per day; if trees are small with plenty of body buds, trim up to whip-stocks, eighteen inches or two feet high; if trees are large, it is better to cut off a little higher, and leave about four limbs near top cut back to five or six buds.

As to cultivating, pruning, fertilizing, etc., commence cultivating soon after the trees are in blossom by ploughing, not too deep; going from the trees one year, toward them the next, and never any closer than two feet from the tree; that space thus

was complete without Hill Chili; old, tried varieties are best. Elberta, Crosby, and a few others are coming to the front.

The Roofing Question.

It is a well known fact that the most expensive item of repair on farm buildings is that which relates to the roof. So very much depends on a good sound roof for buildings that no amount of time or expense should be spared to secure that which is best and most durable. A leaky barn roof may, and not infrequently does, mean the loss of an entire season's labor. Hay or grain that becomes damp and musty from leaky roofs, not only loses its food value, but is unsalable at any price in the market. Houses with leaking roofs are not only disease breeding because of thin, damp and unhealthful condition, but soon become almost uninhabitable from falling plaster or unsightly from mildew and water stains. Temporary repairs will suffice but a short time. There is but one remedy, and that is a new roof. Now while you are about it, you might just as well put on a roof which will last you the remainder of your days, and which will insure you against danger from fire, from flying sparks falling upon it, etc. In other words, put on a corrugated or sheet iron or steel roofing. The first cost, when you consider that you can easily lay the roof yourself, is but little higher than shingles, and will outlast them by far. Our advertising patrons, the Berlin Iron

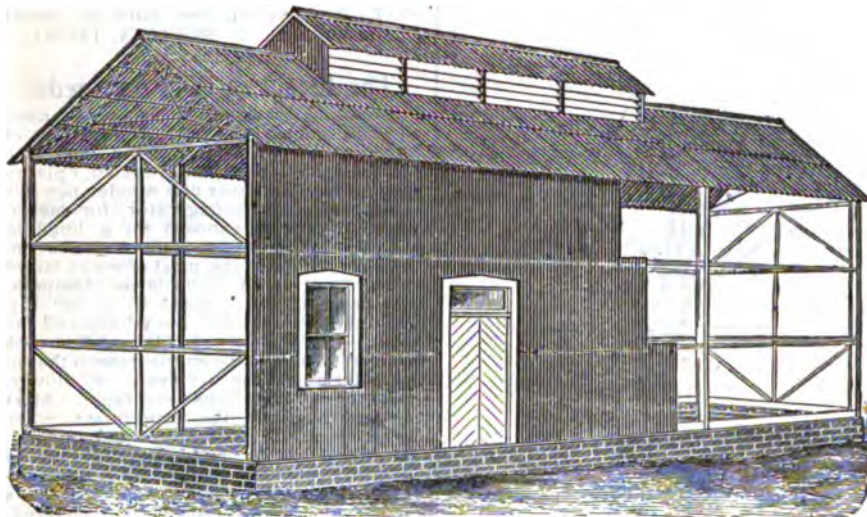


FIG. 93.—A FIREPROOF ROOF.

left to be worked with a hoe. Harrow thoroughly till the middle or last of July; in September, sow to oats, to take some of the moisture out of the land, which will help to harden the trees, and will also catch the leaves as they drop, leaving a good coat of manure for spring.

Unleached ashes are used in great quantities, with occasionally a little bonedust. Pruning commences in spring when frost is not in the trees, annually cutting back one half of last year's growth, by this process a tree four years old will measure 14 feet across and 14 feet in height, bearing from 3 to 4 bushels. In thinning leave the peaches about 8 inches apart. By this method Mr. Morrill has had sixteen Gold Drop peaches fill a fifth basket and weighing eight pounds. He thinks jarring of the trees the best means for getting at the curculio, also gather all stung fruit and scald them in a cauldron of boiling water. The borer must be dug out; a good way to prevent it from getting into the tree is to draw the earth up around each tree to about 8 inches in height in June, and then hoe away in September. [See our issue of April 17 for full instructions.—Ed.]

Harvesting, marketing and varieties: Use a platform wagon that can turn short around the trees without injuring them. This wagon distributes empty baskets and draws full ones to the packing house. The Climax peck basket with handle is used. In the packing house the peaches are graded by experienced hands. The speaker said he had no real choice of variety, but no orchard

Bridge Co., are making both smooth and corrugated iron and steel roofing, and will be pleased to submit you estimate or send you circulars.

Business Notes.—The Lyon Bros. Company of New York City has been incorporated for the purpose of dealing in foreign and domestic fruits. The company's capital stock is \$40,000, and the directors are Leroy M. Lyon of Cranford, N. J., and Cyrus Miller and Alvah Miller, of Brooklyn. Executions have been issued against J. J. Odil, doing business as Odil & Co., wholesale dealers in fruits, produce, etc., at Nashville. An attachment was obtained against him in New York City a week ago for \$700.

Shade Trees in Massachusetts.—During the past two years the Southern Berkshire Improvement Association, through the medium of the Housatonic Agricultural Society, has endeavored to promote the planting of shade trees by offering money prizes. Sweden has set an example that might well be followed in this country. There the school children are given practical instructions in forestry through planting trees each year, and as a result in 1896, 600,000 trees were planted by the school children of Sweden.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

Life and Health

Happiness and usefulness, depend upon pure blood. Hood's Sarsaparilla makes pure blood. This is the time to take Hood's Sarsaparilla, because the blood is now loaded with impurities which must be promptly expelled or health will be in danger. Be sure to get only

Hood's Sarsaparilla

The One True Blood Purifier. \$1. six for \$4.
Prepared only by C. I. Hood & Co., Lowell, Mass.

Hood's Pills cure nausea, indigestion, biliousness. Price 25c.

FLOWERING PLANTS—CHEAP BY MAIL.

Healthy young stock, average prices from one to two cents each. Send for Price List.

E. FRYER, R. R. Ave. and Hill St., BROOKLYN, N.Y.
Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.

Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the
Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

INCUBATORS \$25, \$15, \$12 each.
Brooders, 8 styles, \$6.
Fowls, eggs, Ill. str., 2c. J. A. Chelton, Fairmont, Md.

Mention American Gardening when you write.

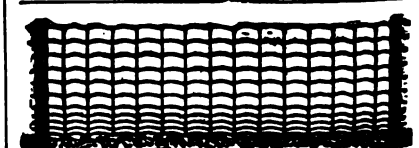
SNIPS Then The best for florists, Holders, gardeners, etc., is
Kelley's Florists' Shears
and Flower Gatherers.
Circular free. FLORISTS
SHEAR CO., Fremont, Ohio.
Mention American Gardening when you write.

CALIFORNIA LANDS ARE HERE

and only \$25 to \$35 per acre AT ESCHMUND. Grows fine oranges, lemons, olives, peaches, apples, hay, grains, etc. Best summer and winter climate in U. S. Send stamp for illus. pamphlet to Home State Land & Town Co. at Eschmundo, Los Angeles or San Diego, Cal.

Mention American Gardening when you write.

EARN A BICYCLE
600 Second Hand Wheels. All Makes. GOOD AS NEW, \$5 to \$15. New High Grade models, fully guaranteed, \$12 to \$25. Special Clearing Sale. Shipped anywhere on approval. We will give a responsible agent in each town free use of sample wheel to introduce them. Our reputation is well known throughout the country. Write at once for our circular.
N. L. MEAD CYCLE CO., Wabash Ave., Chicago, Ill.
Mention American Gardening when you write.



3 Grand Letters 3

In the April "Hustler," one from a despondent agent in Oregon to a successful California agent, his wife, also a "Page enthusiast," answers the letter, sending copy to her husband, who supplements with one of his own and sends us copies of all three. If interested in fencing, send for free copy.

PAGE WOVEN WIRE FENCE CO., Adrian Mich.
Mention American Gardening when you write.

Market Gardeners

SHOULD TRY OUR

W. & D.'s Self-Blanching Celery
W. & D.'s "Bennett's" White Spine Cucumber
W. & D.'s Improved Am. H. Crown Parsnip
W. & D.'s American Beauty Pea
W. & D.'s Deep Scarlet Forcing Radish
W. & D.'s Improved White Bush Squash

Descriptive Catalogue Free, by mail.

WEBER & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, May 11, 11 A. M.

Palms and Decorative Plants and all kinds of summer bedding stock.

Friday, May 14, will be a sale of the same kind of plants.

CATALOGUES FREE.

Mention American Gardening when you write.

CLEARY & CO., 80 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on

Tuesday, May 11, at 11 A. M.,
Rhododendrons, Roses, Dahlias, Canna Roots,
Decorative Plants, and a complete line of
Summer Bedding Stock.

Catalogues free.

Sales every Tuesday and Friday.

Mention American Gardening when you write.

R. M. GARDNER & CO.,
199 Fulton Street, NEW YORK.

Will sell every TUESDAY and FRIDAY
at their rooms at 11 a.m., a general line of
Nursery Stock and Spring Bulbs and a large
assortment of Bedding plants.

Catalogue on application.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO.
Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

50 BEDDING PLANTS FOR \$1.00

All are fine plants in bud and bloom; too
large for mailing; must be shipped by express.

JNO. E. DE WALT,

Box 32. Carlisle, Pa.
Mention American Gardening when you write.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

The marriage of Robert Henderson, gardener at Longue Vue, Hastings-on-Hudson, N. Y., to Ida May Walters, of 130 West 63d St., New York City, was celebrated at Christ Church, West 71st and Boulevard, New York City, by the Rev. J. S. Shipman, Rector, on April 19. The function was attended by a large circle of friends and relatives.

C. Godfrey, for some time past engaged on the L. Toplitz estate, Irvington, N. Y., is in town seeking a situation.

Mr. Karl Keppner, of Rexburg, Idaho, asks for the address of his sister Rosa (Mrs. Jacob West), who came to this country from Baden, Germany, in 1868.

Mr. A. W. McIntosh, well-known as a gardener and writer on horticultural topics, and who laid out the beautiful grounds of A. A. Buell, Esq., Burlington, Vt., has taken charge of the estate of Gen. I. M. Brown, Portland, Me. Under his superintendence, many improvements will be made.

Auction Sales.

Tuesday, May 11. — Hardy Roses, Standard Roses, Lilacs, Hydrangeas, Nursery Stock, Spring Bulbs and Bedding plants, at Elliott's Rooms, New York.

Roses, General Nursery Stock, Bulbs, Rhododendrons, Azaleas, and Bedding plants, at Cleary's Rooms, New York.

Pæonies, Flowering Shrubs, Bulbs, and Bedding plants, at Gardners' Rooms, New York.
Friday, May 14. — Sales will also be held as indicated above.

Meetings.

Tuesday, May 11. — American Institute Farmers' Club, New York City. Exhibition of and discussion on Flowering Shrubs.

Wednesday, May 12. — Morris Co. (N. J.) Society at Madison.

Newport, (R. I.) Society.

Saturday, May 15 — Lenox, (Mass.) Society.

Newport, R. I.

A meeting of the Horticultural Society was held on April 28; the attendance was very good and a number of ladies were present. Dr. Frederick Bradley, the president, occupied the chair, and introduced Mr. John N. May, of Summit, N. J., who gave an interesting lecture on "Flowers and Gardens," treating his subject in an entertaining, popular manner; he had on exhibition blooms of Rose President Carnot, also Carnations Maud Dean and Lily Dean, to each of which the committee on awards granted a certificate of merit.

Lenox, Mass.

The Horticultural Society held its regular meeting on Saturday, May 1. Mr. George H. Thompson exhibited a vase of Carnation, Uriah Pike, a very intense crimson tree Carnation of English origin, to which a first-class certificate was awarded.

A committee was appointed to draw up a schedule for a series of exhibitions, to be held one at each meeting throughout the year.

Orange, N. J.

The New Jersey Floricultural Society held its regular monthly meeting on Monday, May 30. Dr. Kitchen presented the report from the Exhibition Committee regarding a fall show, also a letter which he had prepared which was to be sent to the chief residents of the Oranges seeking a guarantee fund of at least \$500 in order to save the society from a deficit. Without his guarantee he did not think the Society should hold an exhibition. It was determined by the members present to present a certain number of children in all the schools with Chrysanthemum plants some time in June. Several thousand plants are already promised for this purpose, and more are expected.

Peter Duff, gardener to J. Crosby Brown, exhibited a handsome plate of Sharpless

strawberries. The fruits were well colored and of large size.

James W. Withers spoke upon the forced strawberry for market; also other fruits and vegetables, including cucumbers and lettuce, incidentally making use of the remark, which rather astonished his audience, that there was over one million square feet of glass in the form of greenhouses alone now in use producing the above for the New York market.

Mr. De Forest, of Hitchings & Co., will, at the next regular meeting, June 7, deliver an address upon Greenhouse Construction.

New York.

On Tuesday, May 11, at the rooms of the American Institute, there will be an exhibition of hardy and native wild flowers and flowering shrubs. A very large exhibit is expected. A leading feature will be the correct naming of the exhibits, and to this end several experts will be on hand to furnish the same if needed. Dr. N. L. Britton, Director of the New York Botanical Garden, will deliver an address, at 2 P. M., entitled "Hardy and Native Flowering Plants." Mr. S. B. Parsons, of Flushing, N. Y., will also address the meeting. The exhibition will be open from 2 till 9 P. M.

American Institute Fair.

Arrangements for the next great fair of the American Institute, to be held in New York City in the fall, are progressing very favorably. The horticultural and agricultural section, which formed such a feature last year, will be even more worthy on the forthcoming occasion. An appropriation of \$5000 has been made towards the premium list.

A Big Botanical Project.

The Board of Trustees of the Missouri Botanical Garden, better known as Shaw's Garden, have decided to increase its area by the addition of 100 acres and expend at least \$150,000 upon its improvement. Plans are being prepared by the Olmsteads, of Boston. The improvements will include the making of a "synopsis of North American flora." Representatives of every family of plants indigenous to the Continent will be planted. The collection will include fully 4,000 specimens. This will embrace all the flora of the Continent, except a few families of parasites that cannot be cultivated.

Northampton, Mass.

Under the management of Mr. E. J. Canning, the head gardener in charge, the Smith College Botanical Garden is progressing most favorably, and is developing quickly. Mr. Canning is now busily employed in the construction of a rock garden, which will be a notable acquisition. The walks will be grass, thus giving a natural setting to the rocks and the plants. From this garden is issued a seed exchange list, and it has become an important center of distribution to other gardens and collections.

Cinerarias.*

Though the fashions and fancies of recent years have left Cinerarias, like many other old-time favorites, somewhat in the background, still they are undoubtedly worthy of extensive cultivation. I must confess they are my special favorites, and would consider a greenhouse without Cinerarias during the early spring months very bare indeed.

There are few classes of greenhouse plants that afford more variety and brilliancy of color, combined with luxuriant foliage and compactness of habit if the plants be well grown. The season at which I find these plants most serviceable is Easter.

To have them at their best at that time. The seed should be sown by the first week in August in shallow pans of finely sifted, light, free soil, and only lightly covered. The pans should be placed in a cold frame, well shaded. The seed will germinate quite freely providing it is fresh. As soon as the

* Read before the N. Y. Gardeners' Society, by Robert Angus.

plants are large enough to handle they should be pricked out singly into three-inch pots, using the same compost as previously recommended. Great care must be exercised in watering at this time, as it takes some little while before the roots are strong enough to utilize much moisture. A light overhead sprinkling twice daily during bright weather is all that will be required. When the pots are well filled with roots, the plants should be shifted into six inch pots, using a mixture of fibrous loam, leaf mold and sand in about equal portions. I may state here that it is a great mistake to allow the plants to become severely pot-bound in any but the flowering condition. Neglect in shifting at the proper time tends to induce the plants to become wiry, and prematurely produce flowering stems, which means absolute ruin. It is advisable to house the young plants before danger of frost—a house where a temperature of not more than 40° by night, with a rise of 10° to 15° by day, is the most suitable. This temperature can best be obtained in a house with a northern aspect, such a one also affording partial shade, which is desirable.

The final shift requires to be given sometime after they are housed. This should be into nine-inch pots, using a somewhat richer compost than that previously given, and I have found the addition of well-decayed horse manure to the amount of one-third of the compost is the best means of enriching this soil. Watering at this juncture is one of the most important details, special care being exercised in never allowing the pot to become waterlogged from an over supply. On the other hand, severe dryness must be guarded against, as the plants flag very readily, but be sure they are dry enough to require water before it is given. An overhead damping twice a week during bright weather is beneficial; this is best done in the morning, thus allowing the foliage to get dry before the sun is high. When the plants become pot-bound give weak liquid manure once a week.

As soon as the center shoot is four inches high it should be pinched well down, which will induce the plants to branch from the bottom, and so produce a larger and more uniform head.

The most troublesome insect enemy is green fly, and to keep this in check tobacco stems should be plentifully distributed over the pipes and benches. Should this prove insufficient occasional light fumigations may be given. Snails are particularly fond of Cinerarias, and quickly disfigure the leaves if allowed to go unchecked. At the time of flowering an increase of shade will considerably prolong their beauty.

The foregoing remarks refer mainly to single flowered varieties, which are best and strongest when grown annually from seed. The double flowering ones do not reproduce themselves perfectly by this means, but require to be struck from cuttings. Even with the single varieties this latter means is the best to perpetuate distinct named kinds, but for general purposes seedlings are by far the most convenient, providing the strain is procured from a reliable source.

Obituary.

Benjamin S. Olmstead, a well-known landscape architect, died on Monday, May 4, at his home, 520 Nostrand avenue, Brooklyn, N. Y. He was 74 years of age, and had laid out many of the private grounds in Westchester County, and was the landscape gardener for the Larchmont Club. He remodelled the village of Williamstown, Mass., for the late Cyrus W. Field. Formerly, the deceased was in business in New York City with his son, George. He leaves a widow and two sons.

Death.—G. W. Lawson, a prominent fruit grower, of Marlborough, N. Y., died suddenly at his home on April 25. He leaves a widow, two sons and two daughters.

Beet Sugar.—I believe Nebraska is destined, through the sugar industry, to be one of the richest and best States in the Union. It has been demonstrated and we have it upon good authority of the German Government experts themselves that much of Nebraska is admirably adapted to beet raising.—Professor Nicholson.

Fertilizers for Cabbage.

A correspondent has asked about the use of phosphates and other fertilizers on cabbages. We referred the question to one of the largest firms of raisers of cabbage plants whose reply is attached:

As to the question, are phosphates and condensed fertilizers beneficial on cabbages while growing in hotbeds, and if so, at what stage of growth is it best applied? We reply: The application of condensed fertilizer to plants at the time they are in the hotbeds ought to be avoided if possible, as there is great danger of overdoing the thing, and either killing the plants or causing too tender a growth, which then makes the plants difficult to harden off previous to transferring them to the field or garden. The best fertilizer that we have found for this purpose is Peruvian Guano 6 per cent. (about a tablespoonful to the gallon of water) using it between the rows, care being taken to avoid getting it on the foliage if possible; about two applications are sufficient. This is not necessary until the plants have made their true leaves; then if looking yellow and stunted, apply as before mentioned, but not otherwise. As to what is the best fertilizer for field culture, and how many tons to the acre. We would say that we have grown good cabbage for market (that is summer, fall, and winter varieties) with an application of about one ton of good dissolved bone and two dressings of about 150 to 200 lbs.; each application of nitrate of soda; the first application after the plants have been worked over once, the second just before the heads begin to form. Both dressings had better be used between the rows, and not on the plants. If the ground was in an decent condition previous, then the above items, if the crop is properly worked, will bring cabbage that will sell as No. 1 in any market.—R. VINCENT, JR. & SON, White Marsh, Md.

The Perversion of Bounty Laws.

In the early years of the present century the State of Connecticut, having in view the promotion of its agricultural interests, offered a premium on the destruction of the crow; to be paid on the production of the head of the bird to the proper authorities. Thereupon the sons of the farmers desirous of earning a little money, then much more difficult to obtain than at present, diligently searched the woods for the nests of crows, from which at the proper time the eggs were transferred to sitting hens, by whom they were hatched and the resulting offspring brought up until their heads became available for presentation and procurement of the bounty. A summary of the general results of such experience would be somewhat as follows: First, a perversion of the legitimate industry of the hen; second, an elementary lesson for young persons in perpetrating frauds against the State; third, an impairment of the agency of a bird whose habits have been proved by subsequent scientific investigations to be beneficial rather than detrimental to the interests of the farmers. Again, in the early history of one of the Northwestern States of the Federal Union a bounty was offered, at the request of the farmers, for the heads of little burrowing animals known as "gophers," which attracted little attention till the experience of several years showed that the disbursements of the State on this account had become abnormal and were rapidly increasing. Investigation, says the Hon. David A. Wells, in Appleton's Popular Science Monthly, then proved that the raising of gophers by citizens of the State for the procurement of bounties had become a regular industry. A like experience in British India is also worthy of note. Some years since the Government, with a view of arresting the mortality among its native population from the bites of poisonous serpents, offered a bounty on their proved destruction; when it was found that for the sake of obtaining the bounties the cultivation of the "cobra" and other like snakes had been actually entered upon.

Niagara Co., N. Y.—The fruit crop of Niagara County was very seriously injured by frost on April 26. It is feared that the frost has caused thousands of dollars' worth of damage. The damage to the budding trees is considerable.

Grape Campbell Early.

It has been some time since a new black grape has been so well received as this which has been introduced this year by G. S. Josselyn, of Fredonia, N. Y. Wherever it has been exhibited praise has been its lot, and the Campbell Early, raised by the veteran G. W. Campbell, of Delaware, Ohio, bids fair to rank as one of the finest commercial black grapes, if, indeed, it does not prove to be the best.

The Concord has, with all its merits, certain demerits—it lacks packing and shipping qualities, but in the variety now under notice these points seem to be satisfied, and the handsome appearance is easily seen from the accompanying illustration, representing a bunch which weighed 19 ounces.

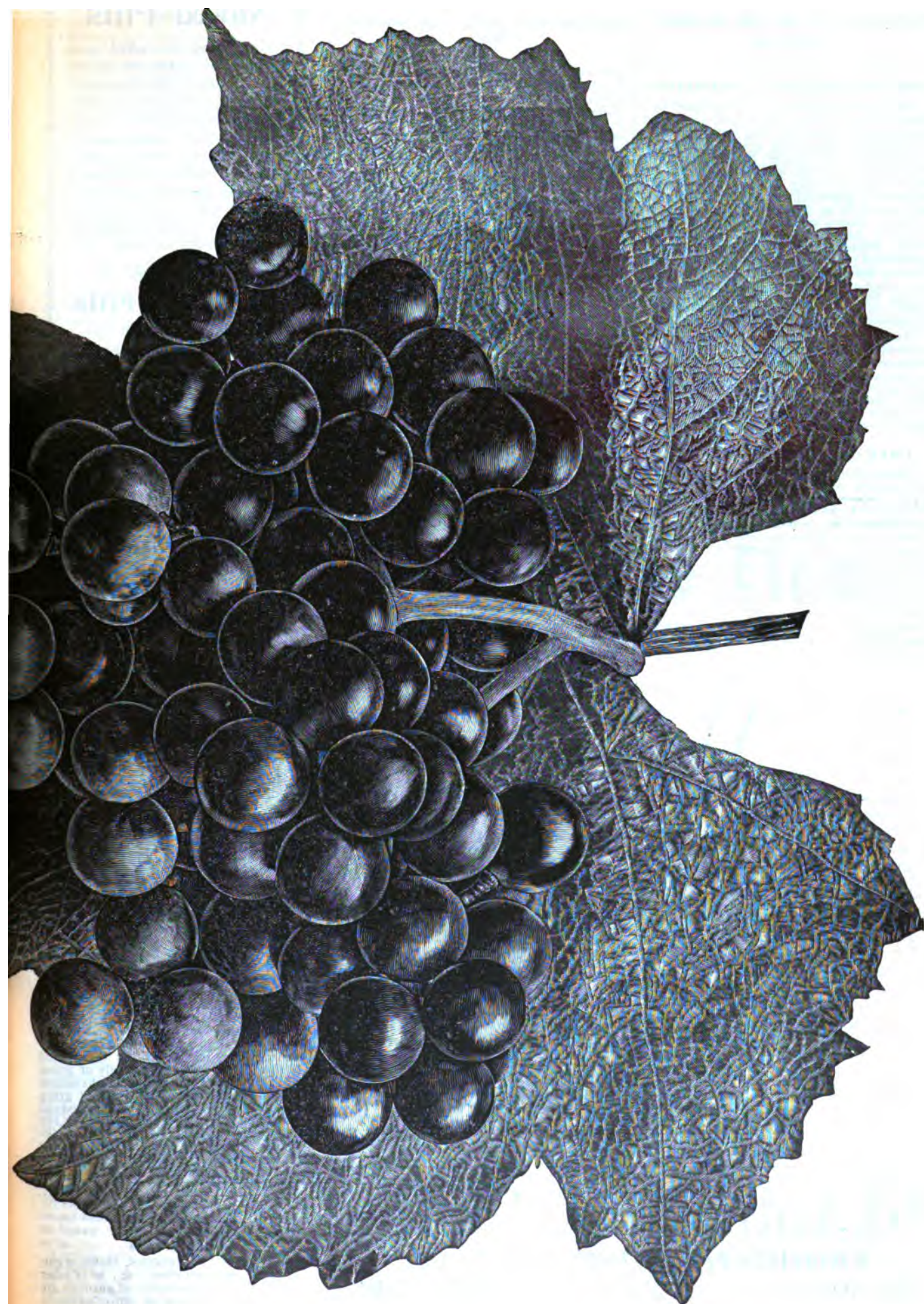
"A seedling of Moore Early crossed with pollen of a choice seedling that resulted from a cross of Muscat-Hamburg

FIG. 94.—GRAPE CAMPBELL EARLY.



on Belvidere. It is regarded by Mr. Campbell as the finest grape in all respects that he has produced in forty years of experimenting. Leaf large to very large, roundish, lobed, rich green, very downy beneath. Cluster large (one of a recent receipt having 113 well-ripened berries), generally shouldered, moderately compact, stem large, long, strong; berry large, nearly round, slightly elongated, adhering firmly; color black, with thin, light-blue bloom; skin thin, with slight pulpiness; flesh translucent, meaty, very tender, very juicy; flavor sweet, rich, aromatic; aroma delicate, not foxy; seeds small, 1 to 3, easily separated from the pulp and without the sharp acid found in many varieties of American origin; quality very good for both market and dessert. Season, early, ripening with Moore Early, but retaining its good qualities until quite late in season.

(Prof. Heiges.)



ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

NEW AND "RELIABLE" INCUBATORS.

The greatest advances of the past two years are in the direction of very small and very large incubators. The latter, holding thousands of eggs each, are, of course, for the very few; the former, for the hundreds who desire to try machine hatching with the expenditure of only five or ten dollars. There is a great call for these. Theoretically, there is no reason why the small incubator should not do equally good work with the best large ones, if equally well built. Indeed, not a few experts distinctly state their preference for the smaller sizes. Among the newer makes of small hatchers, at a small price, is one of 50-egg size, put out by the Reliable Incubator & Brooder Co., and known as "The Reliable Hen." It has, in addition to a thermostatic heat regulator, a patent turning device, and claims to be absolutely self-regulating and absolutely reliable. There is also a hot-air brooder as a companion piece. "Just the thing for an incubator party." And if a reliable incubator isn't also "just the thing" for the brightest youngster in the family, what is just the thing?

CARE OF SEEDLING CYCLAMEN.

Those who have planted Cyclamen seeds in January or February, hoping to get bloom next winter, will now be wondering what makes the Cyclamens so slow. One must remember, however, that patience is a very essential factor in growing Cyclamens. They simply will not, cannot be hurried. The bulbs must have time to form and swell. They may be transplanted at almost any time after they are large enough to handle, and if the surface of the soil has become pretty hard, delay will not help them, even though they are rather small. Two or three may be put in a tiny pot at first; and unless the grower can watch them closely, the pots would better be sunk in a box, and sur-

rounded by moss, kept nicely moist. The plants do not like strong sun heat at any stage of growth.

PANSIES FOR POTS AND WINDOW BOXES.

Those who have plenty of money can buy glorious Pansies from the florist, and have an early display, but she who sows pansy seeds now, may get good return for her money, as they may be had in bloom in June. These later sown plants are the most likely to do well, because they will not suffer from excessive fire heat, or from lack of fresh air, as do those sown earlier. It is rare to see an early-sown, house-grown Pansy plant, that is not drawn and weakened. But now one may get fine thriving plants. These will do finely, especially in window boxes, if shaded from the mid-day sun, and not allowed to become dry at the roots. It is sometimes said that Pansies do especially well near the sea shore, but it is doubtful if this would be the case, were they exposed to strong, drying winds. Heat and drought the Pansy cannot abide.

SOME OF THE NOVELTIES.

Among the new things for the window, *Asparagus Sprengerii*, while not so dainty and graceful as its predecessor, *A. plumosus*, may prove even more generally satisfactory. It seems a very easy plant to grow, makes good show of foliage, and is of an unusually fresh, lively, green color. *Aerua sanguinea*, or Blood Leaf, is rather dull and unattractive looking, though described as having "deep blood red leaves, very bright, rich and velvety." The plant is small, and quite compact in growth. *Clerodendron fragrans* should prove very desirable for those who like rosy white, jasmine scented flowers in summer. The blue *Solanum Wendlandi* is a semi-climber. It has not yet bloomed with us, but the pale blue flowers are said to be over 2 inches across, with from 30 to 50 in a cluster.

PLANTS TO BUY NOW.

To furnish the summer window with bloom needs but a few well selected plants. Among these may be mentioned the *Otaheite Orange* (don't get a small size for this), the

Naked Pills

are fit only, for naked savages. Clothes are the marks of civilization—in pills as well as people. A good coat does not make a good pill, any more than good clothes make a good man. But as sure as you'd look on a clothesless man as a mad one, you may look on a coatless pill as a bad one. After fifty years of test no pills stand higher than

AYER'S
Cathartic Pills

SUGAR COATED.

almost equally fragrant *Jasmine* flowered *Rhynchospermum*, *Petunia* "Defender," *Allamanda Williamsii*, *Justicia carnea*, *Abutilon Infanta Eulalie*, *Primula obconica*, the new Weeping *Lantana*, one or two *Gloxinias*, and one or two *Passifloras* if there is room for climbers. *Stephanotis* is a delightful old thing that blooms in summer. *Grevilleas*, *Palms*, *Asparagus* in variety, and many colored *Coleuses* will add greatly to the general decorative effect.

THE CALLA INSIDE.

In one word, don't have it there, at least not in evidence, after June. It wants rest, and the longer the rest is, perhaps the better. Many people start them too soon in the fall. If one have an outdoor garden, a sheltered spot there is the best summer retreat for the Calla.

CARING FOR THE CHICKS.

During the next six weeks the land will swarm with the young broods brought out. Almost as much a matter of course, the air will be filled with wailing cries for help from novice poultry raisers. If there are no lice on the chicks, probably the most frequent cause of trouble with those raised with the hens, lies in the food. Sound wheat and cracked corn are the safest foods in the hands of the inexperienced. Given these, about the only blunder that can be made is to over-feed. If the chicks are running free, there is not much danger even here. Ground bone is a most excellent addition to the food of all young chicks. Grit must be supplied, if it is not procurable on their range; and decidedly the best plan is to give the hen a roomy coop, while the chicks run at large.

SUPPLIES FOR BROODER CHICKS.

Much more care needs to be exercised with brooder chicks than with those running free. Lice, cold, and damp, over-feeding, lack of green stuff, lack of water, are the commonest causes of failure. Charcoal, grit, and ground bone are among the absolutely necessary daily supplies. Not less necessary are regular meals of green stuff. If feeding four times a day, let the second or third of these meals be entirely of green stuff. If giving five meals a day, let the second and fourth consist almost entirely of green supplies. Lettuce, young plantain, grass and clover sods, sorrel, and chopped onion and potato are available almost anywhere. Potatoes are not to be used too freely, however, and the same may be said of sorrel, the acid of which, in large quantities, appears to cause indigestion.

MYRA V. NORRIS.

Photographs

Of notable fruits, vegetables, views in gardens, or in conservatories, etc., or of other subjects of interest to lovers of gardens, are solicited for the purpose of reproduction in our pages.

ARMSTRONG & McKELVEY
Pittsburgh.
BEYMER-BAUMANN
Pittsburgh.
DAVIS-GRANBERRY
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR
Cincinnati.
ECKSTEIN
ATLANTIC
BRADLEY
BROOKLYN
JEWETT
ULSTER
UNION
SOUTHERN
SHIPMAN
COLLIER
MISSOURI
RED SEAL
SOUTHERN
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALEM
Salem, Mass.
CORNWELL
Buffalo.
KENTUCKY
Louisville.

WHAT has been your experience? That the "just-as-good," "sold-for-less-money" kinds are the most expensive? That the best, or standard, in all lines is the cheapest? The best in paints is Pure White Lead and Linseed Oil. (See list of the genuine brands.)

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

GLASS For Greenhouses, Grap-
eries, Conservatories, **GLASS**
Hothouses and Hotbeds.

VANHORNE, GRIFFEN & CO.

Importers of French Glass.

13, 15 & 17 LAIGHT ST., AND
62, 64 & 66 VARICK ST., NEW YORK.

Mention American Gardening when you write.

WHOLESALE MARKET REPORT

New York.

Business generally can hardly be called brisk, still stock is clearing out moderately well and prices are fair.

Hothouse strawberries are selling from 75c. to \$1.50 per quart; No. 2 are difficult to dispose of at any figure. Southern berries are many of them very fine and prices are down.

Hothouse grapes (American) are quite plentiful, and prices are ruling lower—\$2 per pound is the top figures for No. 1 Black Hamburg.

Hothouse peaches have just made their appearance. No. 1 quality made 40c. each. Tomatoes, 25c. to 30c. per pound.

Radishes, \$1.50 to \$2 per 100 bunches. Cucumbers are very plentiful, and are meeting with big competition from Florida outdoor grown; these are at this time very fine, and are selling at about \$2 per 100. Local grown are selling from 36c. to 50c. per dozen for No. 1.

Cauliflowers have been exceptionally good during the past week; some very superior heads made \$3 per dozen, but \$2 and \$2.50 per dozen was general figure for No. 1.

Hothouse lettuces are nearly over, and are now beaten in quality by frame-grown stock. Some very fine examples of the latter came in during the week from Long Island, and made 60c. per dozen; 50c. per dozen was the ruling top notch figure for fancy. By the barrel prices varied from \$1.50 to \$3.

Asparagus is plentiful and cheaper, and is now coming from many districts. Oyster Bay stock has made its appearance, the first lot selling for \$2.50 per dozen. Poughkeepsie stock is expected next week.

Mushrooms are selling from 25c. per pound, to 35c. and 40c. for very special stock.

Apples.

Ben. Davis, cold storage, fancy... \$2.75—\$3.25
Northern Spy, cold storage, fancy... 3.00—3.75
Baldwin, w'n N. Y., choice, per bbl. 2.50—3.00
Russet, Roxbury, State, per barrel. 2.25—2.62
Golden, State, per barrel... 2.00—2.37

Strawberries.

Norfolk, fair to prime, per quart... 10—15
North Carolina, choice, per quart... 13—15
—poor to good, per quart... 10—12
Charleston, prime to fancy... 16—20
—fair, per quart... 10—14

Vegetables.

Asparagus, Ch'n, Colossal, per doz. 3.00—4.00
—N. C., fair to prime, doz... 1.50—2.00
—Md. and Del., per doz... 1.50—2.25
—Jersey, fair to good, per doz... 1.50—2.25
Beets, Florida, new, per bush. crate 50—1.00
—Charleston, per 100 bunches... 5.00—8.00
Cabbages, Sav. & Ch'n, large, bbl. 2.00—
crate... 75—1.00
Celery, Fla., large to extra, doz. stalks 75—1.00
Cucumbers, Fla., fancy, per basket... 2.00
Lettuce, Norfolk, per basket... 50
Onions, Bermuda, per crate... 2.25
Peas, Charleston, per basket... 75—1.00
—N. C., per bushel package... 1.00—1.50
Radishes, Norfolk, per barrel... 2.00—2.50
Rhubarb, per 100 bunches... 1.00—2.00
String beans, Savannah, per basket 1.50—1.75
—Fla., round wax, per basket... 2.00—2.50
—Fla., green, per basket... 1.00—1.50
Squash, Fla., white, per bush. crate 50—75
—Fla., yellow, per bush. crate 75—90
Tomatoes, Fla., choice, ripe, per car. 3.00—3.50
—Fla., green and mixed, carrier... 1.75—2.50

Boston.

Hothouse cucumbers finding very quick demand—5c. to 6c. apiece. They can be had now in any first-class dealer's store, also very good shipping trade. Hothouse lettuce continues to give satisfaction, with a range of 50c. to 75c. per dozen.

Everybody eating dandelions, 25c. to 50c. per bushel; squash not so plenty, and easily brings 3c. to 3½c. per lb.

Mushrooms steady; fancy stock, 60c. to 75c. per lb.

Florida cabbage easier, \$2.25 to \$2.50 per crate; some South Carolina stock here not as heavy or as large heads selling \$1.75 to \$2.

Carrots firmer, 60c. to 75c. per bushel. We must have them in our daily soups; we are not in the soup, but carrots are. No change in turnip or beets, \$1.25 to \$1.50 a bbl., is all they ought to be quoted.

Bermuda onions, \$2.50 per crate; Egyptians, \$3 to \$3.25 per bag. Leeks limited demand, about 60c. per dozen.

Potatoes—Maine Hebrons, 48c. to 50c. A little boom seems to be on. Queens (a new variety, similar to Hebron stock), 60c. to 75c. per bushel; Early Rose has been in large demand for seed purposes, bringing 60c. per bushel; York State stock Rose brought 38c.

Asparagus is offered on the market in large quantities from North Carolina and Virginia, with a good large sprinkling of Massachusetts stock; generally sold \$1.50 per dozen.

Hotbed rhubarb, 3c. per pound; Illinois stock, 1½c. to 2c. per pound, according to quality.

Florida beans arriving in excellent condition; green about \$2 per bushel; wax, \$2 to \$2.50; not as many offered as wanted.

North Carolina and Virginia strawberries in large receipt, commanding about 13c. per quart.

Hothouse tomatoes, 20c. to 25c. a pound; Florida stock, \$3 to \$3.25 a carrier.

Apples: Choice repacked Baldwins, higher, \$1.50; fine yellow russets, \$1.75; bright red spies, \$2; it is the fancy high-colored apple that is wanted, and easily brings the top prices.

Artichokes find a limited sale, about \$1.50 per bushel. Oyster plant steady, \$1 per dozen.

Havana pineapples, very good demand, 12c. to 18c. apiece.

Some hothouse peaches on sale last Monday brought 25c. to 50c. each; rather an expensive luxury, still the rich can have them and the invalids must.

Southern peas seem to arrive in better condition than former years, bringing \$1.75 to \$2 per bushel.

Philadelphia.

There has been a large amount of business done in this market during the past week. Vegetables are arriving in much better condition, and sell more readily, in fact, in many cases, dealers have been sold out by 11 a.m., something very unusual for the past year.

Apples continue to be held firm, Fancy Baldwins are now selling at from \$2.25 to \$2.50. A few Russets are still coming in, but do not sell very freely.

Strawberries have been rather scarce in the early part of the week, and prices were rather firmer, the average has been 12c. to 20c. per quart.

New potatoes are arriving in larger quantities, and are of much better quality. Prices now range from \$3.75 to \$5.50 per barrel.

Tomatoes are now very plentiful, and are moving freely. Florida crates are selling at \$3 to \$3.50 for fancy, and \$2 to \$2.50 for fair to good.

Beans are moving very freely, the market having been well cleaned up. Green string beans are selling at \$1.25 to \$1.50 per bushel box, and wax at \$1.75 to \$2.

Peas, while not of such good quality as desired, sell at \$1.50 to \$1.75 per bushel basket.

Asparagus—Jersey stock is now very plentiful, and moving freely at from \$1.20 to \$2.50 per dozen bunches.

Egg plants—Florida, \$2 to \$3.50 per crate.

Onions—Bermuda, No. 1, \$2.50 to \$2.75; No. 2, \$1.75 to \$2.25.

Cucumbers have sold very well at \$1.50 to \$1.75 per crate, very few being left over.

New cabbage has sold very well at from \$1.75 to \$2.50 per crate, the market being well cleaned up each day.

Fell to the Floor.

HIS LEGS SUDDENLY CAME OUT.

Thomas P. Bigg, of Cleveland, Stricken as He was Preparing for a Visit to Friends.

From the Leader, Cleveland, Ohio.

Of the list of the many so-called incurable disorders none has proved to be more of an enigma to the most learned and accomplished physicians than locomotor ataxia, or as it is more commonly known, creeping paralysis. This dread disease has baffled their skill, and they have been forced to admit that they cannot successfully cope with it. All they have been able to do is to mitigate the accompanying pain and suffering; beyond this the science of medicine has been of little or no avail to the many unfortunate who have contracted the dreadful malady, which, many people, especially those who are thus afflicted, believe is a forerunner of the grim messenger of death.

Thomas P. Bigg, who lives at No. 1073 St. Clair Street, corner of Lawrence St., Cleveland, O., has been suffering from locomotor ataxia for nearly five years, and nothing but his wonderful vitality has prevented his dissolution long before this.

The malady is directly attributable to his exposure during army life. He enlisted in the Third Regiment Ohio Cavalry in Toledo, and served nineteen months in the volunteer service, and after the close of the rebellion, eighteen months in the regular army. "At first," he said in narrating his experience, "my stomach went back on me, and for six weeks I was laid up in a hospital in Texas. Ever since that time that organ has caused me trouble, and about seven years ago the doctor told me I was suffering from acute indigestion. That was bad enough, but four years ago last July paralysis came on, and I have been using these crutches ever since. The paralysis was in my legs, and it came rather suddenly. I noticed at first that my knees were a little stiff, a sort of rheumatic pain, you know. This quickly developed into paralysis.

"I tried all kinds of remedies, and I tried physicians, but I did not improve. All this time, though, I was holding my own—wasn't

getting any worse. A short time ago I was induced to try Dr. Williams' Pink Pills. I did not expect this last venture would prove any more beneficial than all the others which preceded it. But I am pleased to say I was most agreeably disappointed. Dr. Williams' Pills are simply wonderful. I began to use them two months ago. My legs then were perfectly numb and cold—nothing could warm them. After suffering with paralysis for more than four years, I now experience a comforting feeling of warmth in my lower limbs. I tell you I feel like shouting when I think of escaping from my bondage, and my mind is on the subject pretty much of the time. I intend to continue the use of the pills until my legs are as good and useful as they were in their best days, and I feel that will be soon."

"What effect have the pills had upon your stomach?" Mr. Bigg was asked, "as regards that" said he "you can readily believe that a stomach which has been seriously out of order for thirty-five years is in bad shape. Nothing used to stay on my stomach, and I was subject to violent fits of hiccoughing. Then I would have to take an opiate to get to sleep. But now I find that food stays on my stomach, though I do not suppose that organ will ever be in first-class shape again. Still I am satisfied to think that it is improved to such a degree, and that I can eat with a feeling of ease."

For six years until a month ago, October, 1896, Mr. Bigg kept a stationery and confectionery store at No. 347 East Madison Ave., directly opposite the Madison Ave. School. He sold out his business and can now be found at any time at No. 1073 St. Clair St.

Dr. Williams' Pink Pills are sold by all dealers, or will be sent post paid on receipt of price, 50 cents a box, or six boxes for \$2.50 (they are never sold in bulk or by the 100), by addressing Dr. Williams' Medicine Company, Schenectady, N. Y.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

Borberry, California Privet and Japan Quince

(For Ornamental

HEDGES.

HARDY ROSES ON OWN ROOTS.

Write for Prices to

FAIR OAKS NURSERY, OAK PARK, ILL.

Mention American Gardening when you write.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 665, ALBANY, N. Y.

Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 20 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America.

A printed list sent on application. Sales made at reasonable prices.

E. CORNING.

Mention American Gardening when you write.



We have the largest and finest collection of PALMS, ORCHIDS, FERNS and FOLIAGE PLANTS for Conservatories, Hardy Herbaceous Plants, Flowering, Shade and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting. Plants and furnishing stock (free).

SIEBRECHT & SON'S,

Rose Hill Nurseries, New Rochelle, N. Y.

Mention American Gardening when you write.

...THE COMPLETE...

BOOK CATALOGUE.

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers

The Fruit Grower

The Nurseryman

The Private Gardener

The Market Gardener

The Seedsman

The Farmer

The Poultry Keeper

The Student of Botany, Entomology and Ornithology

and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

Interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE Ptg. and Pub. Co. Ltd.

P. O. Box 1697, New York.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

MYRA V. NORYS has magnificent Black Langhans.

MYRA V. NORYS has White and Rose Comb Brown Leghorns, Knapp and other great prize blood.

MYRA V. NORYS, Cranford, N. J., fine thoroughbred poultry. All eggs, \$1.00 per sitting. A very few to spare from local trade.

DAHLIAS. 500 varieties. H. F. Burt, Taunton, Mass.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 466 W. Broadway, New York.

THE "RIDGWAY."—A new strawberry of great merit. For price of plants and free catalogue address M. H. Ridgway, Wabash City, Ind.

EARLY FORTUNE POTATO—Unexcelled for earliness and productiveness. Bushel, \$1.50; Barrel, \$2.75. R. C. Breck, Bridgewater, Mass.

DO YOU WANT the best flower pots? If so, send address to The Whilidra Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

EGYPTIAN or Top Onion sets cheap; one dollar per bushel in any quantity; purchaser to pay freight. W. W. Thompson & Sons, Station D., Milwaukee, Wis.

THE "IRON AGE" Garden Tools are light, strong and work "just right." High steel wheels, tubular frame, malleable castings. Write for catalogue. Bateman Mfg. Co., Box 206, Greenloch, N. J.

PROGRESS and Palmer Black Raspberries, Cuthbert red, Snyder Blackberry plants; immense stock, low cash prices, or will exchange for strawberry plants; cold frame wintered cabbages and choice seed potatoes. Ct. Valley Orchard Co., Berlin, Ct.

CALIFORNIA PRIVET makes the finest ornamental hedge and are perfectly hardy. Strong plants one to three dollars per hundred. Atlantic Coast Nursery, James H. Cornell, Proprietor, 608 4th Ave., Asbury Park, N. J. Reference list National Bank of Asbury Park.

PAPERS, MAGAZINES, ETC.—We will make you liberal concessions when you order other periodicals for the year, whether in connection with your own subscription or not. Send us your list for estimate American Gardening, P. O. Box 1697, New York.

BOOKS.—We can furnish any book treating on horticulture printed in this or any other country. Send for our Select Catalogue of Horticultural Books, free. American Gardening, P. O. Box 1697, New York.

BINDERS—Every subscriber should have one. We offer the best to be had, sent, postpaid, for 65 cents, or given free for two new subscriptions and the renewal of your own. American Gardening, P. O. Box 1697, New York.

PAPER TUBES FOR MAILING PLANTS—The most perfect contrivance for shipping plants through the mail so as to reach their destination in best condition; furnished in all lengths and diameters. All dealers in plants should have them in stock. Send for our price list. A. T. De La Mare Ptg. and Pub. Co., Ltd., P. O. Box 1697, New York.

WE HAVE BACK VOLUMES American Gardening for sale; of some years we have a good supply, others are short; bound and unbound. Will be pleased to quote prices on any year desired. American Gardening, P. O. Box 1697, New York.

HOME GROUNDS, HOW TO LAY OUT.—The most perfect plan ever given the public, by which to lay out an estate of one to ten acres or more. We give the cardinal principles which govern the art so clearly that all may easily understand. Heavy paper, safely packed, postpaid, for 25 cents. It will pay you to study this plan. American Gardening, P. O. Box 1697, New York.

THERMOMETER WITH WEATHER GLASS—One of the best combinations ever offered. Thermometer is especially scaled for greenhouse use, and we warrant it. Weather Glass is very correct, indeed. Both sent, prepaid, for two new subscriptions or 60 cents in cash. Highest recommendation from the trade and experts generally. You should not be without the combination one week longer. American Gardening, P. O. Box 1697, New York.

Questions Answered.

This is a Bureau of Information, to which subscribers can apply freely for advice on any and all subjects in the field of horticulture.

In order to lessen labor, and that the Editor and his friends may understand each other, the following rules must be observed:

Rules for Correspondents.

Questions must be concise, plainly written on one side of the paper only, and addressed INQUIRY DEPARTMENT, AMERICAN GARDENING, P. O. Box 1697, New York City.

Letters appertaining to subscriptions, or other business matters, should be directed separately; otherwise delay may follow.

The name and address of the sender is required, in addition to a nom de plume. Use a separate sheet of paper, not a scrap, for each question. Questions will be attended to without delay. If by mistake a query fails to be answered, it should be repeated.

Specimens of plants for identification must be good; mere scraps will not do, and no notice can be taken of such.

Questions relating to insects or diseased plants should always be accompanied by specimens, packed in a tin box, and forwarded at letter postage. Always send a liberal sample.

Conditions and soils vary so infinitely that we would be pleased to have our correspondents describe theirs.

Correspondents referring to articles which have appeared in AMERICAN GARDENING should mention page and date of issue.

We cannot promise to comply with requests to answer by mail.

QUALITY OF SOILS.

(What kind of soil, in its natural state, contains the largest per cent. of phosphoric acid?—SUBSCRIBER, Minn.)

—It is difficult to give a concise reply to this question. A trial is the most reliable method of determining whether or not a given soil requires an application of nitrogen, phosphoric acid or potash.

REMEDY FOR OYSTER SHELL SCALE.

(Herewith is a piece of a Lilac bush covered with scale; what is its name, cause, and remedy? The scales are present here in countless millions.—WM. H., New Jersey.)

—The piece of Lilac bush sent by our correspondent, is badly infested with the so-called oyster-shell bark louse (Mytilaspis pomorum). This is a very common scale, and has a very large number of food plants. It infests nearly all our fruit trees, a large number of shrubs, and various other plants. It is not nearly so destructive a pest as the San José scale, and can be kept in check very much more easily. The facts that the creature hibernates in the egg stage, and that the young all emerge usually within a period of three or four days from the time they begin to hatch, make it possible to reduce it very much by spraying with kerosene emulsion shortly after the appearance of the first young. Use it diluted with from ten to twelve parts of water. The hatching season usually lasts three or four days; would begin in New Jersey sometime between the 15th of May and the 1st of June. Spraying at this time will be effective, and so reduce the creatures that they will do little or no harm to the infested plants. If the shrub be badly infested, would advise the cutting out of the worst parts as soon as possible before the breeding season begins. In the fall or winter it would be a good plan to spray or wash the plants with whale-oil soap in water, at the rate of two pounds of soap to a gallon of water. This should be applied, however, during the dormant period of the plant, as it would injure the foliage if sprayed on during the growing season.—W. G. J.

WANTED, A HEDGE PLANT.

(Part of my country home adjoins a dairyman's place. What kind of a hedge can I plant along the fence, in a strip three feet wide, between a roadway and a fence, that the cows will not eat off? How would Roses do?—G. R., W. Va.)

—Roses would not make a satisfactory hedge for the purpose desired. Thorn would be excellent, or Cydonia japonica. How does the Osage orange do in your district? perhaps its growth is too much?

WEED ON LAWN.

(To J. L. E.)—The weed is Achillea millefolium, the only course is persistent weeding, or destruction by poisoning.

COMPOSITION OF BLACK MUCK.

(Does nitrogen or potash predominate in black muck soil, such as low, wild meadow land?—SUBSCRIBER, Minn.)

—Black, mucky soils usually contain an ample supply of nitrogen, and are very likely to be deficient in potash. The nitrogen is fre-

quently present in slowly available forms, but usually a sufficient amount is available for crops. Muck varies greatly in composition. The Massachusetts Experiment Station reports the following: Nitrogen, 0.07 lbs. per 100; potash, none; phosphoric acid, 2.33 per 100. The use of fertilizers containing about 10 per cent. potash and 6 per cent. water-soluble phosphoric acid on a mucky soil would probably be found satisfactory. Vigorous growth of leaves and poor production of seed indicate an excess of available nitrogen in the soil.

RASPBERRIES FOR VERMONT.

(We wish to set about an acre of red raspberries for market purposes. What kind will be best for Central Vermont?—M. W. SMITH?)

—Cuthbert does well anywhere in Vermont. Loudon is equally hardy and perhaps is more desirable. For early, Thompson's Early or Miller.—L. M. MACOMBER.

JAPAN PLUMS FOR VERMONT.

(What three or four Japan plums would be best to set in the central belt of Vermont for market plums? Would the Lincoln plum do well here? Would the new Hale plum ripen here? It is said to ripen in Connecticut about the middle of September. We usually have severe frosts October 1 to 10.—W. M. SMITH.)

—If the Lombard plum does well, the Abundance, Burbank, Willard, and Yellow Japan would do fairly well. Satsuma and Ogon 1 have had set some eight years, and they have given me no fruit; have blossomed two seasons. Abundance has fruited well. Burbank I have had three years; it stands the winters well, and it is the only Japan plum which I have discovered to have fruit buds on this spring. The Willard and Yellow Japan appear equally hardy in twig. The Hale I think would ripen, perhaps, as the first frosts usually do but little if any damage, but it is not yet tested here nor anywhere in Vermont. The Lincoln does well here as to hardiness, but it is new yet. The American plums are very desirable for Vermont; they are hardy in twig and fruit bud, and will fruit every year. The Chickasaw family are, some of them, when young, a little tender in twig, but hardy in fruit bud. The Japan plum trees are a little tender while young.—L. M. MACOMBER, N. Ferrisburgh, Vt.

GERMINATION OF WATER LILIES.

(Will seeds of Water Lilies and Water Hyacinths, sown about the first week in April, bloom before the middle of July?—M. R.)

—Seeds of Water Lilies are not all alike as to time of germinating and arriving at a flowering stage. Some seed will germinate in four days; others take four months, or even longer; it depends entirely on the species and the conditions whether congenial or otherwise for the seed and the seedling. It is possible for seed of the Zanzibar Lilies to produce flowering plants early in July, if sown the first week in April; it has been accomplished inside of three months without forcing. The seed should be sown in pots or pans and placed in water, where a temperature of 75° can be maintained with plenty of light and air. The plants should be pricked off early, and potted and repotted as needed, not allowing a check or suffering in any way. Water Hyacinths increase so rapidly by offshoots that few, if any, are raised from seed. I have had the Blue Water Hyacinth self sown, but could not say how long the seed was in germinating, nor if the plant flowered the same season.—W. TRICKER.

PAPER FLOWER POTS.

(To C. C. U., N. J.) The address of the firm for which you inquire is Aug. Rolker & Sons, 136 W. Twenty-fourth st., New York City.

DECAYING WOOD NOT MANURIAL.

(Will you tell me if the rotten trunk of an old tree, fine as powder, can be used as fertilizer, and, if so, for what, with best results?—C. C. U., N. J.)

—It has no special value, even in a compost heap it would have less value than leaves, and for seed sowing, etc., in the greenhouse it is dangerous, owing to a tendency to breed fungus.

ROSES TO BLOOM IN WINTER.

(I have a bench of roses, planted very late last fall, which have scarcely bloomed any, and are showing buds fast now, which I do not need. What would be best treatment, so as to have them come in good blooming shape for the winter.—ROSE GROWER, Oshawa.)

—Your best plan now will be to ripen up the wood, and rest the plants. Throw open the ventilators, and withhold water to a large degree. The principal point in ripening the wood and drying off, is to do so without shrinking the wood. So the process must be so regulated that the wood keeps plump all the time, while and after the foliage has left the branches. In order to secure this, the operator must watch carefully, that his treatment is not too drastic, or the plants subjected to sudden changes. If water be withheld suddenly, the foliage shrivels on the plant and does not drop, but continues to cling. When this is the case,

the ripening has been badly done, and ultimate results are likely to be poor. This means, then, that even after drying off has begun, syringing and watering may be necessary at intervals, even after all the leaves may have been cast. After an interval of say eight weeks from the beginning of the rest, pruning and training may be done. Head pruning is not desirable. Thinning out of blind and poor wood is preferable. Leading canes may be shortened very slightly and bent down, in order to encourage bottom and stem breaks. The top soil of the bench, at the same time, may be scratched away, and a liberal dressing of strong loam and rotted cow dung, put in its place. Then, toward the end of August, begin syringing a little more freely, to plump the wood, and in a week or so after, begin to close down the house a little, and at the same time give the bench a thorough soaking. The new breaks will throw bloom, and the cutting of the latter serves as a pruning.

PRICES OF ROSES.

(Quote prices of Roses per hundred, wholesale (flowers). Is there a market for them, and in what quantity can they be sold? My land makes fine Roses.—W. T. Aiken, S. C.)

—There would be no possible chance of success with outdoor grown Roses in the Eastern markets; you will have to find a local market. Any prices we could quote for Roses would be for indoor grown flowers, which at the present time vary from \$1.50 to \$6 per 100, according to grade.

USE OF CHARCOAL.

(I have facilities of obtaining powdered charcoal at expense of freight only. Please state what value it has, as compared with ashes or otherwise, for gardening, etc.—J. H. C.)

—The chief purpose and use to which charcoal in any form can be put, in gardening, is to act as a deodorizer, and make more complete the natural drainage of the soil, also to assist capillary action, and for these reasons its presence in soil is always valuable; but as a plant food it has practically no value, except for turnips, for which crop, however, its use is not as yet thoroughly understood.

WRAPPING FOR PIPES.

(What is the best non-conducting material to pack around hotwater pipes carried under ground from one hothouse to another? Also what is best to wrap a hotwater pipe with inside buildings to prevent heat escaping?—B. ROSS.)

—Magnesia packing is the best material we know of. With its use, the tenderest growth or bloom may rest on the packed hot pipes, without suffering injury; even a hot main may be taken through a cool house if need be.

BOX AND YEW IN MASSACHUSETTS.

(Please name a good ornamental variety of Yew and Box to grow in a plant tub, and state how late in the fall they could remain outdoors in Massachusetts. Is any variety of Yew or Box hardy in that State?—E. J. O., Mass.)

—Buxus suffruticosa is the Box generally used for edging; it is perfectly hardy, and makes quite a nice plant for a tub. Buxus sempervirens argentea, or B. s. aurea, also make pretty specimens. Buxus Fortunei is a green Chinese Box, and B. s. obcordata variegata is a useful Japanese kind. All of these are practically hardy. For pots or tubs Taxus adpressa makes a good specimen, or Taxus baccata fastigiata. There is also a long list of garden forms of Yews that can also be used for the purpose, several of which are variegated. The Yew, generally speaking, is not absolutely hardy in this section of the country, although now and again handsome specimens are seen in favored localities.

\$100 REWARD \$100

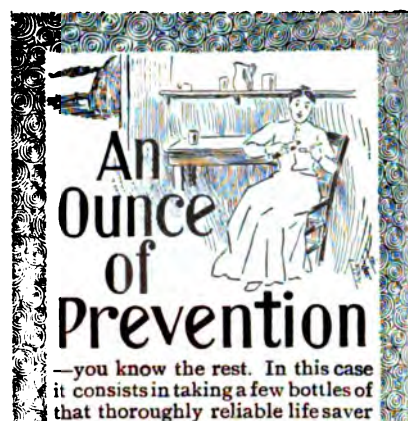
The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO., Toledo, O

Sold by Druggists, 75c.

ASTER SEED Leading kind, best kind for bedding and out flower at low price. **FANSY PLANTS**, 5 cts. each, large plants, too large to send by mail. English Ivy, 4 ft. high, 15 cts. Honeysuckle, 3 years old, sweet scented, each 10 cts., by express. Carnations, rooted cuttings, etc.

HENRI BEAULIEU, Woodhaven, N. Y. Mention American Gardening when you write.



An Ounce of Prevention

—you know the rest. In this case it consists in taking a few bottles of that thoroughly reliable life saver

Warner's Safe Cure

After the long winter of inactivity you may find the spring work and the hot sun more than you are able to bear. You may be debilitated; your liver may not be working well; you may have dyspeptic tendencies. The above remedy will fix you up and make you feel good as new. It is an infallible cure for

**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

It is entirely a vegetable compound. Beware of substitutes. There's nothing so good as Warner's Safe Cure.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion:

GARDENER, married, 14 year's experience in graperies, palms, orchids, rose greenhouses, lawn, flower and truck patch; take charge of place. Best of references. John T. Whittaker, Wallingford, Delaware County, Pa.

HEAD GARDENERS.—We have constantly on hand gardeners of all kinds, single and married—men competent to take charge of graperies, greenhouses, vegetable gardens, lawns, roads, and the usual work pertaining to their profession. Correspondence solicited. Peter Henderson & Co., 35 & 37 Cortlandt St., New York.

SITUATION wanted by first-class grower of roses, carnations, 'mums, violets, etc., and all exotic plants; fine designer and decorator; life experience in florist and landscape work; age 30, German, to take charge, either commercial or private place, strictly sober and honest and good worker, best of references. Address Flora, 410 College St., Clarksville, Tenn.

Business Cards.

Cards will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

LET us make you a suggestion: You have chickens, they pay you. Send us \$1.80 for AMERICAN GARDENING and *The Rural New-Yorker*, both one year. Read all that *The Rural* says about poultry, and if you don't get more than an extra dollar out of your chickens next year we will return your full dollar. Send to *The Rural New-Yorker*, New York, for free sample copy.

The results of our advertisement in AMERICAN GARDENING were far beyond our expectations as we have sold our complete stock. **LOTHROP & HIGGINS.**
E. Bridgewater, Mass., April 19, 1897.

OUR PREMIUMS ARE OFFERED

with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

THE THREE BEST CANNAS KNOWN.

OFFER

No. 66.

Austria, Italia and Mrs. Fairman Rogers

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed Madam Crozy type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of Mme. Crozy, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{2} \times 1\frac{1}{2}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.

ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. Austria is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. Italia has flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the *Gladiolus*, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of Austria with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 38 growths, and attained a height of 43 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and Italia were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.



CANNA
ITALIA.

OTHER PREMIUMS NOT ADVERTISED HERE ARE:

Yellow Rambler Rose.

The Hardest Climbing Rose ever introduced, and the Novelty sensation of 1897. The demand for this new rose is something phenomenal; readers wishing one should be early with their subscription.

NEW HYBRID Sweet Briars.

Every garden should possess a group of these beautiful hardy Roses—prolific bloomers; sweetly scented; beautiful; hardy; vigorous growers; free from disease and the attacks of insects.

Strawberry Plants. The offers in this line embrace all the standard well established sorts and many Novelties. No garden should be without a strawberry bed, and in no way can a collection be obtained so easily.

IF YOU ARE INTERESTED IN ANY OF THESE OFFERS SEND US A POSTAL CARD FOR FULL DESCRIPTIONS.

Offer No. 45.

COLLECTION OF ROSES.

From Maryland. Strong 2-inch pot grown



plants. Delivery on and after April 1, postpaid.

One Crimson Rambler

One Perle
One Safrano
One Mme. Camille
One Marie Guillot
One Iphetos
One Nridesmaid

One Meteor
One Papa Gontier
One Hermosa
One La France
One Bride

Surely the good things of this earth are open to everyone who exhibits a little energy. Realize you can obtain the above set of Twelve Magnificent Roses as a premium for one new subscription to AMERICAN GARDENING, and that it will not take you more than a few minutes' work to accomplish this, then send and get your reward.

Offer No. 63.

CACTUS.

The following collection will be sent for one new subscription at \$1.00, with 85 cents additional to prepay express charges. The plants offered are worth \$2.00 at retail, and come from a noted collector.

One plant each of

Astrophytum myrtilloides.
Anhalonium Lewisii.
Mammillaria discipiens.
Hederlii.

Schinocactus setispinus.
Berlandieri.
Opuntia Engelmannii.
Senilis.

Offer No. 42.

For one NEW subscription at \$1.00, receiver to pay express charges, or by mail, postpaid, for \$1.25.

25 ...ONE YEAR OLD...
NIAGARA GRAPE VINES

Comment on this offer is unnecessary, beyond stating the fact never before was such an opportunity offered to start a vineyard at so small an outlay.

Offer No. 64.

POTATOES

One-half pound each of the four following varieties sent, postpaid, for one new subscription:

Early Michigan. Carman's No. 3.
Early Fortune. Livingston's Banner.

Two pounds or eight potatoes in all.

Option: One pound Early Michigan, or two pounds of any one of the other three varieties. Grown in Michigan.

Offer No. 53.

HARDY EVERGREENS.



Your choice of any one of the below offers of Hardy Evergreens for one NEW subscription. This is a great big offer for the money, and invaluable to any one wishing to set out a young plantation. Plants from Illinois.

A-50 Scotch Pine, 6 inches.
B-50 White Pine, 4 inches.
C-50 Norway Spruce, 3 to 4 inches.
D-50 American Arbor Vitae, 4 inches.
E-25 Red Cedar, 4 inches.
F-25 Hemlock Spruce, 4 inches.
G-15 Blue Spruce, 4 inches.
H-25 Douglas Spruce, 4 inches.
J-15 Picea Canadensis, 4 inches.

Offer No. 58.

CHRYSANTHEMUMS

This collection comprises a very fine assortment of eleven standard large flowering varieties, from 2 1/2-inch pots, good plants, and will be sent, postpaid, for one new subscription; plants grown in Maryland. Ready for delivery on and after April 15. These plants will do well outdoors in mild climate, whilst in more exposed sections to bring them to full maturity in the fall they should have partial shelter.

Mdme. F. Bergmann.—The earliest of all large varieties; color white, of great excellence.
Ivory.—A popular favorite; very dwarf and free flowering.
Miss Minnie Wanamaker.—Pure white Japanese; one of the standard varieties.
Golden Wedding.—The most exquisite yellow Japanese extant.
Eugene Dailledouze.—Monster flowers; yellow Japanese.
W. H. Lincoln.—The champion late flowering yellow; a grand variety.
Col. W. B. Smith.—Japanese incurved bronze.
Mrs. J. G. Whilldin.—Earliest of the Japanese yellows. In flower sometimes Mdme. F. Bergmann, Oct. 4 to 7.
V. H. Hallock.—Color rosy pearl; Japanese.
Maud Dean.—The most charming pink Japanese ever introduced; a good market variety.
Cullingfordii.—A reflexed variety of good reputation; color deepest crimson.

Offer No. 61.

COLLECTION OF
VEGETABLE SEEDS.

The following collection will be sent, postpaid, for one new subscription. It embraces ten 5 cent packets and seven 10 cent packets; valued in all at \$1.20. The varieties offered are all standard, the packets regular size, the seeds fresh and reliable. We feel assured the grower will fill this order to your very complete satisfaction.

Beet, Eclipse.
Bean, Bush Refugee.
Cabbage, Premium Flat Dutch.
Carrot, Henderson's Intermediate.
Celery, Henderson's 1/4 Dwarf.
Corn, Crosby.
Cucumber, White Spine.
Lettuce, Tennis Ball.
Musk Melon, New Hackensack.

Paranip, Long Smooth.
Peas, Alaska.
Radish, White Tipped Turnip.
Spinach, Thick Leaved.
Squash, Bush Crook Neck, Yellow.
Squash, Boston Marrow.
Tomato, Early Ruby.
Burpee's Bush Lima.

Offer No. 46.

THE CELEBRATED

GREEN MOUNTAIN GRAPE

One 2 or 3 year vine and one 1 year vine; two vines in all. Sent, postpaid, for one new subscription.



The Celebrated Green Mountain Grape is fast coming to the front and is bound to stay. It is acknowledged to be the earliest good grape on the market. It is the most delicate and delicious grape grown out of doors. It is a strong-growing, healthy vine, an enormous and early bearer, with well shouldered and handsome bunches.

No one grape possesses so many merits as the Green Mountain. The firm making this offer are headquarters for this vine and have over an acre out as a vineyard.

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE

CHRYSANTHEMUMS

NEWEST, EARLIEST, BEST.



In Splendid Assortment of Varieties,

Forms, Substance and Color.

Mrs. Higginbotham. Best of all Ostrich Plumes.
Glor. Anna. The pretty twisted petalled yellow.
Marie Louise. A grand white.
Pitcher and Manda. A variety of two colors.
Kate Brown. Earliest and best for the garden.
Pres. Smith. A robust pink.
Silver Cloud. A salmon.
G. W. Childs. Finest of the reds.
Major Bonaparte. The best yellow.
Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

OUR PREMIUMS ARE OFFERED with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

Our Premium Offers open the way to all who want a fine garden, but lack the means wherewith to buy.

Offer No. 35.



SENT postpaid, for ONE **\$1.00**
NEW subscription at

....**BEAUTIFUL**....

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Maman Cochet
Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Hermet

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

Offer No. 47.

Sent, Postpaid, for one NEW Subscription at \$1.00.

NEW GIANT FANCY COSMOS

(MRS. SHEPHERD'S STRAIN).



Mrs. Shepherd's New Fancy Cosmos was offered for the first time last season, but this is the first time they have been offered, put up in separate colors, as here described:

Of this strain, five packets of which are offered in this collection, the grower, Mrs. T. B. Shepherd, of Ventura, California, says:

"No one else grows it, and it is so distinct as to be readily recognized anywhere by one who has once seen the different varieties in bloom. I have been working with it so long that it has an individuality peculiarly its own."

One packet of the above, in splendid assortment, containing over 35 varieties of beautiful flowers, in all shades of red, pink, mauve, tinted and white... 15c.

Three packets of above, in separate colors, Red, Pink and White, one packet of each, at 15c..... 45c.

"Tints of Dawn," one packet of above, lovely tinted flowers, white ground, delicately tinted or flecked with pink or mauve in lighter or darker shades..... 15c.

Curled and Crested ZINNIAS, splendid mixed, one pkt..... 10c.

These are the gayest, brightest and most esthetic bedding flowers imaginable, all colors and shades, with petals daintily curled and crested, having none of the coarseness of other Zinnias.

IPOMŒA, Heavenly Blue, one pkt..... 10c.

A perfect dream of beauty.

SCABIOSA, New Large Flowering, red and pink varieties, mixed, one pkt..... 10c.

These are very beautiful.

Total Value..... \$1.05



The Choicest Collection of Seeds ever sent out for the money; a poem in flowers and a revelation in nature.



Offer No. 54.

THAT GRAND NEW SINGLE VIOLET

PRINCESS of WALES



Away and beyond the best of all the single varieties lately introduced. The Queen of Single Violets. Fragrance equal to Marie Louise. Blooms very large, strong grower and productive. Grower, who is one of our most renowned violet experts, will send, postpaid, for one new subscription,

Eight (8) good rooted plants, with some flowers accompanying same; carefully packed for safe arrival. Plants ready for delivery now. Grown in New York.

Offer No. 43.

DAHLIAS

The recent revival of interest in this most worthy class of plants, coupled with the introduction of many new and interesting varieties, renders it incumbent on every one to see to it that their garden is supplied with the best obtainable.

Any one of the three collections here offered will be found up-to-date and choicest kinds, and as they come from celebrated growers and prize winners, we can assure our friends we are offering them a remarkably good thing and trust they will not be slow to take advantage of one or more of these offers.



A—Four Superb Cactus Dahlias.

One strong root each, Wm. Agnew, Oriental, Nymphæa and Zulu, by mail, postpaid, for one new subscription.

B—Four Show and Fancy Dahlias. (Dwarf)

One strong root each, New Double Tom Thumb, Arabella, Blam-falter and Lucy Faucett, by mail postpaid, for one new subscription.

C—Four Pompon or Bouquet Dahlias.

One strong root each, E'ganza, Sprig, Ariel and Vivid, by mail, postpaid, for one new subscription.

"Any one of these collections is worth over \$1.00 at retail, but will be sent postpaid, carefully packed, and guaranteed to arrive in first-class condition for one NEW subscription to AMERICAN GARDENING at \$1.00. Order by Offer No. and Letter.

Offer No. 56.

GLADIOLUS BULBS.

The following offers on Gladiolus Bulbs are well worth striving for. Your choice of one of the two collections offered for only one new subscription at \$1.00. Sent, postpaid, in neat pasteboard boxes. Order by Offer No. and Letter.



A.—6 Bulbs each of May, Bertha, Abel, and Marie Lemoine.

May.—Large spike, well expanded flowers. White, edge of petals touched pink. A grand variety.

Bertha.—This is the finest variety of its color, which is a brilliant light scarlet. Makes a tall spike, with large side branches.

Mabel.—Dwarf, upright habit. Full spike open at one time. In color it is a blending of carmine, cherry and pink. One of the first to bloom.

Marie Lemoine.—Upper division of flowers of pale creamy color, flushed salmon lilac, the lower petals spotted purplish violet, bordered canary yellow. Peacock blotched.

B.—100 Cushman's High Grade Seedling Gladioli.

All blooming size. No two alike. Rivaling the filocelle silks in coloring and sheen.

Offer No. 59.

VEGETABLE SEEDS.

The following collection of Seeds is offered by a reliable dealer, with a view to introducing his stock. They are of precisely the same grade as is sold to market gardeners and all desiring the best. The entire collection of twenty named varieties will be sent, postpaid, for one new subscription at \$1.00.



One oz. Beet, Eclipse; one pkt. Cabbage, Early Wakefield; one pkt. Cabbage, Early Flat Dutch; one pkt. Cabbage, Savoy Early; one pkt. Cabbage, Savoy Late; one pkt. Cauliflower, Erfurt; one-half oz. Carrot, Half Long Nantes; one pkt. Celery, Paris Yellow; one oz. Sweet Corn, Early Mammoth; one pkt. Cucumber, White Spine; one pkt. Onions, Early Flat, Red or White; one pkt. Parsley, Double Curled; one pkt. Lettuce, Summer Blonde; one pkt. Radish, Early White Tipped; one pkt. Tomato, Acme; one pkt. Spinach, Viroflay; one pkt. Squash, Early Bush; one pkt. Turnip, Red Top; one pkt. Rutabaga, Champion; one pkt. New Victoria Spinach.

Offer No. 50.

VEGETABLE PLANTS.

All ready to set out.



All good plants. Grown in Maryland. Delivery April 15, postpaid. This is an offer we are not able to make our friends every week in the year, and we will be mistaken if this Bargain is not taken advantage of by thousands.

12 Peppers, two kinds.

12 Egg Plants.

12 Cauliflower Snowball.

12 Tomatoes, two kinds, select.

50 Cabbage or Sweet Potato Plants.

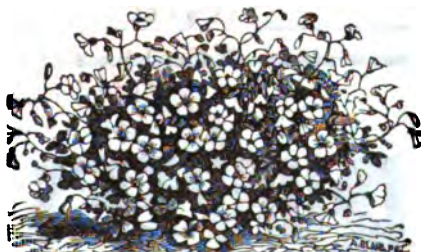
50 Lettuce, two kinds.

148 choice vegetable plants, and AMERICAN GARDENING one year, to a NEW name, for only \$1.00.

Offer No. 49.

Sent, postpaid, for ONE NEW subscription at \$1.

SUMMER BEDDING

150 OXALIS BULBS

These bulbs make beautiful borders for summer flower beds, as well as attractive pot plants. The collection includes 150 Bulbs in equal proportions of the four following varieties, named, and in separate packets:

OXALIS DEPPEI ALBA.—White.

OXALIS DEPPEI ROSEA.—Old rose or salmon.

OXALIS ERYTHILLA PURPUREA.—Purple.

OXALIS LASLANDRA.—Crimson. Tall, fine pal-
mate leaves.

Offer No. 57.

CHRYSANTHEMUMS

For one new subscription and \$1.00 we will forward, postpaid

A Collection of 36 Plants.



All different; prize-winning varieties, comprised in great part of last year's novelties, in all shades of color and types of bloom.

This offer comes from a noted grower, and we hope to receive a great many orders for this collection.

Offer No. 40.

FLOWERING PLANTS

All ready to set out.

This is a collection which everybody should be sure to obtain. It only requires one NEW subscription to become the possessor of all the plants here mentioned. Ready for delivery May 1st. Postpaid. Grown in Maryland. Save time growing from seed and get this lot all ready to set out.



10 Antirrhinums, choice mixed.

10 Asters, mixed.

10 China Pinks, mixed.

10 Cosmos, choice mixed.

10 Petunias, mixed.

10 Phlox Drummondii, mixed.

10 Marigold Eldora.

10 Scabiosa, choice mixed.

10 Zinnias, choice mixed.

10 Scarlet Sage.

100 Choice Flowering Plants and AMERICAN GARDENING, one year, to a NEW name, for only \$1.00.

Offer No. 59.

GRAPES

Every country and suburban home needs a vinery, and those who avail themselves of the offer which follows will be well satisfied and pleased for years to come with the result. A grower offers:

Agawam,

Lindley,

Brighton,

Worden,

Niagara,

Moore's Early.

Your choice of Ten one-year vines, all of one variety, or three each of three of the above sorts, for only one new subscription. Forwarded postpaid.

Offer No. 52.

Collection of Flower Seeds

Sent, postpaid, for one new subscription to AMERICAN GARDENING. The following list embraces 16 varieties of choice flower seeds; fresh and true to name, eight of which are of 5 cent packets, six of 10 cent packets, and two of 15 cent packets valued in all at \$1.30. This collection is offered by a reliable grower, in whom we have full confidence.

Alyssum, Sweet

Asters, mixed

Cosmos, Large

Flowered

Calendula, Price of

Orange

Calliopsis, mixed

Datura, Double,

mixed

Carnation Marguerite, finest double mixed

Mignonette Machet

Nasturtium, Dwarf

mixed

Poppy, Carnation

flowered, mixed

Sweet Peas, Eck-

ford's mixed

Heliotrope

Larkspur, Dwarf

double

Cobaea Scandens

Zinnia, Double,

mixed

Lobelia compacta

More Potash

in the fertilizers applied on the farm means larger and better yields of crops, permanent improvement of the soil and

More Money

in the farmer's pocket.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.



FOR ROOFING or Siding

either new or old buildings there is nothing the equal of CORRUGATED IRON AND STEEL. There is much less danger from fire which is an object to the farmer who lives away from the ample fire protection of the city. A good corrugated Steel Roof at 2½ c. per sq. foot.

THE BERLIN IRON BRIDGE CO. E. BERLIN, CONN.

Mention American Gardening when you write.



SPRAY PUMPS AND THEIR USES

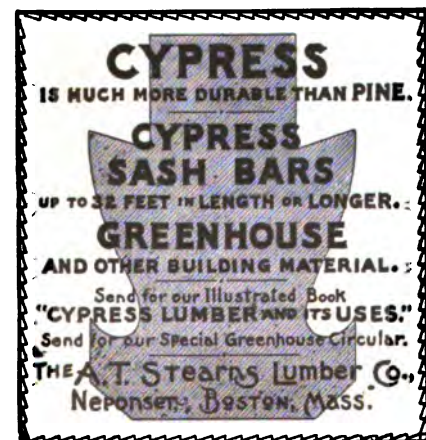
12 KINDS AND PRICES

being the contents of an illustrated book on the subject. Tells WHEN, WHERE AND HOW to Spray

Valuable for mules, for insects, etc., sent FREE for the asking.

GOULDS MFG. CO., 11 Ovid St. SENECA FALLS, N.Y.

Mention American Gardening when you write.



CYPRESS

IS MUCH MORE DURABLE THAN PINE.

CYPRESS SASH BARS

UP TO 32 FEET IN LENGTH OR LONGER.

GREENHOUSE AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book "CYPRESS LUMBER AND ITS USES."

Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.,
Neponset, Boston, Mass.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price with list extra discounts. All of our pots from 7 in. and upwards have our Patent Ezel-sior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.



The TWIN COMET (Stationary) \$5.00
The LITTLE GIANT (Traveler) 15.00

LAWN SPRINKLERS.

Best Sprinklers made for Florists and Nurserymen's use. Will save labor of one man, for they sprinkle 4 times greater area than any other sprinkler.

E. STEBBINS MFG. CO.

Made for J. B. FELLOWS & CO., SPRINGFIELD, MASS.
49 Warren St., N. Y. City. Will send on 5 days' trial.
Agents Wanted. Can make big money.

Mention American Gardening when you write.

ASK YOUR SEED DEALER FOR:

SLUG-SHOT

TO DESTROY

Current and Cabbage Worms, Potato Bugs, Cucumber Fleas, Rose Lice and Slugs, Lice on Cattle, Fowls, Etc.

SLUG SHOT stands to-day the most successful general insecticide in the world for use on VEGETABLES, FRUITS OR FLOWERS. It is put up in various sized packages to suit all wants. We prepare all sorts of INSECTICIDES and FUNGICIDES for spraying or in powder. GRAPE DUST—Powder for destroying Mildew on Roses and Gooseberries. If you have trouble with Insects or Blights, write and we will try to help you. Send a postal for pamphlet to B. HAMMOND, Fishkill-on-Hudson, New York.

Mention American Gardening when you write.



TRADE MARK.

"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address THE AMERICAN JADOO CO.

811-813 Mount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.



you should write for

BURPEE'S FARM ANNUAL 1897

Tells the plain truth about
The BEST SEEDS that Grow!
Hundreds of Illustrations with remarkable NEW Novelties, painted from nature.
"The Leading American Seed Catalogue." 50c Mailed FREE to all.
W. ATLEE BURPEE & CO., PHILADELPHIA, PA.

Mention American Gardening when you write.

LORD & BURNHAM CO.,
HORTICULTURAL ARCHITECTS AND BUILDERS
STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York.

Mention page

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 125.
COMBINED SERIES VOL. LI.

NEW YORK, MAY 15, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Canna America.....	363	Orchard Insects and Diseases.....	360	Pruning of Trees and Shrubs.....	359	Strawberries, Fancy, How to Get.....	353	Cherry, Double Flowered.....	356
Crab Bechtel's Double.....	359	Pine Seed, Saving.....	361	Questions Answered.....	355, 356, 363	Vegetable Garden.....	355	Deutzia Scabra.....	356
Cultivate!.....	355	Poison Ivy.....	358	Readers Notes.....	359	Violet Questions.....	355	Maple Japanese.....	357
Dandelion.....	355	Poison Ivy and Cereus.....	359	Roses Out of Doors.....	361	Violets, How to Grow.....	354	Spiraea Reevesi.....	356
Fruits of Experience.....	361	Poultry Notes.....	366	Society Reports.....	364	Water Proofing.....	356	Strawberry Runner Cutter.....	354
Garden, In the.....	358	Primulas, Notes on.....	361	Strawberry Newmarket.....	359	Illustrations.....		Sub-Tropical Bed, A.....	353
Grape Thinning.....	361	Private Gardeners.....	364	Sulphur for Mildew.....	357	Berberis Nepalensis.....	355	Viburnum plicatum.....	357
Home Plot, The.....	366	Privet Hedge, Making a.....	359			Berberis Thunbergi.....	357	Xanthoceras Sorbifolia.....	357
Market Reports.....	362								
Nurserymen, Ass'n of.....	359								

How to Get Fancy Strawberries.

Fancy Strawberries are easily grown if certain conditions are complied with, and these requirements are that there must be a large plant isolated so that every part of its foliage and especially the crown shall be fully exposed to the sun. We all understand that the leaves perform the office of stomach and

even moderate shade, and is wholly suspended in the dark. If the crown of a strawberry is excluded from sunlight strong buds will not form and fruit development will not go on.

In the thick matted row the leaves of other plants fall over the crown of the plant and shut out the light, but in the isolated plant the foliage will arrange itself to do all this



FIG. 95.—A SUBTROPICAL BED. (See page 358.)
[From a Photograph sent by L. Murray Perkins, Baxter Springs, Ks.]

lungs to the plant. Fully ninety-five per cent. of all agricultural plants by weight, comes from the atmosphere. The roots take up water from the ground, this is charged with nitrates and certain mineral substances which are passed up to the leaves where the water is given off and carbon gathered which is combined with the minerals from the roots by the aid of the sun's light. This process cannot go on actively in

work in great perfection, and so secure the best of results.

Then again there must be an abundance of root pasturage. If the ground be rich and mellow, the plant left to itself will send its roots out systematically and occupy every inch of the ground within two or three feet, and is able to sustain the plant abundantly in imparting to its fruit firmness of texture, rich flavor and all the other good qualities.

Strawberries multiply themselves in two ways. First by seeds and then by buds or runners. If the plant be restricted in making runners, by cutting the wire as soon as it appears it will throw its strength back to the crown and will then seek to multiply by forming a new seed bud or crown on the side of the old plant, and if we keep cutting these runners new crowns and fruit buds continue to form and the plant is built up to mammoth proportions. I have frequently had plants grow as large as a bushel basket and produce as much as four quarts of the finest fruit.

The work of keeping off the runners is not so great if done by machine. For this purpose we use the automatic runner cutter shown in the illustration. Place it over the plant and press down on the handle. Two fingers are forced around by the spiral shaft and gather up the runners and draw them under knives on each side, which are then forced down and the runners thus cut off. The work is rapidly and easily done. The great point is to cut the runners before they have formed leaves. It will not do to let a large amount of foliage make on the plant and then cut it all off.

The necessity of maintaining a balance between root and branch in the plant is as great as in trees. In its normal condition the amount of roots is equal to foliage and removal of the latter brings on a congested condition, the plant is weakened, and attacks of rust, insects and fungi invited; and it is also rendered unable to make new buds or mature fine fruit.

Another requisite for hill culture is that the ground shall be very rich and thorough culture given. It will not do to let the plants become smothered in weeds or dry out for the want of frequent surface tillage. Unless a really large plant can be secured it is better that we let it grow in a limited matted row—never in a thickly matted row.

The plant should be given only the room it absolutely requires to do its work, hence these conditions being complied with, the more plants we can get on an acre the more fruit we shall get.

My practice has been to set varieties not making a large amount of foliage (like Crescent, Warfield and Cyclone) in rows thirty inches apart and eighteen inches in the row, using the weeding machine till the plants had made a considerable growth of crowns, and then a cultivator with the pulverizer attachment. If land was not so much of an object and I had no weeder, I would set 30x30 inches, and larger varieties like Marshall, Enormous, Belt, etc., about 36x36 inches and cultivate both ways.

The question is often asked what varieties are best suited to hill culture? And the answer is short—all varieties. Those varieties which are chiefly valuable because of large-sized fruit should never be grown in any other way.

The objection is often raised that the fruit needs shade. If the ground is rich and runners cut as fast as formed, the foliage will be abundantly large and fruit will be much better protected than in the matted row. The natural habit for the plant is to put a large leaf over each berry to give it the needed protection.

The next most important, and I might say all important, feature is that the plant shall be in strong breeding or fruiting condition, of which I will speak on another occasion. Suffice it now to say that the grower who expects to command his local market and choose high-paying customers, will grow his strawberries in hills.

R. M. KELLOGG, Three Rivers, Mich.

To Advertisers.

We would say that out of eleven publications similar to yours, in which we placed the same ad, the number of enquiries from them all, over 40 per cent. is credited to your paper. Several have none to their credit.

FLORISTS' PRUNING SHEAR MFG. CO., Fremont, Ohio.

How to Grow Violets.

The notes to be given here are not intended, for the present at least, to discuss in detail the multitudinous perplexing problems that are nearly every day confronting the professional violet grower, but rather to assist the modest owner of perhaps one sash or the more ambitious amateur who aspires to own and run a small or large greenhouse for the cultivation of the violet.

The Soil.

The soil best adapted for the violet is a rather heavy loam, and in order to get it pick out a piece of the nicest and heaviest sod that can be found in an old pasture field; take four or five inches of this top sod and place it in a heap and to every five parts of this soil add one part of well-decomposed cow manure. If possible get the manure from cows that have been fed grain. Mix this heap thoroughly and let it stand as long as is convenient.

In preparing this soil be very careful to see there are not in it any yellowish grubs with black heads, and which curl up when disturbed, for they are the young May beetles, and every one that is left in the soil of the violet bed means death to one or more plants. It will be taken for granted that the house



FIG. 96.—STRAWBERRY RUNNER CUTTER.

or frame is ready for the reception of the soil, and if one can have solid beds so much the better. Place about six or eight inches of the prepared soil in the bed, having the coarser pieces of sod in the bottom, level it off nicely with the rake, and the bed is ready for planting.

The Plants.

The necessity of starting with good stock is a vital point, yet one which a great many people overlook. Order from some successful and reliable violet grower, send struck cuttings, not rooted runners simply torn away from the old plant, and which ought never to have been allowed to remain, but genuine hand-made cuttings struck in sand. Plants from these will have a short body and plenty of working roots, and will stand up well under the trials incidental to transplanting. Such plants will cost a trifle more in the beginning, but the extra expenditure pays largely in every way.

Planting.

Now mark off the bed in rows, setting the plants seven inches one way and nine inches the other, and letting the crown of the plant be on a level with the soil; then give a good watering. The best time for planting is between May 15 and June 15, but earlier or later than these dates will answer

if circumstances should prevent planting within those limits.

Shade, Etc.

Give an abundance of air at all times by raising the sash; for shading use ordinary lime wash and put it on the glass evenly by means of a brush. A light shade is better than a heavy one. Wash a trifle thicker than good milk is about right; put it on when the sun is shining in the morning, for the sun changes its qualities and makes it stick to the glass. Some use a wash made from white lead and kerosene. Either will give satisfaction.

Weeds

As the plants begin to grow, keep the soil loose and free from weeds, and as soon as the runners are about two or three inches in length pull them off very carefully, steadying the plant with one hand and giving the runner a strong twitch with the other—a little practice will make one expert at the work.

Insects.

The red spider is likely to put in an appearance at that time, especially if the weather be dry and hot. Like all insect pests, it likes to be left alone, and if left alone brown, sickly-looking plants will soon result. Water applied with force to the under side of the leaf is the remedy. Syringe or spray the plants every evening and morning if the weather be hot and dry, and endeavor to maintain a moist atmosphere, because this pest hates water in any form. At the same time, the violet plant likes plenty of water. It is, therefore, the cultivator's own fault if the red spider pays a visit.

The aphid or green fly, possibly black fly, may make an attack in September and October. These can be killed and other attacks prevented by placing some extract of tobacco largely diluted into an iron pan and then dropping into the solution a good-sized heated iron, sufficiently large to evaporate the contents of the pan, the frame or house being, of course, closed. This is superior to burning tobacco stems, and there is not so much danger of injury to the plants.

Diseases.

The diseases which may attack violets are many, but here we shall notice but a few which appear to be the most common. Their appearance is induced mainly by certain atmospheric conditions, which are often beyond control.

The "spot" generally makes its appearance about August 1 and is characterized, as its name implies, by a white ring with a dark-colored spot in the centre of the ring. Several of these rings may, and usually do, appear on one leaf, and if the conditions of the atmosphere are favorable the disease may spread over all the plants, causing the foliage to rot and melt away; in this stage of the disease a peculiar and penetrating odor is thrown off, which once recognized will never be forgotten. Many remedies have been tried and failed utterly. When first perceived hand-picking should be resorted to, or a punch may be used to punch out the spot, leaving the balance of the leaf on the plant.

Another disease called "heart rot" is due to a fungus that attacks the young foliage at the heart of the plant and rots part or the whole of the very young leaves; the old leaves are proof against it. This disease is induced by an insufficient supply of air and too much moisture, and if the condition of the atmosphere be not changed it will cause serious damage by eating the whole or part of the crown away. The damage is done during the months of August and September.

One other and last disease that I shall briefly notice is "scald leaf." The edge of the older leaves will appear to be burnt and very often this "burn" will spread over all the leaves, thereby sapping the vitality of the plant, which for all practical purposes will be as

dead. This disease has baffled the skill and intelligence of every violet grower; like a thief in the night, it steals over the plants, leaving blight and desolation in its track, and I know of no remedy for it. Woe to the violet grower who gets a full dose of it among his plants. It will take more egotism out of him in one week than he will be able to replace in two years. Endeavor to prevent its approach by clean and good cultivation, always remembering that any check to a plant will weaken its vitality, thereby rendering it more susceptible to the attacks of the disease.

Fertilizers.

It is often asked, are fertilizers good for violet plants? They undoubtedly do good sometimes, but they require so much good judgment, caution and experience in their use that I advise they be left severely alone; it is my firm belief that more harm is done by the misuse of these fertilizers than by any other one thing, with the single exception of disease. The violet is one of the most susceptible of plants in the artificial atmosphere necessary to the production of flowers in our trying, changeable climate. Is it, then, any wonder that at least one-third of all the violets produced are fit only for the rubbish heap, another third passable and the remainder a pleasure to behold, and whose sale at a remunerative price is certain? This is not a pleasant picture to look upon, but it is a cold fact.

Varieties.

The varieties I consider the best on the market to-day are the following: Double purple, "Marie Louise;" single purple, "Princess of Wales;" double magenta pink, "Mrs. J. J. Astor;" double white, "Swanley White." There are a host of other varieties with strong and weak points combined, and to such as can afford to grow them no doubt are highly interesting, but the cream is contained in the four varieties mentioned.

Summary.

To briefly recapitulate: Use common sense—think more; get the best soil and the best plants possible; don't be afraid of the water; give them enough to drink; don't indulge in fertilizers until you have learned by experience how to use them; don't smother your plants for want of fresh air; don't be guided by your feelings with regard to temperature, but watch the thermometer—40 to 45 degrees night, and 50 to 55 degrees day, with sun heat; lay in a good stock of patience, and don't expect something for nothing; learn to love your plants.

GEORGE SALTFOED, N. Y.

Some Violet Questions Answered.

Hardiness of Violets.

Are the violet Princess of Wales and Farquhar hardy? Should they be planted in the sun or in the shade?—A. E. BARNEY, Ind.

They need the protection of a frame. They are both well adapted for frame purposes.

Planting Violets.

Will you please let me know through the columns of your paper how far apart to plant violets and what culture they require?—W. C. PENNINGTON, N. J.

Violet cutting plants should now be ready for planting out in the open. Some growers plant in full exposure; others select a cool, partially shaded position. Plant about eight inches apart between plants and fifteen inches between rows. Lift and put in house in September.

Raising Violets.

Can violets be raised profitably in cold frames like pansies? When do you sow seed of single ones and how are the double ones treated? How are carnations started? Can they be wintered over as pansies are? Will they bloom in time to sell early?—G. A. KAUFF.

It would hardly be a profitable venture to raise violets from seed, division of cuttings being the proper method. They do well in cold frames. Carnations treated the same way would be useless.

The Vegetable Garden.

Salads.—The cultivation of salads is easy, and they are relished by so many that they are daily growing more in popularity.

Endive is one of the best for late summer and fall use, and is also very pretty for garnishing. Sow now a few seeds of the white variety in drills one foot apart; when large enough thin out to six inches apart; the thinnings may also be transplanted.

Mustard and Cress.—A little seed sown in a small corner broadcast every week or ten days will give a regular supply.

Water Cress is a general favorite and may be successfully grown in a cool, damp situation, or in a place where it can be conveniently watered. Wherever there is a small running stream, that is the ideal spot for a water cress bed.

Radish.—The Yellow Summer is one of the best for summer use; it is better to select a partially shady place, which is cool and moist, and in such a place any ordinary variety will succeed during hot weather.

Corn Salad is another excellent early spring salad. It may be sown now and

good cultivation are like a well-groomed horse—healthy and vigorous. It has been our practice for many years to cultivate everything in the garden. Every week throughout the season a day is regularly set apart to do this. In small gardens the pronged hoe or potato hook will be found the most useful, handy, and cheap cultivator. It may be purchased with either flat or round prongs. In using this tool, loosen the soil close up to the rows, without disturbing the plants, and by drawing the tool and walking backwards any weeds or rubbish will be brought along to the end, while cultivating and raking, thus leaving the ground neat and tidy. Where there are many weeds, it is best to use the hoe first; the best garden laborer that worked for me used to carry along a file whenever doing this class of work. By this means he kept the tool sharp and did good work. In noting the difference between the work of such a man with a good, sharp tool, and an indifferent, disinterested man with a dull, rusty tool, one would find the comparison largely in favor of the first one. Keep tools keen and free from rust.

Machine Cultivator.—In more extensive gardens it pays to procure one of



FIG. 97.—BERBERIS NEPALENSIS.

every few weeks until September. It is usually ready to use in from six to eight weeks after sowing.

Whitloof Chicory.—This is really the finest of all winter salads and well worthy of a place in every garden. Seed may be sown from now till July 1 in drills fifteen to eighteen inches apart. As soon as large enough, thin out to six inches from plant to plant, the roots to be dug up in the fall when further directions regarding them will be given in this place.

Dandelion.—This common weed makes a fine salad in the early spring. Sow seeds now in rich ground. Plants should receive good cultivation to be satisfactory, and are to be thinned out to about eight inches apart. Every effort should be made to get strong roots, which in spring will soon begin to grow. Before using they should be blanched, either by tying or covering them up with two boards placed one each side of the rows and meeting on the top. This improves their taste.

Cultivate.—As soon as the seeds can be seen above ground, begin to cultivate, and do it thoroughly and well. Weeds should never be permitted to appear; good culture means success and a clean garden. Plants receiving

these very useful and convenient implements. They are cheap, will do good work and they can be used for many purposes. In busy times a man can cultivate a very large piece of ground in a day, which is an advantage always to be aimed at.

W. M. EDWARDS, N. Y.

Some Vegetable Questions Answered.

For Late Celery.

When should I sow my celery seed for late crop? And how should I treat the young plants to make them strong and stalky?—W. G. NEB.

If not already sown, seed must be put in immediately. Sow on a spent hot-bed and prick out the plants into very rich earth, and transplant when they are a fair size into well-cultivated and thoroughly-enriched land.

When Endive Is Ready.

When should endive be ready for use, sown in hot-bed March 20? Information in different books is very different as to time that it takes to mature.—A. K.

Endive is out of season at this date. No fixed time can be given for getting ready for table; so much depending upon local circumstances. It may take ten to fifteen weeks from date of sowing till good, crisp, well-blanching heads are produced.

The Fruit Garden.

Fire Blight, or Pear Blight.—Remove at once any affected wood on apple and pear trees; patches not noticeable last year can now be detected at once. Remember that the disease is contagious, and that we have no known remedy. Cut back into sound, healthy wood and clean up and burn every particle now—at once—not at the first opportunity.

Currants.—Any dead wood still on the bushes should be cut out. If it be the result of attacks of the currant borer or of one of the parasitic fungi do not delay the burning. Keep a sharp lookout for the currant worm and dose it with hellebore or a weak solution of London Purple ($\frac{1}{4}$ oz. to 4 galls. of water) as soon as discovered. There are several broods of the insect, so do not fix one and consider that the job is finished for the season. Neither do the spraying in the middle of a bright, sunny day.

London Purple—I may say to those who are using this for the first time that it is slow in operating, but sure; don't expect to find your enemies either gone or dead an hour or two after applying the stuff. I use it because it dissolves more easily in water and is not so expensive as Paris green.

Caterpillars.—Those from the eggs of the Lackey Moth will be getting in their fine work about this time, and just now a half hour among the trees can be profitably spent twice a week.

Walnuts.—Examine the trees for small, black beetles, which feed on the young foliage at the growing point of the trees (*Juglans regia*). Spray with $\frac{1}{2}$ oz. of London Purple to 4 gallons of water. The beetles are most active in the afternoon.

Plum Leaf Spot.—Spray with Bordeaux soon after the blossoms fall. This disease appears as light-colored spots on the leaves. Soon the spots turn brown and drying out drop from the leaf, giving it the appearance of having caught some stray shots from some one gunning. Severe attacks not attended to will cause most of the leaves to fall prematurely at a time when they are most important for the proper ripening of the wood for the following year. At this time mix with one barrel of Bordeaux 3 ounces of London Purple and 6 ounces of fresh lime, slaked in water and strained through a coarse cloth or very fine wire sieve.

Kelsey Plum.—I shall be pleased to hear from any readers of American Gardening who have been successful in getting a crop from the Kelsey Plum, or lacking that, can give as good a substitute for its season.

Strawberries which had made an early start received a severe check by frost on April 19 and 20, and at this date, May 5, the damage is very plainly seen.

J. HOLLOWAY, L. I.

Lettuce Forcing House.

What would make the best house for forcing lettuce, also the best lettuce for forcing; one with a good, solid, yellow heart, about three or four inches in diameter, to be crisp and tender.—T. H. M.

The modern lettuce-forcing house is usually built from thirty-five to forty feet in width, with a southern exposure, and the lettuces are planted in the solid bed, no benches being used. Boston Market is the variety used by the market growers. Golden Queen is also recommended. Illustrated articles on this subject appeared in Vol. XVI, pages 89 and 135.

Cold Frame Strawberry Plants.

We have a few plants of a new variety of strawberries. We desire to get as large a crop of them as possible next spring. Have heard that potted and cold frame plants will produce a crop first year. How are potted and cold frame plants produced and how treated to produce a crop the first spring?—G. A. KAUPP.

The earliest runners are taken. These may be pegged or kept down by a stone until rooted and then potted up, if desired; or the wire may be severed and the plant encouraged to grow and then potted up in a six-inch pot in the fall. See page 303, in issue of April 24.

Water-proofing.

In answer to the inquiry of Peter S. Couch, W. Va. (page 320). To water-proof woolen cloth:

Four ounces of powdered alum, $\frac{1}{4}$ oz. sugar of lead, dissolved in 3 gallons of water, stirred twice a day for two days. When perfect subsidence has

of whatever color is desired. Take a large lump of common brown soap, pretty freshly cut from a bar, hold it in the left hand, and every time you replenish the brush with paint rub well on the soap, taking up as much as possible, and rub well on one surface of the linen or calico. It will take long to do and should be hung in the windiest place you can find. Summer is the best time. A month will see it in very usable order. It will be supple and perfectly waterproof. After wearing a few times a second coat would be advisable, done in the same way. This will dry in half the time.

Sackcloth or Canvas.—This can be made as impervious to moisture as leather by steeping it in a decoction of 1 pound of oak bark with 14 pounds of



FIG 98.—POPULAR FLOWERING SHRUBS

1.—Spiraea Reevesii.

2.—Double Flowered Cherry.

3.—Deutzia Scabra.

taken place, pour off the clear liquid only, and add to it two drachms of isinglass, previously dissolved in warm water, then mix thoroughly. Steep the cloth in this mixture for six hours, after which hang up to drain and dry; do not wring.

Linen or Calico.—Stretch the article upon a table. Make very thick paint

boiling water. This quantity is sufficient for eight yards of stuff. The cloth has to soak for twenty-four hours, when it is taken out, passed through running water, and hung up to dry. The flax and hemp fibres, in absorbing the tanning, are at the same time better fitted to resist wear.—G. M. STRATTON, Morgantown, W. Va.



FIG. 99.—VIBURNUM PLICATUM.



FIG. 100.—XANTHOCERAS SOMBIFOLIA.



FIG. 101.—JAPANESE MAPLE.

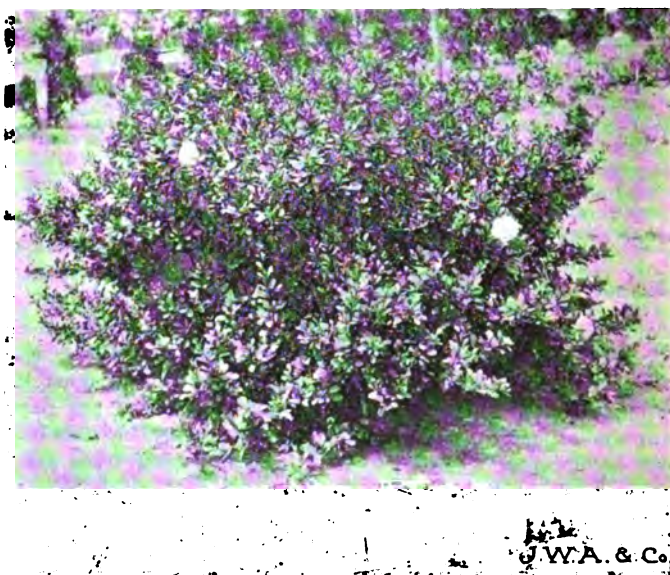


FIG. 102.—BERBERIS THUNBERGII.

Some Useful Shrubs. (Illustrations kindly lent by J. W. Adams & Co., Springfield, Mass.)

Sulphur for Mildew and Rot.

Formerly we were much troubled with fungus diseases, but of late they do not demand a thought. We first used sulphur for mildew on roses by adding it freely to vessels of water and boiling them until the water was practically gone. Sulphur volatilizes—vaporizes—at about 170 degrees and the water boils at 212 degrees, so that we vaporized our sulphur without risk of setting it on fire. This reached our trouble on roses all right, but seemed to have little or no effect on other fun-

gus diseases.

We then adopted the plan of adding sulphur to whitewash—about thirty pounds to a bushel of lime. The lime was slaked with sufficient water for the mixture to heat to the boiling point and the sulphur added. The latter dissolved in the hot bath and gave it a strong yellow color. Water is then added to make the proper consistency. Every year we give our house a thorough "painting" with this sulphur whitewash, not merely coating the unpainted wood, but daubing it on heavily. It goes on yellow, but it dries out

white. Every part that can be reached is so treated.

Since then we have known no mildew, no bench rot, no fungus of the cutting bench. On hot days, in clear sun, we distinctly notice a faint sulphurous odor in the air, but at proper temperatures there is no sign of its existence. Our benches are four years old. We water with city water and hose—and, therefore, abundantly—but if the benches are not as sound as when they were put in we have not discovered the fact. CHARLES H. DARLINGTON. Tennessee.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1894.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

(Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Poison Ivy. THE judgment for substantial money damages recently returned against a cemetery association, because of injury inflicted on a widow through the growth of the poison ivy, is a matter to which the attention of cemetery superintendents must be directed.

The judge, in commenting upon the case in allowing an appeal to be taken, remarked that the award was a most just one. Certainly it would seem (since it is a matter of common knowledge that the plant known as poison ivy is capable of causing suffering to certain people) that it is the duty of cemetery superintendents to take extreme care that it does not gain a foothold. Just how far this responsibility will extend in other directions is an interesting question. Thus, should superintendents of public parks be held responsible if the weed affected a visitor, who, by having suffered previously, is susceptible to the influence of the plant if it be in close proximity?

The fact that all persons are not equally susceptible to the "ivy," causes many who apparently do not suffer from it in any way, to cast doubts upon the veracity of the reports of suffering caused by it, or even to question the existence of any real danger from contact with the plant. But the matter does not admit of doubt; instances of injury inflicted are only too numerous. The point as to who are likely to feel any ill effects from the ivy has been at various times free discussed, and there appears to be a large amount of evidence to support the contention that fair complexioned individuals are far more likely to become victims than are persons of dark skin and hair.

These statements are based on reports made by medical men, and it would be very interesting to learn if our readers can support or contradict the conclusion from their own experience or knowledge.

THE eyes of all who love their gardens, in the Gardens. are, at this season of the year, open to the beauties of nature, more, perhaps,



FIG. 103.—THE POISON IVY.

than at any other time. The budding mantle of the trees, the breaking of the ground as growth begins, call eloquently for notice.

One is reminded that summer is approaching apace, and preparations for that season must now be made. For the present, our parks and gardens are wealthy in the bloom given by the flowering trees and shrubs. The very best of spring effects are to be had from these, and the greater favor with which they are being regarded is a worthy sign of the times that more intelligence, more reality, truer art, are gaining a sure place in our parks and gardens. Let us but copy nature as nearly as possible, and we cannot go far wrong—and nature is lavish with her flowers; brightness and variety is her ideal, not sombre monotony. By all means, then, let us use in profusion the flowering shrubs—both native and foreign. And not only is the spring effect of our gardens thus brought into harmony with the spirit abroad, but the after effect, when the foliage shall have fully expanded, gives

the grandest of settings for other plants to be used later in some form of bedding.

Nurserymen and florists report a largely increased demand for hardy herbaceous stock, and on many large estates somewhat extensive collections are now in course of formation. All this is along the line of advance in garden taste, and will inevitably lead to greater horticultural activity, because permanency is being introduced, and the ephemeral summer bedding relegated to its proper sphere.

Bedding out is the work of the present, it must be done now, at once; delay will be fatal to best results. In this work of bedding, let boldness of effect be the ideal. By the introduction of sub-tropical effects a maximum of this may be had from a minimum of plants; aye, and labor, too, if a suitable selection be made. What, indeed could be more satisfactory than the bed shown on the first page of this issue? Comment is unnecessary. Such a bed appeals to all, and there is not one person who reads these words, but could have such an one in his garden. The plants employed are *Caladium esculentum* as the main feature, with a *Castor Oil Bean* as the centre, a few *Cannas* and an edging of *Coleus*, well-known plants, here used to advantage, and what is there in the way of cultivation? Nothing but copious waterings—but remember, *copious*.

Shrubs. IN conjunction with the increased demand for herbaceous plants comes a still growing popularity of flowering shrubs and ornamental foliaged trees. Among the latter the Japanese Maples in their multitude of foliage, color, and form, perhaps lead, and they are now being offered at much reduced rates. As single specimens on lawns, or used in masses and groups, these graceful plants are equally effective.

On other pages of this issue we give representations of a few worthy subjects—the selection is a purely haphazard one, and there are hosts of others equally useful.

Berberis Thunbergi is very suitable as a single specimen, as shown in the figure, and may be classed as a foliage and fruit shrub, for its flowers are not very conspicuous. *Berberis nepalensis*, shown in fig. 97, is one of the most beautiful in both foliage and flower, the leaves measuring some 20 inches in length. It is unfortunately liable to be winter killed, but the specimen from which our sketch was made was uninjured last winter on Long Island. Our thanks are due to Mr. John Holloway for the specimen.

In fig. 98 a group of well-known plants is seen; they abound on all sides, but for all that, we would wish to see still more of the double-flowering cherry.

Viburnum plicatum, shown on page 357, is much superior to the better

known *V. opulus*. The growth is more compact and the ball-like heads of flower more dense. *Xanthoceras sorbifolia* is a handsome shrub, very effective all through the season, when in foliage.

One matter in relation to shrubs demands attention, that is pruning. Oh, that our urgings could be influential in stopping the barbarous mutilation that these plants so often suffer. Rather, by far, leave them alone—nature's forms are not hideous, but man's constructions often are. If pruning must be done, remember the rule. If a shrub flower on last year's growth, prune after the flowering period is over; if the bloom appear on the new season's wood, spring pruning or thinning may be done.

Premium No. 80, consisting of 200 celery plants, in four varieties, is certainly one of the most liberal offers ever made for one new subscription. See our premium advertisements.

Berry Pickers Accounts.

In the matter of keeping account of the work done by the pickers, much ingenuity has been brought into play by berry growers. There are about as many systems as there are growers, yet surely in all the lot there must be some that for security and simplicity outdistance the others. What have the berry growers to say for their various schemes? A free discussion will benefit some if not all.

The Best Ever Seen.

I have received the strawberry plants (premium No. 31). They are the finest and best rooted plants that I have ever seen, and I have received plants from several sources. I would not take five dollars for them and be deprived of getting more. Am well pleased with American Gardening and am learning to be a market gardener; will build a hot-house in fall. Accept my thanks for plants.—W. P. MORRIS, Tenn.

U. S. Promologist's Report.

"The Report of the Pomologist for 1896," which has just been issued by the Department of Agriculture, is comprised in sixty-four pages and has six colored plates of promising new fruits. These are Ozone Apple, Calvin Pear, Rupp Cherry, Miss Lola Peach, Scribner Plum and Campbell Early Grape. Among the general articles included is a valuable one on "Principles of Pruning," and another, by J. B. Gilchrist, on "Small Fruit Culture."

American Association of Nurserymen.

The 22d annual convention of this association will be held at St. Louis June 9 and 10. There is every reason to expect that the coming convention will prove one of the most enjoyable ever held by the association. An invitation to the members to visit the Missouri Botanical Gardens has been cordially extended by the director, Dr. William Trelease. They are also indebted to Dr. Trelease for an invitation to attend the "Shaw Banquet" as honored guests. This invitation, for the evening of June 10, has been accepted for the association by the Executive Committee. It is expected that welcome will be extended to the visiting nurserymen by Mayor Ziegenhein and the Hon. Norman J. Colman.

Among other things, the tariff discussion will undoubtedly be one of the most interesting features of the convention. The committee appointed at Chicago last year will report its work at Washington. There will also be the report of the Committee on Freight Charges, a matter of vital importance to the trade. The convention will open at the Lindell Hotel on the morning of June 9. Special railroad rates are expected.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Who Has Newmarket Strawberry?

—Will you please inform me where I might purchase the Newmarket Strawberry? Very few varieties of strawberry do well in the South, but a neighbor of mine has Newmarket doing splendidly; she bought of a traveling agent. I have several different varieties, but they do not do well. I have scanned the advertisements of every issue, but while I see many names of strawberry growers, none appear to have the variety spoken of, and thought perhaps you could help me. Please let me know.—J. LAWSON, Algiers, La.

—We have never heard of the variety mentioned by our correspondent, but perhaps some of our readers can give some information. It may be an old variety renamed. Why does not our enquirer procure a few plants from his neighbor?—ED.

Making a Privet Hedge.—In your issue of April 24, I note some suggestions for making a Privet hedge. I would offer a suggestion which was given me by an extensive nursery grower in New Jersey. If you have two-year-old plants, plant them about six inches below where they branch out. The difficulty with the privet hedge is, it is very apt to be bare for some inches above the ground, and, therefore, to look like a row of little trees. By planting in this way, every branch makes a little tree, separating in every direction, some almost horizontally, others interlacing, and in two years the hedge will be a solid mass of green from the ground up, and will retain this characteristic indefinitely.—C. CHAUNCEY PARSONS.

The Best Dewberry.—Replying to the question of M. W. Smith, Lucretia Dewberry does well, but there is more money in blackberries. Try Acent Briton. I know nothing of Austin's Improved Dewberry.—L. M. Macomber, N. Ferrisburgh, Vt.

Bechtel's Double Flowering Crab.—E. Y. T. says, in American Gardening, for May 1, that the flowers of Bechtel's Double Flowering Crab "are much the form, size and color of a La France rose." I have a couple of trees which I have supposed to be this variety, but the flowers are only about an inch in diameter. Has E. Y. T. overestimated the size or are my trees not genuine? If the latter, please tell me where the genuine, that bear flowers as large as a La France rose, can be had?—W. H. W.

W. N. Y. Fruit Prospects Good.

Our Rochester (N. Y.) Correspondent writes in jubilant tones as to the Fruit Prospects.

"Western New York happily escaped any great damage from the general freeze of two weeks ago. One fruit grower in Wayne County fears that in his section several varieties of pears, including Bon Chretien and Duchesse, were severely frozen and fruit buds killed; also that cherries were somewhat damaged. This may be explained by the fact that the section being in a valley, fruit buds were well advanced prior to the frost. In Monroe County, especially in the vicinity of Rochester, careful examination fails to reveal any evidence of damage, and the outlook for all kinds of fruit is splendid. From Orleans County and the surrounding country most encouraging reports are received, and Western New York will, if nothing further happens, be in a position to not only supply its own people with peaches, but to meet some of the demand that will come from sections where that crop has so seriously suffered."

Poison Ivy and Cemeteries.

Mrs. Barbera George, who lost her health and was personally injured by coming in contact with poison ivy, which had been allowed to grow on her husband's grave, sued the Cypress Hills Cemetery Company, N. Y., for \$10,000. She recovered \$3,500 in the Trial Term of the Supreme Court, Brooklyn, on May 6. Mrs. George lost her husband in May, 1891, and afterward visited his grave in the cemetery frequently. She paid an attendant to keep it in order. One day she and her twelve-year-old daughter found some weeds on the mound and she took off her gloves and started to remove them. She became ill when she arrived home and the doctor said she had been poisoned by the "Ivy." She was ill eighteen months, and when she recovered found that she could not get employment in her former position, so brought suit for damages, with the result as noted.

Summer Pruning of Trees and Shrubs.

At this season it is well to consider the reasons for and the advantage of summer pruning. If plants could be properly pruned in the summer they would need but very little pruning in the winter time, and in many cases would need no pruning at all in winter. All we have to remember is that by pinching and cutting out very strong and undesirable growths, extra strength is given to the weaker ones. The following remarks, from Meehan's Monthly, contain sound advice:

Every observer must have noticed that the strongest growth is always at the top of the plant. The lower branches are always the weakest ones. If we check this strong upper growth the lower branches gain a strength which would otherwise go to the top.

This is the great secret in trimming hedges. The general evil in the hedge is that in the course of time all the growth is at the top, while the lower portion of the hedge is naked, and thus it ceases to be a pleasure. If such a hedge had been cut at the top early in the season, certainly after the younger growth was made, the lower portion would be as thick as the upper. Nothing shows better the intelligent skill of the gardener than a hedge which has the lower branches just as densely thick and healthy as the upper ones.

In evergreens grown as specimen trees on lawns, we find excellent illustrations of this lack of pruning, with all the strong branches at the top, and at the bottom a very few weak ones. The great beauty of evergreens consists in having a good, healthy foliage to the ground. The nakedness referred to could have easily been avoided by checking the strong growth at the ends of the branches. The finger and thumb are the only pruning implements required in these cases. Pinching out the ends of the very strong shoots towards the top when these young growths are from three to four inches long is all that is required.

Even a leading shoot in a pine tree may be pinched back at this period, as a new leading bud will be formed at the point where the pinching occurs. A check to the upward flow of the sap is all that is necessary.

This lesson may be carried to the orchard, as well as practiced in the flower garden. No one shoot should be allowed to become more vigorous than another. Pinching back or even taking out entirely the strong growths will accomplish this. One must not forget that the phrase "early in the season" means a great deal. Nothing is gained if the work is deferred until the young growth has matured.

Silk from Wood.—Artificial silk is now being prepared in France. It is made largely from wood pulp produced from the spruce fir.

Some Diseases and Insects of Orchards.*

What is the object in spraying and why do we spray? We spray for checking diseases, destroying obnoxious insects, keeping our trees healthy and bringing the fruit to perfection. Can that be done? Yes; if a man knows how to take care of his trees with pruning, tilling and fertilization, how and when to spray, and what to spray with, then his trees ought to be healthy and vigorous, and his fruit perfect, but take one link away and the chain is broken.

How to Spray.

When spraying, use as fine a nozzle as you can and be sure that you get all over the tree so that no part is left unsprayed. This is more easily done with a fine nozzle than with a coarse one. And always remember that one really good thorough spraying is worth more than three less thoroughly done.

What to Spray With.

The fungicides mostly used for orchards are: (a) Copper sulphate solution; (3 lbs. of pulverized sulphate of copper to 45 or 48 gals. of water.) (b) Bordeaux mixture; (6 lbs. sulphate of copper and 4 lbs. of quicklime to 50 gals. of water.) At times it may be necessary to take only 4 lbs. of sulphate of copper instead of 6, but it is very seldom that the foliage shows any effect from the stronger solution; and for that reason it is, as a rule, preferable, being more effective. (c) Ammoniacal copper carbonate. (5 ozs. copper carbonate, ammonia enough to dissolve the copper, 45 gals. of water.) The Bordeaux mixture should, as a rule, be used together with Paris green at the rate of 4 to 5 ozs. to 50 gals. of the mixture. When mixed thus it is as valuable an insecticide as it is a fungicide, and the Paris green can be applied with more safety when mixed with the Bordeaux mixture than when it is used alone. Ammoniacal copper carbonate can be mixed with Paris green too, and is then a very valuable insecticide. However, there ought not to be used more than 2 ozs. of Paris green to 45 gals. of this solution, as otherwise there will be danger of injuring the foliage.

When ought these different fungicides to be used, and when is one preferable to the other?

Use the copper sulphate solution in the spring while the buds are swelling, but never use it on foliage. It will burn.

Use Bordeaux mixture and Paris green, first, when the leaf buds are open, but before the flower buds expand; second, as soon as the last blossoms have fallen, and then every tenth or fourteenth day, or at longer intervals, as needed; but do not use it on any kind of fruit after the fruit is half grown, as it then will spot it, and the spots will hurt the appearance and sale of the fruit.

Use ammoniacal copper carbonate and Paris green when a fungicide is needed, after the fruit is half-grown or later. It will not spoil the looks of the fruit, and is very effective. When used without Paris green it can be safely applied within three days of ripening of currants and gooseberries without staining the fruit. There are other fungicides as iron sulphate and sulphuric acid solution and potassium sulphide solution, but they are not so all-around useful as the three first mentioned.

Before leaving the fungicides I would caution you to never mix the copper preparations in tin or iron vessels, as they will soon be destroyed. Always mix in a wooden, a brass, or an earthen vessel. And again, do not use Paris green with ammoniacal copper carbonate without adding $\frac{1}{2}$ lb. lime for 45 gals., and then not more than 2 ozs. of the green. One of the reasons why Paris green cannot be used with the carbonate when fruit is near ripening is that it will stain, while the ammoniacal copper carbonate, pure and simple, will not.

Insecticides.

Of insecticides there are quite a large number. However, I shall only mention a few of those best known and most extensively used.

The insecticides may be divided into two

classes, viz: internal poisons for insects which chew, and external poisons or those causing death by contact. The last mentioned poisons are used exclusively for those termed "true bugs," that is, insects which suck, as the aphides and scale-lice. Besides, they are used with very good success on soft-bodied insects.

Paris green is well known and deserves to be so. It is a very valuable insecticide. It may be applied at the rate of 1 oz. to 10 gals. of water, provided there is added 1 lb. of quicklime to every 50 gals. However, the best and safest way is to use it with Bordeaux mixture. London purple is another well known insecticide. It should, however, be used with more care than Paris green. The arsenic in London purple is, as a rule, more soluble, and consequently it is more liable to cause injury to the foliage. It should not be used at a greater strength than 4 ozs. to 50 gals. of water and always in connection with lime or Bordeaux mixture. Besides, it should never be used on peach, plum, nectarine, apricot, or cherry. And it may be said that Paris green is safer to handle, and gives altogether better satisfaction.

Arsenate of lead is made of three parts of arsenate of soda, mixed with seven parts of acetate of lead. This can be applied very strong without injuring tender foliage. For most larvæ it will be strong enough at 1 lb. to 45 gals. However, it can be used with safety at 1 lb. per 15 gals. If there is added one pint of glucose for every 45 gals, it will be more adhesive.

White hellebore kills both by contact and by being eaten, as does pyrethrum powder. Both of these can be used at the rate of 1 oz. to 3 gals. of water, and they are very good, particularly for the currant worm. Kerosene emulsion is a contact poison, and a very good one. It is mixed in several ways and after different formulæ, as the Riley Hubbard Emulsion, Prof. Cook's Emulsion, kerosene and milk emulsion, and pyrethrum kerosene emulsion.

Of the kerosene emulsions I consider the Riley Hubbard the most convenient, besides it is perfectly safe to use. The formula is $\frac{1}{2}$ lb. of hard soap dissolved in 1 gal. of boiling water; remove from the fire and add 2 gals. of crude kerosene; mix it with a large hand syringe till it has the consistency of lopped milk. This standard emulsion can then be diluted with as many parts of water as may be wanted for the treatment intended. In using for the four-lined leaf bug it should, according to Mr. Slingerland, of Cornell Experiment Station, be used in a strength of 1 part of the emulsion to 4 or 5 parts of water, and, according to the same authority, it should be used for the pear leaf blister mite at a strength of 1 to 5 or 7. The latter corresponds with our experiments.

The easiest and most convenient way to mix pyrethrum kerosene is to take 1 lb. of hard soap and dissolve in 1 gal. of boiling water; when the soap is dissolved add 1 lb. of pyrethrum powder, boil for 3 to 4 minutes, remove from the fire and add 1 gal. of kerosene, and dilute for use like the Riley Hubbard emulsion. However, I will here caution you to skim off the pyrethrum powder when diluted before you apply it to the trees, as I know from experience that if applied without skimming it is apt to hurt the foliage of the trees. The excess of soap and the adding of the pyrethrum make this emulsion, in certain cases, more desirable and effective than the Riley Hubbard emulsion.

During the years 1895 and 1896 we have carried on several experiments, some of them directed against certain insect pests, others to ascertain how strong the different solutions, mainly kerosene, can be applied to trees during the growing season, without killing the trees or injuring the foliage.

In 1895 we started a series of experiments with the Riley Hubbard emulsion, to find out how strong a solution could be used with safety on foliage during growing season. We experimented on the Houghton gooseberry, Ray's Prolific currant, and Anjou pear. The experiments were carried on for four months. The results proved that the bushes can be sprayed at those seasons with perfect safety, with a solution of 1 to 4, and the pear trees with 1 to 7, and in all cases but one the bushes showed no bad effect from a strength of solution of 1 to 3, and the pear trees 1 to 5. In the worst cases

at that time, these had only 20 per cent. of their foliage injured.

During 1895 and 1896 we carried on experiments against the pear leaf blister mite. The result has been to prove that the time giving the surest and best results is in winter, while the wood is dormant. In summer it is useless to attempt destroying them with spraying; but in the fall, just when the trees are ready to commence shedding their leaves, there can be obtained very good results. In fact, we have obtained as good results with spraying in the fall, with a solution of 1 to 5, as in the winter with a solution of 1 to 6 or 7.

In the summer of 1895 we executed extensive experiments with pyrethrum kerosene emulsion, to find out just how strong it could be used and how effective it was. The experiments were all made on dwarf apple trees, using the emulsion as given above but without skimming of the pyrethrum. The trees sprayed with 1 to 6 were killed outright; those sprayed with 1 to 8 died within two months; and of those sprayed with 1 to 10 and 1 to 12 we lost 25 per cent.—one tree of each. All of those sprayed with 1 to 14 were more or less injured; and of one variety sprayed with that strength we lost 40 per cent. And there were trees occasionally injured up to a dilution of 1 to 25. There it proved to be safe. I experimented with strengths of 1 to 6, 1 to 8, 1 to 10, 1 to 12, 1 to 14, 1 to 16, 1 to 18, 1 to 20, 1 to 25, 1 to 30, 1 to 35, and 1 to 40. Then the solution was tried, but with skimming of the pyrethrum before using. This time I did not use the solution thinner than 1 to 33, as 1 to 35, before that, had proved not quite strong enough to kill out all the aphides. Besides, I determined to use all the stronger solutions only on two kinds of apples; so that there were to be taken some trees of both kinds, for each solution, of the strengths 1 to 6, 1 to 8, 1 to 10, 1 to 12, 1 to 14, 1 to 16, 1 to 18, and 1 to 20. The reason for selecting only two varieties was that it would then be much safer to draw conclusions than when different varieties were sprayed with different strengths of solutions, as the first experiments had clearly proved that some trees had more power to resist the action of the solution than others. The two varieties selected were Fall Pippin and Gravenstein.

Result: The trees sprayed with 1 to 6 had from 20 to 25 per cent. of the foliage injured; those sprayed with 1 to 8 had from $\frac{1}{2}$ to 2 per cent. of the foliage injured; the rest did not show any bad effects whatever from the spraying; and 1 to 33 proved to be sufficiently strong for the aphid, while the solutions stronger than 1 to 20 proved very effective on other insects. Now, you will notice that when the pyrethrum kerosene is skimmed, it can be safely applied much stronger than when it is not. The cause for starting the last experiments was that I found, invariably, that the trees worst affected in the first experiments were those that showed most of the pyrethrum powder on their leaves. That led me to believe that skimming of the powder, before using, would prove to be of use; and the results fully sustained the supposition.

Pyrethrum kerosene is often made by filtering about $1\frac{1}{2}$ gals. of kerosene through 2 to 2½ lbs. of pyrethrum. That will give about one gallon of kerosene extract of pyrethrum. But there is always lost about one-third of all the kerosene used, which is thrown away with the pyrethrum powder. Besides, I believe the afore-mentioned methods of mixing are just as safe when skimmed before used; besides, it is much easier to mix and costs less, as there is nothing thrown away.

Evergreen Bag-worm or Basket-worm.

In 1895, we found that the evergreen bag-worm had invaded the orchards. Later we found they had been brought in a lot of American Arbor Vitæ. On June 9th, 1895, we sprayed the trees and bushes affected, with common Bordeaux mixtures containing 4 ozs. of Paris green per 50 gals., but it had no effect on the bag-worm whatever. Again we sprayed on June 28, with Bordeaux mixture, containing 5 ozs. of Paris green per 50 gals., but it did not give any better result than the first time. On July 3 we sprayed again; this time we used Paris green at the rate of 4 ozs. to 1 lb. of quicklime to 45 gals. of water, however we did not have any better success than on the first

* Read before Pennsylvania Horticultural Society, March 16, 1897, by P. Pedersen.

two occasions. On July 8 we sprayed again; this time with 8 ozs. of Paris green to 1 lb. of quicklime, to 50 gals. of water. This time we succeeded in injuring, severely, the foliage on all the trees and bushes treated, but as likely as I could ascertain, we had not destroyed or hurt one single specimen of the bag-worms. They were now growing large, and I gave up experimenting further with them that year, and went to work gathering them by hand. We tried to get them all except on two raspberry bushes, where a few specimens were left. When pruning during the winter, 1896, we kept on a sharp lookout for their baskets, gathering and destroying them all, except six, left on the two raspberry bushes mentioned above. Those we kept for experimenting on. In the beginning of June, 1896, they commenced hatching; and just before the middle of June they were all hatched, and the bushes were covered. On the evening of June 18, we sprayed them with a solution of Bordeaux mixture, with 5 ozs. of Paris green per 50 gals. of water, to which was added $\frac{1}{2}$ pint of crude carbolic acid to 4 gals. of the mixture. When the bushes were thoroughly sprayed and still dripping, they were given a good application of dry pyrethrum powder, so that the leaves were literally covered on both sides. Early on the morning of the 19th we gave the bushes a very thorough cleaning with an emulsion of 12 gals. of water, to which were added $\frac{1}{2}$ pint of crude carbolic acid and 1 lb. of lime. This treatment was again given with the strong emulsion, and the pyrethrum on the evening of the 19th, and the bushes again cleaned in the morning of the 20th. Then we could not find one of the bag-worms alive; and, indeed, since then until now I have not seen a single specimen on the place. The foliage on the bushes looked a little sickly for a few days, but neither of the bushes was damaged. As likely as could be seen, about 70 per cent. of the bag-worms were killed with the first application, and the balance were very weak.

(To be continued.)

Saving White Pine Seed.

The cones of the white pine, from which seed is to be saved, must be secured just before they are ready to open, and here in New Hampshire I find most of the cones open and the seeds out by the 10th of September. The time of the cones opening and letting the seed fall, probably does not vary much in New England. In this section I expect a good crop of white pine seed this year. I think our last good crop was in 1891. I hope this year more will be gathered than ever before.

The cones should be gathered the first week in September. Spread them thinly on a tight floor in a cool, dry place, and in ten days, more or less, the scales of the cones will be open, and a little beating with a stick will suffice to separate the seed from them. A bushel of good seed will sow from ten to sixteen acres of ground. At least 100,000 acres of the cheap and waste lands of Massachusetts should be sown or planted to the white pine the coming autumn, and tens of thousands of acres to the seed of other timber trees.

When our people learn to grow timber trees as a crop as well as they now know how to grow corn and other farm crops, the rain fall and the moisture of the atmosphere, freshets in spring and autumn, and low streams in summer will all be altered by means of the trees.

Utilize the forest, waste and cheap lands, by growing timber trees, not ninety and nine nearly or quite worthless trees to one valuable specimen. Covering the land with timber trees will make such lands profitable, and if it also makes the rain and rivers answer their purpose better, then this will be clear gain.

While foolish statements and false figures are put forth, and ridiculous laws are proposed, relative to forestry matters, it is encouraging to notice that the forestry commission, designated by the National Academy of Science to recommend legislation in regard to the government's forest re-

serves, has issued an official report full of sense.

When we can secure official reports upon forestry filled with important facts, correct principles and truthful figures, we may hope to see the science and art of forestry make rapid advance. The landowners need to be taught how to grow timber as a crop. Practical teachers of forestry sent out among the people to teach them how to seed cheap lands to timber trees, and then how to grow the trees to the timber size, would soon add millions of dollars to the realty of Massachusetts and other States, and greatly enhance the beauty of their scenery.—J. D. LYMAN, in American Cultivator.

Roses Out of Doors.

American Gardening asks its readers for their experience and observation, and it is from this hint that I pen the following statement as to how I grow roses so that the foliage is fresh and green. The way to plant them can be learned from the catalogue; but the care after they are growing is what I wish to impart to those who, like myself, have worked and failed, and are ready to despair.

There are but two kinds of insects which do much damage—the little louse, which infests the under side of the leaf, and the slug. The first is the louse or mite, which grows into the hopper or fly, and is killed by spraying the under-side of the leaf with a solution of Tobacco Insecticide Soap, manufactured by the Rose Manufacturing Co., of Niagara Falls, N. Y. Don't wait until the bush is spoiled, but begin in season and repeat until you have killed all the insects. Three or four times spraying, at intervals of five or six days, will do the work.

The slug is more easily killed by using a solution of white hellebore. This is to be used as a spray thrown from below up into the bush.

I have found the best pump for garden use is made here in Cazenovia, N. Y., by De Clercq Brothers. It has, if ordered, a nozzle crooked at right angles, which is invaluable for spraying bushes from below. The sulpho-tobacco insecticide soap will kill the aphids, also the mealy bug indoors.—I. N. GOFF, Cazenovia, N. Y.

Notes on Primulas.

We sow all our Primulas in April or early in May in boxes four inches deep and one foot square. These are filled with a mixture of three parts leaf soil and one part loam and white sand. The seeds of those primulas which are large enough to handle are placed at intervals of an inch or so. This allows them to grow along through the summer without transplanting, and being in boxes they do not dry out as rapidly as if in pots. The boxes are kept either in a well-shaded frame or greenhouse during the summer and the seedlings are transferred to pots about the first of September. They grow rapidly during the fall months and are shifted on as they require it.

Primula verticillata, a lovely Egyptian species, is just now an attractive feature in our cool greenhouse, and out of some ten species grown here we consider it one of the best. The leaves are nine inches long by four wide, ovate in outline and covered with a white powdery substance. The scape is about eighteen inches in height and the bright yellow flowers, which are produced in great abundance, are arranged in tiers or whorls. The pedicels are some two inches in length and each tier is surrounded by a whorl of small leaves. It is about the last to flower of the greenhouse kinds, being about at their best on April 25. It is of easy culture, requiring much the same treatment as the common *P. sinensis*.

Many of our plants of *P. sinensis* measured from eighteen inches to two feet in diameter, and carried hundreds of blossoms. Several plants of *P. ob-*

conica, which we grew on into eight and ten-inch pots, carried as many as 150 trusses of blossoms at one time and were the admiration of every one who visited these greenhouses.

P. auricula did very well and produced umbels of good-sized flowers. *P. officinalis* and var. *elatior* made good-sized plants and produced their flowers in abundance. *P. officinalis* var. *elatior* macrocalyx we do not consider worth growing, except as a curiosity. *P. sik-kimensis* we have not yet succeeded with in the greenhouse. *P. denticulata*, a pretty himalayan species, did very well; the bright lilac-colored flowers are produced in dense umbels and are very attractive, though the individual flowers are small. *P. floribunda*, when well grown, is a beautiful species. The flowers are small, of a bright yellow color, and produced in the greatest profusion. It is a native of the Western Himalayas.

The main point in growing primulas is to sow them early enough. Many is to sow them early enough. Many gardeners defer sowing till August, which is a mistake if good specimens are desired. We have just sown some twenty species for next season, and with the exception of *P. auricula* we treat them all as annuals, preferring seedlings to old plants.—E. J. C., Smith College, Northampton, Mass.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Clyde Strawberry seems to be promising.

Cuthbert Raspberry still holds its own, judging from the demand for plants this spring.

What a fine growth the strawberry patches are making.

Be ready to counteract the action of the spring frosts on the strawberry blossoms. Then should the frosts not come you will be all right; but should they happen, if your berries are protected a higher price will be received for the fruit.

If you have any doubts as to whether the soil around the hard wood cuttings was sufficiently firmed, better pack firmly once more by using the feet on each side of the nursery row, then run the garden rake lightly over the foot marks so as to leave a loose blanket of earth on the surface to hold the moisture, which is of so much value in starting hard wood cuttings.

Why not have a bed of wild flowers this summer?

Trimming Old Trees.—The proper way is to cut limbs close up to the bark, then they heal over quickly.

Let us resolve to have this season the largest of compost heaps.

Wickson Plum.—Many are trying a tree or two of this plum this spring.

Plenty of discussion brings out many a practical idea.

Grape Pruning.—The renewal system seems to be as satisfactory as any in Michigan.

Setting Out Evergreens.—The middle of May is a good time to set out a belt of evergreens for a wind break. Never, if you can help it, allow the roots of the evergreens to get dry from the time of taking up from the nursery row to the time of setting out.

Take down the shotgun and watch that hawk in the early morn. The plumper and finer your chicks the better the hawk likes them.

Kansas Black-cap Raspberry is worthy of more attention among fruit growers.

Plenty of barnyard scrapings worked into the new rose bed will be of much benefit.

Enhance Strawberry.—We have been digging this and are much pleased with the growth of roots which it makes.

Note Book.—Is a small note book and a lead pencil always found in your vest pocket to note down important suggestions as they come to your mind?

Cultivation every week to ten days in the berry patch until late in the summer will bring best results.

New York.

The most practical as well as the very best system that can be devised for keeping track of the quantity of berries picked, as well as of the amount due each individual picker, is that illustrated here with :

[illegible]

Philadelphia.

the truckers at Norfolk and reports the crops to be in bad condition, owing to so many frosts and heavy rains. He returned by the Cape Charles route through Maryland and Delaware. The peach crop he reports will be about half a crop, and owing to so many cold nights the strawberries in those States are not any farther advanced than are the Jersey berries, so that all will be in at once.

Apples.

Baldwin, W. N. Y., choice, per bbl. 3 00
Russets, Roxbury, choice, 2 75
Strawberries.

N. C., choice, per quart. 100 15
Charleston, choice, per quart. 150 18
Vegetables.

Asparagus, Jersey, per dozen bunches 1 00
Asparagus, N. C., fair to good. 25 25
Beets, Fla., new, per bush. crate. 75 10
Beets, Charleston, per 100 bunches. 4 00
Cabbages, Sav. and Charleston, per bbl. crate. 75 10
Cucumbers, Fla., fancy, per crate. 1 25
Egg plant, Fla., per crate. 2 50
Onions, Bermuda, per crate. 2 00
Peas, Charleston, per basket. 75 12
Radishes, Norfolk red, per 100 bunches 1 00
Radishes, Norfolk, white, per 100 bunches 1 50
String beans, green, per basket. 1 00
Wax beans, per basket. 1 50
Squash, Fla., per bush. crate. 75 10
Tomatoes, hothouse, per pound. 20 25
Tomatoes, Fla., per carrier, choice. 2 00
Tomatoes, Fla., per carrier, fair to good. 1 50

Fruit Under Glass.

Grape Thinning.—As the rush of grape thinning takes place within the next fortnight or so, it may be well to touch slightly upon the subject. At such a time the whole strength is usually brought to bear upon the task, for every day is of importance. Good grape thinners are made and not born; in other words, it is impossible for an inexperienced hand to thin a bunch properly. Ragged shoulders and seedless berries, when the fruit is ripe, indicate the work of the green hand. Such a one should, therefore, be carefully looked after and guided where he is apt to go astray. The first thing to do is to cut out all the small and inside berries which would not have a chance to swell. Then the larger outside ones must be carefully thinned, with a close eye kept upon the ultimate shape of the bunch. A mistake that is often made is the cutting away of the berries on the under side of the shoulders. These should only be thinned in the same way as the rest of the bunch, the shoulders themselves being supported with light straws of raffia as soon as the berries reach any size. Pricking the berries with the point of the scissors must be vigilantly guarded against, and in order to entirely steer clear of this evil a start must be made with the bunches before the berries get too thick and crowded. All the workmen should wear caps, since if the bunches are rubbed by the bare heads some of the berries are almost sure to rust.—Gardening World.

Canna America.

Professor Waugh, of University of Vermont, writing to Garden and Forest on this canna, the third of Dammann & Co.'s "orchid-flowering" type, states that it ranks above both Austria and Italia; the foliage seems to be stronger and tougher; the color is one harder to get incannas—dark, bronzy-red, with irregular and conspicuous dashes of lighter, greenish color. The flowering stem is tall and strong, bearing a large spike of flowers of the form and size of those of Italia. They are, however, of a most rare and striking color—a sort of brilliant apricot-red, faintly spotted with darker salmon. The center is canary-yellow, marked with the apricot-red of the body color, very much after the pattern of Austria and Burbank, except that in America the center is lighter-colored than the wings. The blossoms are richer in appearance than any of the earlier orchid-flowering cannas. They do not appear to be better in substance, though.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*We cannot undertake to reply by mail.

EXTERMINATING NUT GRASS.

Can you tell me by what means I can rid my garden of nut grass? I have had it worked out thoroughly several times this season, but it returns in a short time in apparently larger quantities.—PETERSBURG, Va.

This most troublesome of weed pests is difficult to exterminate. The only satisfactory mode of which we know is to portion out the land and set the pigs in. They are so fond of the roots that they root it all out and devour it straightway. If the pig remedy is not possible, then some crop has to be found that will smother it, and for this purpose nothing is more effective than peas or cow-peas. Tomatoes will also master it. To cultivate is only to propagate.

HOW TO PROPAGATE ADIANTUM FARLEYENSE.

I have fourteen nice plants of Adiantum Farleyense and wish to propagate from them. Will you tell me how to do so, the time it takes, the temperature necessary and the proper kind of soil?—CHARLES FINLAYSON, Fla.

Propagate by division in a good, brisk atmosphere of 70 degrees and partially shaded. While the plants are in a small stage use a light soil, but as they get larger reduce the compost to almost entirely fibrous loam, well drained.

NAMES OF PLANTS.

(To P. E. B.) Kerria Japonica.—(To D.) 1. Trillium grandiflorum. 2. T. erectum. 3. Erythronium Americanum.—(To A. M.) 1. Sedum sp. (send when in bloom). 2. Sedum sp. (send when in bloom). 3. Ophiopogon Jaburan, fol. var. 4. Ophiopogon Japonicum. 5. Ophiopogon gracilis. 6. Rohdea Japonica, fol. var. 7. Linaria cymbalaria. 8. Panicum sp. (specimen too small). Of the ferns, one only, No. 3, Pteris adiantoides, can be identified. The others are all too small and immature specimens.

HOLLYHOCK DISEASED.

(To A. M.)—Your plants are attacked by Puccinia malvacearum, which plays sad havoc with hollyhocks. The best remedy is burning the affected plants and spraying others with Bordeaux mixture.

A CACTUS MATTER.

Should I take the little cactuses off from the large one or leave them on? It is a club, or balloon cactus.—LINA GALEY, N. Y.

If needed for propagation, they may be taken away; otherwise there is no reason why they should be removed.

MAKING A GENISTA FLOWER.

A Genista over four years old has never bloomed. It has been given rich earth, plenty of moisture and a warm, sunny spot, summer and winter. What can be done to make it bloom?—A. E. B., Ind.

Keep the roots contracted for a time and do not cut away any growth. It must then flower.

Death of John Saul.

This very well-known nurseryman died near Washington, D. C., on Tuesday last, aged 74. He was chairman of the Parking Commission. He was born at Cork, Ireland.

\$100 REWARD \$100

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.



and one which will support you when the fell hand of disease is upon you, and which will bring you back to perfect health and strength, putting a ring in your voice, a sparkle in your eye and a spring in your walk is that world endorsed remedy

Warner's
Safe Cure

It never fails in all those diseases brought about by disordered Kidneys and Liver and is a positive cure for

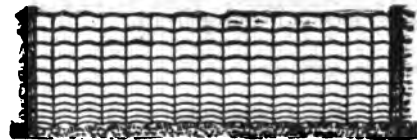
**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

Try a bottle and you will add your testimony to the thousands already cured by it. Beware of substitutes. There is nothing "just as good" as Warner's Safe Cure.

Business Cards.

Cards will be inserted under this heading at two CENTS PER WORD each insertion, payable in advance; the address to be counted part of the advertisement.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. J. J. Forreth Johnson, P. O. Box 1697, New York City.



Luck or Merit?

Our competitors say it's Luck that enables us to get the best railroad trade, the best farm trade and all the Parks and Game preserves. Our customers buy the fence on its merits, we sell on its merits, and no one objects to the good luck that goes with it. PAGE WOVEN WIRE FENCE CO., Adrian, Mich. Mention American Gardening when you write.

GOULDS' SPRAY PUMPS

are either made of Brass or are Brass Lined. No Iron to rust or corrode. 12 Varieties, meeting all the requirements of Spray Pumps.

GOULDS' NOZZLES ARE BEST.

Made in 28 styles. This shows one of

GOULDS' PORTABLE BRASS FORCE PUMPS.

All about Spraying, "How and When to Spray," and Valuable Formulas for Insecticides sent free. Address

THE GOULDS' MFG. CO.
11 Ovid St., Seneca Falls, N. Y.

Mention American Gardening when you write.

Market Gardeners

SHOULD TRY OUR

W. & D.'s Self-Blanching Celery
W. & D.'s "Bennett's" White Spine Cucumber
W. & D.'s Improved Am. H. Crown Parsnip
W. & D.'s American Beauty Pea
W. & D.'s Deep Scarlet Forcing Radish
W. & D.'s Improved White Bush Squash

Descriptive Catalogue Free, by mail.

WEEBER & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, May 18, 11 A. M.

Palms and Decorative Plants and all kinds of summer bedding stock.

Friday, May 21, will be a sale of the same kind of plants.

CATALOGUES FREE.

Mention American Gardening when you write.

GLEARY & CO., 60 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on Tuesday, May 18, at 11 A. M., Rhododendrons, Roses, Dahlias, Canna Roots, Decorative Plants, and a complete line of Summer Bedding Stock.

Special sale of Palms and Crotons also Cannas Austria and Italia, Thursday, May 20, from W. K. Harris, Philadelphia.

Catalogues free.

Sales every Tuesday and Friday.

Mention American Gardening when you write.

R. M. GARDNER & CO., 199 Fulton Street, NEW YORK.

Will sell every TUESDAY and FRIDAY at their rooms at 11 a.m., a general line of Nursery Stock and Spring Bulbs and a large assortment of Bedding plants.

Catalogue on application.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

199 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

CONTRACTS NOW TAKEN

To grow Small Fruit Plants for NURSEY-MEN and DEALERS for late fall and spring trade. Lots of moss used in packing which is free.

CHAS. C. NASH, - Three Rivers, Mich.
Mention American Gardening when you write.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Mr. C. S. Plumb, who was for five years with L. C. Weir, Cincinnati, O., has secured the position of gardener to A. M. Huntington, Esq., Bay Chester, N. Y.

Mr. Samuel Henshaw, chief gardener in the New York Botanical Gardens, sails from New York per S. S. Furnessia this day (May 15). He goes in the interests of the gardens to visit the chief botanical institutions of England and the Continent of Europe.

Mr. Hans Rieck has resigned his position as gardener to Geraldyn Redmond, Esq., Tivoli, N. Y., and is now in another one at 63 School Street, Yonkers, N. Y.

The Castle Grove Farm greenhouses, at Danville, Pa., under the management of Mr. G. Cook, will, for the future, be semi-commercial in their nature. American Beauty and other roses will be extensively grown, also carnations. Considerable glass has recently been erected and more is expected. At present the range consists of two houses, each 300x30 feet, three 90 feet, and several others 50 feet each. R. Petfield takes charge as inside foreman this week and takes with him Messrs. McKenzie, Holahan and Murison as assistants.

Auction Sales.

Tuesday, May 18. — Hardy Roses, Standard Roses, Lilacs, Hydrangeas, Nursery Stock, Spring Bulbs and Bedding plants, at Elliott's Rooms, New York.

Roses, General Nursery Stock, Bulbs, Rhododendrons, Azaleas, and Bedding plants, at Cleary's Rooms, New York.

Paeonies, Flowering Shrubs, Bull's, and Bedding plants, at Gardeners' Rooms, New York.

Thursday, April 20. — Special sale of Palms, Crotons and New Cannas from W. K. Harris, Philadelphia, at Cleary's Rooms, New York.

Friday, May 21. — Sales will also be held as indicated above for Tuesday.

Meetings.

Friday, May 21. — Penna. Horticultural Society, Monmouth Co., (N. J.) Society at Oceanic.

Saturday, May 22. — Mass. Horticultural Society Prize Exhibition.

New York.

The New York Gardeners' Society met on Saturday last at 64 Madison Avenue, President Shore in the chair. Samuel Henshaw, Charles Rice and A. Newell were elected to active membership. The Exhibition Committee presented rules for judging, which, after some discussion, were laid over to next meeting.

The following members were appointed to act as a committee to get up an exhibition in June to take place on or about June 19: Messrs. Welsing, Donlan, Reynolds, Taaffe and Shore. These gentlemen are authorized to draw up a schedule, and to solicit premiums and exhibits. The next regular meeting will take place on the day of the exhibition.

Since the meeting it is announced that an exhibition will be held on June 19 in the Alderman's Room, City Hall, New York. His Honor Mayor Strong will formally open the exhibition. Proceeds to be given to the hospitals.

The exhibits on Saturday night were: P. Beer, gardener to A. A. Low, Sedum Stonei; James Dean, per Ed Fischer, Aristolochia gigas Sturtevant and A. ornithocephala; W. Anderson, gardener to J. M. Constable, Antirrhinums and Canterbury Bells (cert. of merit); E. Reynolds, gardener to Mrs. Fisher Howe, Pelargoniums; Charles Webber, gardener to Mrs. J. H. Hood-Wright, two superb plants of hybrid Calceolaria (cert. of merit); James Morris, gardener to Hicks Arnold, Esq., New York City, a fine spike of Cattleya Skinneri alba and of Laelia purpurata. A. Grierson, gardener to Hicks Arnold,

Rye, N. Y., put up seventy hardy flowers. The collection included species of Tulip Narcissus, five Iceland poppies and four dwarf bearded Iris (cert. of merit). J. M. Zeller, per Mr. Welsing, exhibited the new Pteris serrulata Zelleri and sprays of twelve flowering shrubs.

A resolution was adopted that the society offer a silver cup at the Monmouth County (N. J.) exhibition in September next.

New York City Gardeners.

The city of New York employs for its public parks a goodly number of gardeners; these have recently met together and formed the City Gardeners' Society. The first regular meeting of the new organization, which numbers over sixty members, was held on Friday, May 7. Mr. N. J. Rose, under whose direction the planting of Riverside and Morningside Parks is being carried on, is the president, with Mr. A. Ketterer, of Central Park, as secretary. The society is organized to provide for the mutual improvement of the members by reading of papers, lectures and discussions, and also to give an impetus to social intercourse.

The gardeners engaged in the public parks and gardens of other cities may well go and do likewise.

Poughkeepsie, N. Y.

The Dutchess County Horticultural Society met on May 5. Mr. Hans Rieck handed in his resignation, as he is leaving the district. Mr. T. H. Reed, gardener to W. R. Sands, Esq., New Hamburg, was elected to membership. Mr. James Blair read a valuable paper on "Rose Culture Under Glass," for which a hearty vote of thanks was accorded.

It was announced that at the annual exhibition of the society, to be held November 3, 4 and 5, Mrs. Levi P. Morton offers a special premium of \$20.00 for roses five varieties. Mrs. Ogden Mills offers a like amount for twelve American Beauty roses (open to private gardeners only).

It was decided that the various papers read before the society be printed in a pamphlet at the end of each year.

The next meeting of the society will be held in conjunction with the Annandale Rose Show at Barrytown on June 16.

Oceanic, N. J.

The Monmouth County Horticultural Society has issued a preliminary schedule of classes arranged for the society's exhibition to take place September 1 and 2. Twenty-seven classes for vegetables are open to private gardeners only. Fruit classes, including hot-house grapes, are open to the county. Classes are also provided for amateurs, for florists and some are open.

Boston.

The May exhibition of the Massachusetts Horticultural Society was held last Saturday and was of unusual excellence in several departments. The large upper hall was well filled and the cut flowers, and especially the pot plants, were of a very high order. It was prize day for calceolarias and Mrs. B. P. Cheney (John Barr, gardener) and Jason S. Bailey (William Donald, gardener) carried off the honors with very superior specimens. Kenneth Finlayson, gardener to Dr. C. G. Weld, took all the prizes on named Indian azaleas on well-grown and finely-flowered plants. Among his collection were Lady Polymode, Empereur du Bresil, La Victoire, Bernhard Andreas and Bijou de Paris. The same exhibitor showed a collection of several dozen seedling amaryllis, less than three years from the seed, which were remarkably beautiful, and received the society's silver medal. Both prizes for streptocarpus went to Mrs. B. B. Cheney for fine specimens. A silver medal was awarded to Jason S. Bailey for a fine plant of Dendrobium nobile Baileyanum. Dr. C. G. Weld also showed a collection of boro-

nias and Saintpaulia ionantha. Donald McKay exhibited a well-bloomed plant of Mimulus (Diplacus) glutinosus, for which he received a certificate of merit. Dr. C. G. Weld exhibited six pots of ivy-leaved pelargoniums, which were good, though small, and were awarded the second prize.

Oakes Ames, Esq., showed a plant of Cyrtopodium Marchioness of Salisbury, C. bellatulum C. barbatum, which has never before been exhibited in bloom in this country.

The cut flower exhibit was exceptionally good for this season of the year and included many collections of tulips and narcissi, the prizes for which were taken by the Bussey Institution and Dr. C. G. Weld, about equally.

The show of pansies was good, the first and second prizes going to Joseph S. Fay and the third to Mrs. E. M. Gill. Rea Brothers made an interesting showing of hardy perennials and Dr. C. G. Weld, James Comley, Mrs. E. M. Gill, W. N. Craig, John Jeffries and Oakes Ames made displays of cut flowers. There were also a number of collections of native flowers. The exhibition of vegetables was excellent.

Club News.

The May meeting of the Boston Gardeners and Florists' Club, the last before the summer vacation, occurred at Horticultural Hall on Tuesday evening with an average attendance. The essay was on "Modern Bedding," by Thomas H. Westwood, of the Forest Hills Cemetery. The paper was interesting and instructive, containing many suggestions of happy combinations of bedding plants and also pointing out the errors which are sometimes committed by people who do not combine study and pains with their labor.

Philadelphia.

American Dahlia Society.

This society has finished its schedule of prizes for the exhibition to be held during the third week in September. This exhibition promises to be a good one. The dealers and growers of dahlias report a much larger trade in roots this season, and orders for plants are also larger.

Park Displays.

The various small parks throughout the city, under the charge of City Forester John C. Lewis, have been resplendent the past few weeks with flowering bulbs. Some of the beds of tulips and hyacinths were grand and reflect great credit on the untiring energy of the City Forester, who has given to the public pleasures not had before.

American Institute.

The American Institute of New York City has secured Madison Square Garden, from September 15 to November 5, for its annual fair. The management will hold a four weeks' display of fruits, flowers, plants and vegetables, beginning September 27; \$5,000 will be given in prizes, in addition to medals and diplomas. The first week's horticultural display will be devoted almost entirely to Dahlias, when it is confidently expected 50,000 blooms will be staged.

The schedule, which has been materially altered from that of last year, provides a greater number of small classes. The superintendents of the different divisions will be: Plants and flowers, James W. Withers; fruits, E. G. Fowler; vegetables, C. L. Allen; farm products, Dr. Robert Taylor. Schedules will probably be ready next week.

Briar Root.—The best briar root from which pipes are made comes from the borders of France and Italy. In the mountainous districts of those countries roots are dug out which have grown for ages, and sometimes weigh hundreds of pounds. The wood thus obtained is remarkably beautiful.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion:

SITUATION, as gardener's assistant, by Scotch-American, age 21, has had four years' experience. Address W. H., 119 Ave E., Jersey City, N. J.

A practical working gardener, good Rose grower, wants situation on private place, good references, strictly temperate. Address Gardener, 221 East Avenue, Rochester, N. Y.

WANTED—private situation, for my thoroughly experienced gardener, especially good rose-grower, strictly temperate, moderate wages, married. Address G. H. Perkins, East Avenue, Rochester, N. Y.

SITUATION wanted by a thorough practical English gardener, 20 years' experience, 12 years in America, around New York. 3 1/2 years on one place in Boston, in all branches. Roses, and chrysanthemums a specialty. moderate wages, strictly temperate, married, one baby girl. Address Palmer, 28 Gardiner Park, Rochester, N. Y.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

DAHLIAS. 500 varieties. H. F. Burt, Taunton, Mass.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

GARDEN PLOWS. The best. Circulars free. Write quick. G. W. Cole, Canton, Ill.

ALTERNANTHERA (red and green), good strong plants. \$2.00 per 100. Chas. T. Darling, Stony Brook, Long Island.

WELL IMPROVED farm of 103 acres in Douglas County, Oregon. For full particulars write Mrs. C. Challenor, Brockway, Oregon.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

THE "IRON AGE" Garden Tools are light, strong and work "just right." High steel wheels, tubular frame, malleable castings. Write for catalogue. Bateman Mfg. Co., Box 206, Grenloch, N. J.

CELERY PLANTS. Best varieties. Lowest prices. H. N. Hammond, Deatur, Mich. Mention American Gardening when you write.

INOUBATORS. Self-regulating. Catalogue free G. S. SINGER, Cardington, O. Mention American Gardening when you write.

INCUBATORS \$25, \$15, \$12 each. Brooders, 8 styles, \$6. Fowls, eggs, Ill. etc., 3c. J. A. Chelton, Fairmont, Md. Mention American Gardening when you write.

FLOWERING PLANTS—CHEAP. BY MAIL. Healthy young stock, average prices from one to two cents each. Send for Price List.

E. FRYER, R. R. Ave. and Hill St., BROOKLYN, N. Y. Mention American Gardening when you write.

ASTER SEED Leading kind, best kind for bedding and cut flower at low price. **PANSY PLANTS**, 5 cts. each, large plants, too large to send by mail. English Ivy, 4 ft. high, 16 cts. Honeyuckle, 2 years old, sweet scented, each 10 cts., by express. Carnations, rooted cuttings, etc. **HENRI BEAULIEU**, Woodhaven, N. Y. Mention American Gardening when you write.

CELERY PLANTS

We grow Celery Plants by the acre on land specially adapted to them. Sown thin, each plant is strong, stocky and well rooted. White Plume and Golden Self Blanching, etc., we ship safely to all parts of the United States. Price, 500, 75c., 1000, \$1.25; 5000, \$5.00.

WILSON BROS., Tecumseh, Mich. Mention American Gardening when you write.

50 BEDDING PLANTS FOR \$1.00

All are fine plants in bud and bloom; too large for mailing; must be shipped by express.

JNO. E. DE WALT,

Box 82. Carlisle, Pa. Mention American Gardening when you write.

THOUSANDS of farmers say that one article in *The Rural New-Yorker* is worth more than the paper costs them for several years. You get 52 papers every year for \$1. We can send it and AMERICAN GARDENING both one year for \$1.80, and your money back for *The Rural* if you want it.



We have the largest and finest collection of **PALMS, ORCHIDS, FERNS and FOLIAGE PLANTS** for Conservatories, Hardy Herbaceous Plants, Flowering Shrubs and Ornamental Trees, Vines. Everything for a private place. Estimates and Plans for Planting Places and furnishing stock (free).

SIEBRECHT & SON'S,

Rose Hill Nurseries, New Rochelle, N. Y.

Mention American Gardening when you write.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 665, ALBANY, N. Y.

Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 20 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America.

A printed list sent on application. Sales made at reasonable prices.

E. CORNING.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

General Catalogue and Garden Guide for the South

Comprising summary description, degree of hardiness, hints to culture of 1500 sorts of plants. New enlarged edition. 93 pages. Free by mail.

Southern California Acclimatizing Association
SANTA BARBARA, CAL.

Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the

Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

FLOWER QUERIES.

A book written in Questions and Answers, discussing 500 topics on flower culture, in ten chapters as follows: Chap. I.—Soil and general cultivation. Chap. II.—Bulbous Plants. Chap. III.—Lilies, Culture and Management. Chap. IV.—Roses. Chap. V.—Vines or Climbers. Chap. VI.—Shrubs. Chap. VII.—Ferns and Palms. Chap. VIII.—Insects and Diseases. Chap. IX.—Miscellaneous Queries. Chap. X.—Floral Hints. Every one who loves and cultivates flowers needs it. PRICE 25 CENTS.

THE COURIER, Chatham, N. Y.

Mention American Gardening when you write.

PLANTS WORTH HAVING.

	Per doz.
Abutilon Souvenir de Bonn.....	\$1 50
Aralia papyrifera.....	2 50
Chenostoma hispida.....	1 00
Cyclamen giganteum, 2 1/2 in. pots.....	2 00
..... 4 in. pots.....	4 00
Grevillea robusta.....	3 00
Maranta bi-color.....	1 00
Musa Ensete, 5, 6, 8 and 12 inch pots from 75c. to \$5.00 each.....	
Strobilanthes dyerianus.....	1 30

Catalogues free on application.

SEAWANNAH GREENHOUSES,

P. O. Box 34. Oyster Bay, N. Y.

James C. Clark, Supt. Wm. L. Swan, Prop.

Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Bargain Collections.

Too many people are afraid of these. For the experimenter, or the well-versed grower, who wishes to select special sorts, they are virtually worthless. But for the novice, they are quite as likely to prove satisfactory as any list which he might select for himself. They are not poor, valueless plants, but usually consist largely of left-over stock. Often of the finest kinds grown, and sometimes including novelties. Besides, one gets twice or three times as much in quantity for the money as when making his own selection. The idea is a good one, both for the buyer and for the seller.

Potting Ferns.

Among the choicest greenhouse ferns are counted the Davallias and the various sorts of Nephrolepis. Counted among the best of our decorative ferns, both these genera find close duplicates among native sorts. Hence, although the florists' ferns are exquisitely beautiful and a delight to the possessor, the window gardener with light purse may get as much of beauty and satisfaction combined from the choice carpetings of our own bits of woodland. The present season, when the fern fronds are just unrolling, is an unexcelled time to secure these plants, since the beauty of the fronds will not be marred as must be the case if transplanted later. Let us have plenty of our native ferns for the windows.

Plants by Mail.

Doubtless the majority of people, if given their choice, would speak out an immediate preference for expressage as a means of transportation of plants; but it is often the case that plants received by mail thrive better than those expressed. The ball of earth sent with expressed plants is too often left just as it is, hard and root-bound, and the plants remain inexplicably at a standstill. The plant that is sent by mail shows its exact condition, as to root. If the plants are laid in warm water for a half hour after receipt and the roots then carefully pruned, i. e., bruised ends cut off, they may be potted in small-sized receptacles, or set thickly around the edge of large ones, if pots are scarce. Being carefully wa-

tered and kept rather close out of the wind for a few days, they will soon be ready for rapid growth. They should receive air and sunshine in plenty as a means of hardening, before being placed outside. It is the extreme of risk to place a soft, tender greenhouse-grown plant at once outside.

An Easter Joy.

Clotilde Souper, having been ripened off late in the summer and placed in a cool cellar during the early part of the winter, was thence transferred later to a sunny window in a chimney-heated room. Just before Easter it was ready with some extra fine blossoms and has ever since been covered with swelling buds, intermingled with blooms. Enough can scarcely be said in favor of this fine rose, for the general grower.

Feed for Small Chicks.

The judicious feeder will "balance" the ration well, as to its effect on the bowels. White bread and hard-boiled egg are constipating. Bran and all the green stuffs are laxative. Care should be taken that no one of these preponderates too strongly. This being done, all may be used as helpful parts of the daily ration. Flaked oats form an excellent feed once or twice a day. But are likely to induce indigestion if the chicks are allowed to pack their crops at will with them. Corn meal and bran are always better scalded. But they may be used without cooking, a portion of the time, if mixed long enough before feeding to become well swelled. One must not, on the other hand, err by using food so long mixed that it has begun to ferment.

Eggs of One Color.

"The way to resume is to resume." The way to learn the value of assorting eggs is to assort a few lots and study them. It will take but one glance of the eye to teach us the superior attractiveness of the even-sized, even-colored lots over those of varying size or mixed color. Since the seller cannot often become the actual purchaser, let him put himself in the place of the purchaser, experimentally, so far as may be. It will increase the faculty generally called shrewdness, and will pay him in cash in hand.

A Window Garden Curiosity.

In order to gain an object lesson as to the capacity of some willows for easy rooting, it needs only to place a few branches in water in a warm room. Some pussy willows thus placed in a vase, early in March, retained their pretty catkins for many weeks, and at

IT'S CURES THAT COUNT.

Many so-called remedies are pressed on the public attention on account of their claimed large sales. But sales cannot determine values. Sales simply argue good salesmen, shrewd puffery, or enormous advertising. It's cures that count. It is cures that are counted on by Ayer's Sarsaparilla. Its sales might be boasted. It has the world for its market. But sales prove nothing. We point only to the record of Ayer's Sarsaparilla, as proof of its merit:

50 YEARS OF CURES.

the last of April a number of them were found furnished with roots two inches in length.

Covering for Fine Seeds.

There are many seeds so fine that a covering of even the finest soil risks their chances of germinating. To attempt to grow them without covering is almost more of a risk, as the window gardeners who can keep such things constantly in mind are few, indeed. The seeds are almost sure to be dried up at some stage of the process. Powdered moss makes a very light covering, which does not flood in watering. Those who use paper only as a covering should see to it that the paper is very coarse and porous, as otherwise mold is certain to attack the seed. A loose, moisture-retaining cloth, like coarse woven flannel, is generally much better than paper. It needs very careful hands to use glass as a moisture retainer, on account of the dangerous excess of moisture so often precipitated; and it is also true that most seeds germinate better, if kept dark, according to nature's own methods.

Kerosene as a Poultry House Accessory.

Few common things may be either so helpful or so fatally harmful as kerosene, according to the varying methods of its use. It is the best agent that can be employed around the poultry house to overcome vermin. All about the house, on the perches, the fowls themselves, it is very helpful. The one exception to be strongly emphasized is that it must never be used during the hatching season. It is invariably fatal to the chicks within the eggs. Upon hens with small broods, it may be used with advantage by dipping the fingers in it, and passing them through the hen's feathers. Very small chicks may be treated with it by wrapping them for a short time in a cloth which has been sprayed with kerosene. The skin of both chicks and fowls seems to be peculiarly susceptible to irritation from kerosene, as they will scream the instant it touches them, and manifest the greatest fear of the operation being repeated.

MYRA V. NORRIS.

Protecting the Flower Bed.

If the location of your flower bed be in the sod, weeds and moles will likely trouble. In order to obviate this, after having taken off the sod, dig a trench all around down to the subsoil wide enough to sink some old plank, boards or pieces of stove pipe (unjointed). Pound well all around, then throw the soil back so as to cover the upper edge of the wood or sheet iron and you have the best preventative against the aggressiveness of the grass, roots and moles.

ARMSTRONG & McKELVY
Pittsburgh.
REYMER-BAUMANN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANGOR
Cincinnati.
EOKSTEIN
ATLANTIC
BRADLEY
BROOKLYN
JEWETT
ULSTER
UNION
SOUTHERN
SHIPMAN
COLLIER
MISSOURI
RED SEAL
SOUTHERN
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALKIN
Salem, Mass.
CORNELL
Buffalo.
KENTUCKY
Louisville.

YOU will find that painting properly done with Pure White Lead and Pure Linseed Oil is a good investment—more than the cost will be added to the attractiveness and value of your property. Make sure that the brand is right. (See list of brands which are genuine.) Avoid the "just-as-good," "sold-for-less-money" sorts.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

OUR PREMIUMS ARE OFFERED

with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to obtain the new subscriber and retain the premium. If the subscriber they procure wants a premium (and he doubtless will,) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

LORD PENZANCE'S NEW HYBRID SWEET BRIARS.

Quite a New Feature in Roses.

The foliage of every one of them is as sweetly scented as the old-fashioned Sweet Briar that grew in our grandmothers' gardens.

The Sweet Briar or Eglantine, is acknowledged by all to possess one of the sweetest perfumes that nature has provided and its delicious scent is the object for which it is usually cultivated. These new varieties, now for the first time placed in commerce, are vast improvements upon the old sorts. They are hybrids (obtained by the Right Hon. Lord Penzance) between the common Sweet Briar and various old-fashioned garden Roses and are possessed of many advantages.

The flowers are borne in wondrous profusion, and vary in color from white, through several shades of pink, to very dark red or crimson.

The plants are perfectly hardy even in very bleak and exposed positions.

For vigor of growth there is scarcely anything in the rose world to equal them. Plants three years old have now many shoots on them that rise to the height of twelve feet. These, with a slightly outward bend, and clothed with flowers of exquisite tints, produce a gorgeous effect.

The buds are the most graceful, sweet and delicate objects imaginable.

The flowers are single or semi-double, and this adds lightness and elegance to their beauty.

After the flowers are over, they are followed by bright scarlet seed pods or "hips" in great numbers, which, nestling among the deep green, scented foliage, make the plant delightfully ornamental till quite late in the autumn.

No garden will be esteemed complete which does not possess a group of Hybrid Sweet Briars. They are so sweetly scented, so beautiful in color, so hardy and free from disease and the attacks of insects, as to make them eagerly sought after by all the knowing ones.

**This
is Our
Offer.**

For one NEW subscription to American Gardening at \$1.00, we will forward you, all charges prepaid, your choice of two of the three following varieties:
Meg Merrilies, Red.
Anne of Geierstein, Pink.
Brenda, Blush White.

The above to be well-established plants out of 2½ inch pots.

The collection of Three above Plants for one NEW SUBSCRIPTION to American Gardening at \$1.35.

These plants will be forwarded to our subscribers direct from the growers, eminently responsible people, who guarantee them to be true to name and color.

Plants ready for shipment May 1. Orders booked now, however, owing to the expected enormous demand.

OUR GREATEST 1897 PREMIUM

The Wonderful New Climbing Rose

Yellow Rambler (Aglaia)

A worthy COMPANION to the well-known Crimson Rambler.
The Hardest Yellow Climbing Rose Ever Introduced.

Yellow Rambler bears its flowers in immense clusters, often as many as one hundred and fifty blossoms in a bunch, the trusses being of handsome pyramidal shape.



A CLUSTER OF YELLOW RAMBLER ROSES.

Yellow Rambler holds its blooms from three to four weeks without fading; a large bush in full bloom is one of the most beautiful sights imaginable.

Yellow Rambler is a clear decided yellow, in marked contrast to many roses so described, but which have really only a yellow tinge.

Yellow Rambler is very vigorous; well-established plants often making shoots eight to ten feet in height in a single season.

Yellow Rambler represents the triumph of the century in the hybridizing art, and is the most valuable introduction in recent years.

Yellow Rambler is very sweetly scented.

Yellow Rambler combines the climbing habit and decided yellow color with hardiness.

Yellow Rambler will withstand, without protection, a zero temperature; with protection it will thrive where any other rose will.

Yellow Rambler is thus adapted to successful culture in nearly all of the northern parts of the United States.

Yellow Rambler is absolutely NEW on the market and will prove the sensation of 1897!

Yellow Rambler premiums will be shipped direct to our subscribers from the introducers, one of the largest and most reliable firms of nurserymen in the country.

All stock is guaranteed pure and will be shipped in good condition.

DON'T YOU WANT A YELLOW RAMBLER ROSE?

You Can Earn One in Ten Minutes!

READ OUR OFFER.

We will forward, all charges prepaid, one well-established plant of **Yellow Rambler Rose**, from 2½ inch pot, for ONE NEW SUBSCRIPTION to American Gardening at \$1.00, or six plants for five NEW subscriptions at \$1.00 each.

The same plant will not be sold in 1897 for less than 50 cents. Plants will be shipped on and after March 15th. It is expected that the demand for this New Rose will be phenomenal, and we advise those of our readers who want a plant to be early with their order.

OUR PREMIUMS ARE OFFERED with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will), he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by **AMERICAN GARDENING** in 1897 will be select and valuable, and owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

THE THREE BEST CANNAS KNOWN.

OFFER

No. 66.

Austria, Italia and Mrs. Fairman Rogers

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed **Madam Crozy** type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of **Mme. Crozy**, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{2} \times 1\frac{1}{2}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.

ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species **Canna flaccida**, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. **Austria** is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. **Italia** as flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the **Gladiolus**, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of **Austria** with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 38 growths, and attained a height of 43 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and **Italia** were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.



CANNA
ITALIA.

Offer No. 60.

CACTUS.

The following collection will be sent for one new subscription at \$1.00, with 35 cents additional to prepay express charges. The plants offered are worth \$2.00 at retail, and come from a noted collector.

One plant each of

<i>Astrophytum myrtilloides</i> .	<i>Echinocactus setispinus</i> .
<i>Anhalonium Lewinii</i> .	<i>Berlandieri</i> .
<i>Mammillaria discoloris</i> .	<i>Opuntia Engelmannii</i> .
<i>Hederii</i> .	<i>Senilis</i> .

Offer No. 42.

For one NEW subscription at \$1.00, receiver to pay express charges, or by mail, postpaid, for \$1.35.

25ONE YEAR OED.... NIAGARA GRAPE VINES

Comment on this offer is unnecessary, beyond stating the fact never before was such an opportunity offered to start a vineyard at so small an outlay.

Offer No. 64.

POTATOES

One-half pound each of the four following varieties sent, postpaid, for one new subscription:

Early Michigan.	Carman's No. 3.
Early Fortune.	Livingston's Banner.

Two pounds or eight potatoes in all.

Option: One pound Early Michigan, or two pounds of any one of the other three varieties. Grown in Michigan.

Offer No. 45.

COLLECTION OF ROSES.

From Maryland. Strong 2-inch pot grown



plants. Delivery on and after April 1, postpaid.

One Crimson Rambler

One Perle
One Safrano
One Mme. Camille
One Marie Guillot
One Iphigene
One Nridesmaid
One Meteor
One Papa Gontier
One Hermosa
One La France
One Bride

Surely the good things of this earth are open to everyone who exhibits a little energy. Realize you can obtain the above set of Twelve Magnificent Roses as a premium for one new subscription to AMERICAN GARDENING, and that it will not take you more than a few minutes' work to accomplish this, then send and get your reward.

Offer No. 80.

FOR ONE NEW SUBSCRIPTION

200 CELERY PLANTS

AS FOLLOWS:

50 Plants
White Plume.50 Plants
New Rose.50 Plants
Golden Self-
Blanching.50 Plants
Giant Pascal.

This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to AMERICAN GARDENING. Orders for celery plants will be filled from now until August 15th.

Offer No. 55.

One plant each of....

Starr, Parlin Beauty and Bismarek Apples.

By mail, postpaid, for one new subscription.

Starr. Fruit very large, 11 to 12 inches around, showy, pale green, frequently with handsome bluish on sunny side; very early; an excellent shipper; superior cooking and very good eating apple.

Parlin. Very hardy; a good grower and productive. Fruit splashed and striped with red; September.

Bismarek. Dwarf and extremely prolific. Most suitable apple for hot climate, yet the hardiest known. A wonderful bearer. Fruit is large, brilliant in color, handsome. Flesh tender, pleasantly sub-acid; of distinct and most delicious flavor, unequaled as a dessert apple and very superior for cooking. Will keep until March.

Offer No. 53.

HARDY EVERGREENS.

Your choice of any one of the below offers of Hardy Evergreens for one NEW subscription. This is a great big offer for the money, and invaluable to any one wishing to set out a young plantation. Plants from Illinois.

A-50 Scotch Pine, 6 inches.

B-50 White Pine, 4 inches.

C-50 Norway Spruce, 3 to 4 inches.

D-50 American Arbor Vitae, 4 inches.

E-25 Red Cedar, 4 inches.

F-25 Hemlock Spruce, 4 inches.

G-15 Blue Spruce, 4 inches.

H-25 Douglas Spruce, 4 inches.

J-15 Picea Concolor, 4 inches.

Offer No. 58.

CHRYSANTHEMUMS

This collection comprises a very fine assortment of eleven standard large flowering varieties, from 24-inch pots, good plants, and will be sent, postpaid, for one new subscription; plants grown in Maryland. Ready for delivery on and after April 15. These plants will do well outdoors in mild climate, whilst in more exposed sections to bring them to full maturity in the fall they should have partial shelter.

Mdme. F. Bergmann.—The earliest of all large varieties; color white, of great excellence.

Ivory.—A popular favorite; very dwarf and free flowering.

Miss Minnie Wanamaker.—Pure white Japanese; one of the standard varieties.

Golden Wedding.—The most exquisite yellow Japanese extant.

Eugene Baillodouze.—Monster flowers; yellow Japanese.

W. H. Lincoln.—The champion late flowering yellow; a grand variety.

Col. W. R. Smith.—Japanese incurved bronze.

Mrs. J. G. Whilldin.—Earliest of the Japanese yellows. In flower same time as Mdme. F. Bergmann, Oct. 4 to 7.

V. H. Hallock.—Color rosy pearl; Japanese.

Maud Dean.—The most charming pink Japanese ever introduced; a good market variety.

Cullingfordii.—A reflexed variety of good reputation; color deepest crimson.

Offer No. 61.

COLLECTION OF

VEGETABLE SEEDS.

The following collection will be sent, postpaid, for one new subscription. It embraces ten 5 cent packets and seven 10 cent packets; valued in all at \$1.20. The varieties offered are all standard, the packets regular size, the seeds fresh and the seeds regular size.

true to name, and reliable. We feel assured the grower will fill this order to your very complete satisfaction.

Beet, Ellipse.
Bean, Bush Refugee.
Cabbage, Premium Flat Dutch.
Carrot, Henderson's Intermediate.
Celery, Henderson's 1/4 Dwarf.
Corn, Crosby.
Cucumber, White Spine.
Lettuce, Tennis Ball.
Musk Melon, New Hackensack.

Parasip, Long Smooth.
Peas, Alaska.
Radish, White Tipped Turnip.
Spinach, Thick Leaved.
Squash, Bush Crook Neck, Yellow.
Squash, Boston Marrow.
Tomato, Early Ruby.
Burpee's Bush Lima.

Offer No. 46.

THE CELEBRATED

GREEN MOUNTAIN GRAPE

One 2 or 3 year vine and one 1 year vine; two vines in all. Sent, postpaid, for one new subscription.



The Celebrated Green Mountain Grape is fast coming to the front and is bound to stay. It is acknowledged to be the earliest good grape on the market. It is the most delicate and delicious grape grown out of doors. It is a strong-growing, healthy vine, an enormous and early bearer, with well shouldered and handsome bunches.

No one grape possesses so many merits as the Green Mountain. The firm making this offer are headquarters for this vine and have over an acre out as a vineyard.

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE**CHRYSANTHEMUMS**

NEWEST, EARLIEST, BEST.



In Splendid Assortment of Varieties,

Forms, Substance and Color.

Mrs. Higginbotham. Best of all Ostrich Plumes.

Gloriana. The pretty twisted petalled yellow.

Marie Louise. A grand white.

Pitcher and Manda. A variety of two colors.

Kate Brown. Earliest and best for the garden.

Fra. Smith. A robust pink.

Silver Cloud. Pale salmon.

G. W. Childs. Finest of the reds.

Major Bonnacon. The best yellow.

Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

OUR PREMIUMS ARE OFFERED with a view to interesting present subscribers to obtain us **New Subscriptions**, and for so doing we expect them to **obtain** the new subscriber and **retain** the premium. If the subscriber they procure wants a premium (and he doubtless will) he, in turn, should interest himself in the same way. **New names sent in direct** are, of course, also entitled to our premium offers.

Every premium offered by AMERICAN GARDENING in 1897 will be select and valuable, and, owing to the fact that all orders will be filled direct from growers who seek the trade of our readers, and so are making us great concessions, the premiums will, as a rule, be in themselves worth the full subscription price of the paper.

Our Premium Offers open the way to all who want a fine garden, but lack the means wherewith to buy.

Offer No. 35.



SENT postpaid, for **ONE** **NEW** subscription at **\$1.00**

....**BEAUTIFUL**....

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection

and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Flaman Cochet

Cornelia Cook
Maurice Rouvier
Catherine Mermet
Prince Hohenzollern

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

Offer No. 47.

Sent, Postpaid, for one NEW Subscription at \$1.00.

NEW GIANT FANCY COSMOS

(MRS. SHEPHERD'S STRAIN).



Mrs. Shepherd's New Fancy Cosmos was offered for the first time last season, but this is the first time they have been offered, put up in separate colors, as here described:

Of this strain, five packets of which are offered in this collection, the grower, Mrs. T. B. Shepherd, of Ventura, California, says:

"No one else grows it, and it is so distinct as to be readily recognized anywhere by one who has once seen the different varieties in bloom. I have been working with it so long that it has an individuality peculiarly its own."

One packet of the above, in splendid assortment, containing over 85 varieties of beautiful flowers, in all shades of red, pink, mauve, tinted and white... 15c.

Three packets of above, in separate colors, Red, Pink and White, one packet of each, at 15c. 45c.

"Tints of Dawn," one packet of above, lovely tinted flowers, white ground, delicately tinted or flecked with pink or mauve in lighter or darker shades. 15c.

Curled and Crested ZINNIAS, splendid mixed, one pkt. 10c.

These are the gayest, brightest and most esthetic bedding flowers imaginable, all colors and shades, with petals daintily curled and crested, having none of the coarseness of other Zinnias.

IPOMEEA, Heavenly Blue, one pkt. 10c.

A perfect dream of beauty.

SCABIOSA, New Large Flowering, red and pink varieties, mixed, one pkt. 10c.

These are very beautiful.

Total Value.....\$1.05

The Choicest Collection of Seeds ever sent out for the money; a poem in flowers and a revelation in nature.

Offer No. 54.

THAT GRAND NEW SINGLE VIOLET

PRINCESS of WALES



Away and beyond the best of all the single varieties lately introduced. The Queen of Single Violets. Fragrance equal to Marie Louise. Blooms very large, strong grower and productive. Grower, who is one of our most renowned violet experts, will send, postpaid, for one new subscription.

Eight (8) good rooted plants, with some flowers accompanying same; carefully packed for safe arrival. Plants ready for delivery now. Grown in New York.

Offer No. 43.

DAHLIAS

The recent revival of interest in this most worthy class of plants, coupled with the introduction of many new and interesting varieties, renders it highly benevolent of every one to see to it that their garden is supplied with the best obtainable.

Any one of the three collections here offered will be found up-to-date and choicest kinds, and as they come from celebrated growers and prize winners, we can assure our friends we are offering them a remarkably good thing and trust they will not be slow to take advantage of one or more of these offers.



A—Four Superb Cactus Dahlias.

One strong root each, Wm. Agnew, Oriental, Nymphs and Zulu, by mail, postpaid, for one new subscription.

B—Four Show and Fancy Dahlias. (Dwarf)

One strong root each, New Double Tom Thumb, Arabella, Blumenfalter and Lucy Faucett, by mail, postpaid, for one new subscription.

C—Four Pompon or Bouquet Dahlias.

One strong root each, Elegance, Sprig, Ariel and Vivid, by mail, postpaid, for one new subscription.

Any one of these collections is worth over \$1.00 at retail, but will be sent postpaid, carefully packed, and guaranteed to arrive in first-class condition for one NEW subscription to AMERICAN GARDENING at \$1.00. Order by Offer No. and Letter.

Offer No. 56.

GLADIOLUS BULBS.

The following offers on Gladiolus Bulbs are well worth striving for. Your choice of one of the two collections offered for only one new subscription at \$1.00. Sent, postpaid, in neat pasteboard boxes. Order by Offer No. and Letter.



A.—6 Bulbs each of May, Bertha, Abel, and Marie Lemoine.

May.—Large spike, well expanded flowers. White, edge of petals touched pink. A grand variety.

Bertha.—This is the finest variety of its color, which is a brilliant light scarlet. Makes a tall spike, with large side branches.

Mabel.—Dwarf, upright habit. Full spike open at one time. In color it is a blending of carmine, cherry and pink. One of the first to bloom.

Marie Lemoine.—Upper division of flowers of pale creamy color, flushed salmon lilac, the lower petals spotted purplish violet, bordered canary yellow. Peacock blotched.

B.—100 Cushman's High Grade Seedling Gladioli

All blooming size. No two alike. Rivaling the floccelle silks in coloring and sheen.

Offer No. 49.

VEGETABLE SEEDS.

The following collection of Seeds is offered by a reliable dealer, with a view to introducing his stock. They are of precisely the same grade as is sold to market gardeners and all desiring the best. The entire collection of twenty named varieties will be sent, postpaid, for one new subscription at \$1.00.



One oz. Beet, Eclipse; one pkt. Cabbage, Early Wakefield; one pkt. Cabbage, Early Flat Dutch; one pkt. Cabbage, Savoy Early; one pkt. Cabbage, Savoy Late; one pkt. Cauliflower, Erfurt; one-half oz. Carrot, Half Long Nantes; one pkt. Celery, Paris Yellow; one oz. Sweet Corn, Early Mammoth; one pkt. Cucumber, White Spine; one pkt. Onions, Early Flat, Red or White; one pkt. Parsley, Double Curled; one pkt. Lettuce, Summer Blonde; one pkt. Radish, Early White Tipped; one pkt. Tomato, Acme; one pkt. Spinach, Viroflay; one pkt. Squash, Early Bush; one pkt. Turnip, Red Top; one pkt. Rutabaga, Champion; one pkt. New Victoria Spinach.

Offer No. 50.

VEGETABLE PLANTS.

All ready to set out.



All good plants. Grown in Maryland. Delivery April 15, postpaid. This is an offer we are not able to make our friends every week in the year, and we will be mistaken if this Bargain is not taken advantage of by thousands.

12 Peppers, two kinds.

12 Egg Plants.

12 Cauliflower Snowball.

12 Tomatoes, two kinds, select.

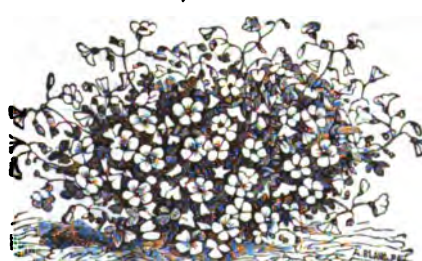
50 Cabbage or Sweet Potato Plants.

50 Lettuce, two kinds.

148 choice vegetable plants and AMERICAN GARDENING one year, to a NEW name, for only \$1.00.

Offer No. 49.

Sent, postpaid, for ONE NEW subscription at \$1.

SUMMER BEDDING**150 OXALIS BULBS**

These bulbs make beautiful borders for summer flower beds, as well as attractive pot plants. The collection includes 150 Bulbs in equal proportions of the four following varieties, named, and in separate packets:

OXALIS DEPPEI ALBA.—White.
OXALIS DEPPEI ROSEA.—Old rose or salmon.
OXALIS ERYTHILLA PURPUREA.—Purple.
OXALIS LASLANDRA.—Crimson. Tall, fine palmate leaves.

Offer No. 57.

CHRYSANTHEMUMS

For one new subscription and \$1.00 we will forward, postpaid

A Collection of 36 Plants.

All different; prize-winning varieties, comprised in great part of last year's novelties, in all shades of color and types of bloom.

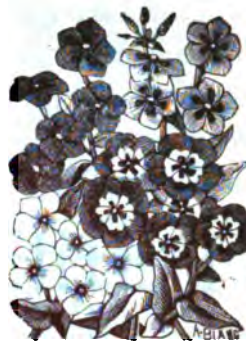
This offer comes from a noted grower, and we hope to receive a great many orders for this collection.

Offer No. 40.

FLOWERING PLANTS

All ready to set out.

This is a collection which everybody should be sure to obtain. It only requires one NEW subscription to become the possessor of all the plants here mentioned. Ready for delivery May 1st. Postpaid. Grown in Maryland. Save time growing from seed and get this lot all ready to set out.



10 Antirrhinums, choice mixed.

10 Asters, mixed.

10 China Pinks, mixed.

10 Cosmos, choice mixed.

10 Petunias, mixed.

10 Phlox Drummondii, mixed.

10 Marigold Eldora.

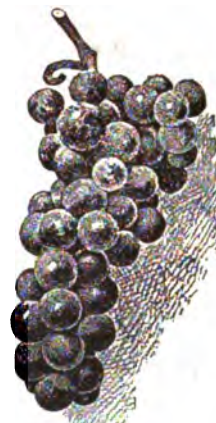
10 Scabiosa, mixed choice.

10 Zinnias, mixed choice.

10 Scarlet Sage.

100 Choice Flowering Plants and AMERICAN GARDENING, one year, to a NEW name, for only \$1.00.

Offer No. 59.

GRAPES

Every country and suburban home needs a vineyard, and those who avail themselves of the offer which follows will be well satisfied and pleased for years to come with the result. A grower offers:

Agawam,

Lindley,

Brighton,

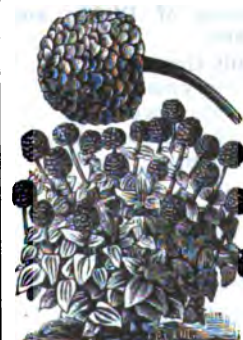
Worden,

Niagara,

Moore's Early.

Your choice of Ten one-year vines, all of one variety, or three each of three of the above sorts, for only one new subscription. Forwarded postpaid.

Offer No. 52.

Collection of Flower Seeds

Sent, postpaid, for one new subscription to AMERICAN GARDENING. The following list embraces 16 varieties of choice flower seeds; fresh and true to name, eight of which are of 5 cent packets, six of 10 cent packets, and two of 15 cent packets valued in all at \$1.30. This collection is offered by a reliable grower, in whom we have full confidence.

Alyssum, Sweet

Asters, mixed

Cosmos, Large

Flowered

Calendula, Price of

Orange

Calliopsis, mixed

Datura, Double, mixed

Carnation Marguerite, finest double mixed

Mignonette Machet

Nasturtium, Dwarf mixed

Poppy, Carnation

flowered, mixed

Sweet Peas, Eckford's mixed

Heliotrope

Larkspur, Dwarf

double

Cobaea Scandens

Zinnia, Double, mixed

Lobelia compacta

Potash

is a necessary and important ingredient of complete fertilizers. Crops of all kinds require a properly balanced manure. The best

Fertilizers

contain a high percentage of Potash.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.

DON'T HAVE SOUL MILK
USE THE
CHAMPION
Simple, cheap, effective. "Pays for in a week." Ask for free book, "Milk."
CHAMPION MILK COOLER COMPANY,
61 Bank St., Cortland, N. Y.

Mention American Gardening when you write.

...THE COMPLETE...

BOOK CATALOGUE.

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers

The Fruit Grower

The Nurseryman

The Private Gardener

The Market Gardener

The Seedsman

The Farmer

The Poultry Keeper

The Student of Botany, Entomology and Ornithology

and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE PTC. AND PUB. CO. Ltd.

P. O. Box 1897, New York.

...NEW CALLA ELLIOTTIANA...

A beautiful, yellow-spathed variety, introduced from South Africa by Captain Elliott, after whom it is named. The foot-stalks of the leaves are 15 to 21 inches long, mottled with white towards the base and supporting a broad, triangular, arrow-shaped blade 9 to 12 inches long. The leaf is thicker in texture than the well-known Calla aethiopica, and is finely spotted and marked with white. The spathe is of a rich, pure yellow, and forms a broad, trumpet-shaped tube 5 inches in diameter at the mouth.

This variety is distinct from any Calla in cultivation, and makes a splendid addition to any collection. It has received First Class Certificate from the Royal Horticultural Society, and other First Class Certificates wherever exhibited.

We have secured a fine lot of these bulbs, which are extra strong, measuring 4 to 5 inches in circumference, and offer them at \$1.50 to \$2.00 each.

PITCHER & MANDA, JOHN N. MAY, Short Hills, N. J.

Mention American Gardening when you write.

ASK YOUR SEED DEALER FOR

SLUG-SHOT

TO DESTROY

Curran and Cabbage Worms, Potato Bugs, Cucumber Fleas, Rose Lice and Slugs, Lice on Cattle, Fowls, Etc

SLUG SHOT stands to-day the most successful general insecticide in the world for use on VEGETABLES, FRUITS OR FLOWERS. It is put up in various sized packages to suit all wants. We prepare all sorts of INSECTICIDES and FUNGICIDES for spraying or in powder. GRAPE DUST—Powder for destroying Mildew on Roses and Gooseberries. If you have trouble with Insects or Blights, write and we will try to help you. Send a postal for pamphlet to B. HAMMOND, Fishkill-on-Hudson, New York.

Mention American Gardening when you write.



"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND DRINK TO PLANTS.

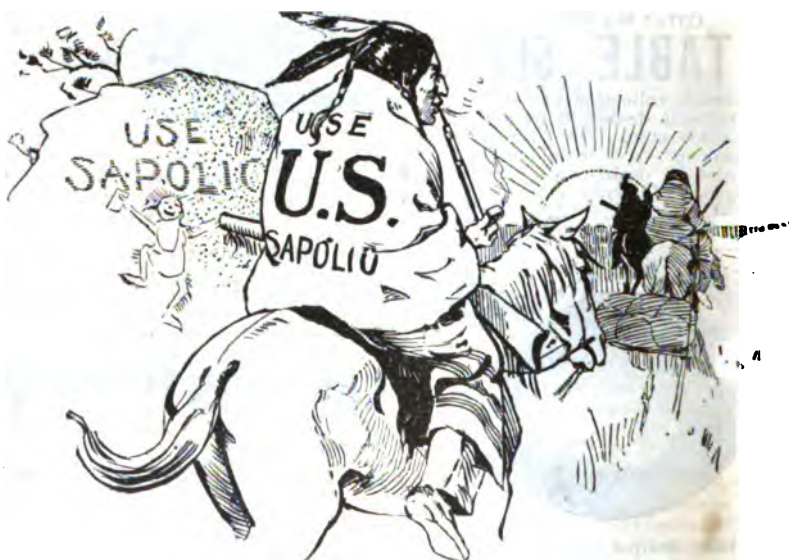
Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address **THE AMERICAN JADOO CO.**

811-813-815 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.



If we could teach the
Indians
to USE **SAPOLIO**
it would quickly civilize them

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 126.
COMBINED SERIES VOL. LI.

NEW YORK, MAY 22, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

American Cowslip.....	373	Plant.....	383	Boston, Phila.....	385	Pæonies, Planting.....	386	Vegetable Garden.....	374
Apple Tree Borers, The.....	375	Fruit Garden.....	374	Mushrooms.....	383	Pansies, Sweet Scented.....	384	Window Gardening.....	384
Arbor Vitæ, Heading.....	378	Holding for a Rise.....	378	Obituary:		Plum Curculio.....	374		
Back.....	386	Home Plot, The.....	384	Alley, H. H.....	381	Poultry Notes.....	384	Illustrations.	
Berry Pickers, Checking.....	378	Insects, Destructive and.....	375	Berkmans, Mrs.....	381	Private Gardeners.....	382	American Cowslip.....	373
Brussels Sprouts.....	379	Methods of Control.....	375	Nixon, E. S.....	381	Roses, Insects on.....	386	Apple Borers:	
Carnation, a New.....	383	Insects on Vegetables.....	374	Saul, J.....	381	Salsify, Woody.....	374	Flat Headed.....	375
Chrysanthemums.....	374	Iris, Japan, Bed for.....	379	Orchards, Some Diseases.....	379	Society Reports.....	382	Round Headed.....	375
Color of Plants.....	374	Leaf Mold.....	384	and Insects of.....	379	Squash, etc.....	374	Berry House.....	377
Corn, How Thick to.....		Market Reports: N. Y.,.....		Orchid Notes.....	381	Strawberries.....	374	Berry Pickers' Checks.....	376, 377

The American Cowslip.

DR. N. L. BRITTON,

Director-in-Chief N. Y. Botanical Garden.

This plant was apparently first made known by Plukenet, who in his *Almagestrum Botanicum*, of 1692, page 62, describes it as "*Auricula ursi virginiana*, floribus boraginis instar rostratis, cyclaminum more replexis," thus early recognizing its affinity with *Cyclamen*. He figures it at plate 77, fig. 6, of his *Phytographia*, issued the preceeding year. He says it was collected by Banister in Virginia, and by him transmitted to England.

Phillip Miller, in the early editions of his *Gardener's Dictionary* states that Banister sent it to Dr. Compton, Lord Bishop of London, in whose curious garden he saw it growing in 1709. In the sixth edition of his *Dictionary* (1752) Miller published Catesby's name *Meadia* for the genus; this was in honor of Dr. Richard Mead, Physician to the King; two years later (1754) Catesby's name was published also by Edwards who edited the second edition of Catesby's "*Natural History of Carolina, Florida, and the Bahama Islands*," and at page 1, plate 1, of the appendix we find an interesting description and good figure of the tooth-leaved form of the plant.

Meadia has not been used by many authors, for Linnæus in "*Nova Plantarum Genera*" (1751), and in the first edition of

"*Species Plantarum*" (1753), used for it a name given by the Greeks to some other plant, viz., *Dodecatheon* (twelve Gods). The adopted laws of botanical nomenclature, which do not recognize generic or specific names published before the issue of the first edition of *Species Plantarum*, call for the maintenance of *Dodecatheon*. The name *Meadia* has, however been used

for the genus by several botanists, notably Miller (1759, 1768); Crantz (1766); Kuntze (1891); Greene (1894).

Dodecatheon Meadia early became a favorite, and was widely cultivated and frequently illustrated. Among the older figures may be specially cited, *Botanical Magazine* plate 12; Sweet's *British Flower Garden*, vol. 2, plate 60 (a form with lacinate leaves); Loddiges' *Botanical Cabinet*, No. 1489 (a white flowered form); *Botanical Magazine*, plate 3622 (as *D. integrifolium* Michxaux, the entire-leaved form). It has recently been figured in *Meehans' Monthly* (vol. 4, plate 5), where a very interesting account of it may be found. It is stated by some authors that Catesby published the name *Meadia* in 1743, in the first edition of "*Natural History of Carolina*," but this appears to be an error.

It has been maintained by many authors that there is but a single species of *Dodecatheon*, but that position is evidently very far from the truth. The typical species naturally inhabits moist cliffs and prairies from Pennsylvania to Manitoba, Georgia, and Texas; it is possible that this may yet be separated into other species; especially noteworthy in this regard

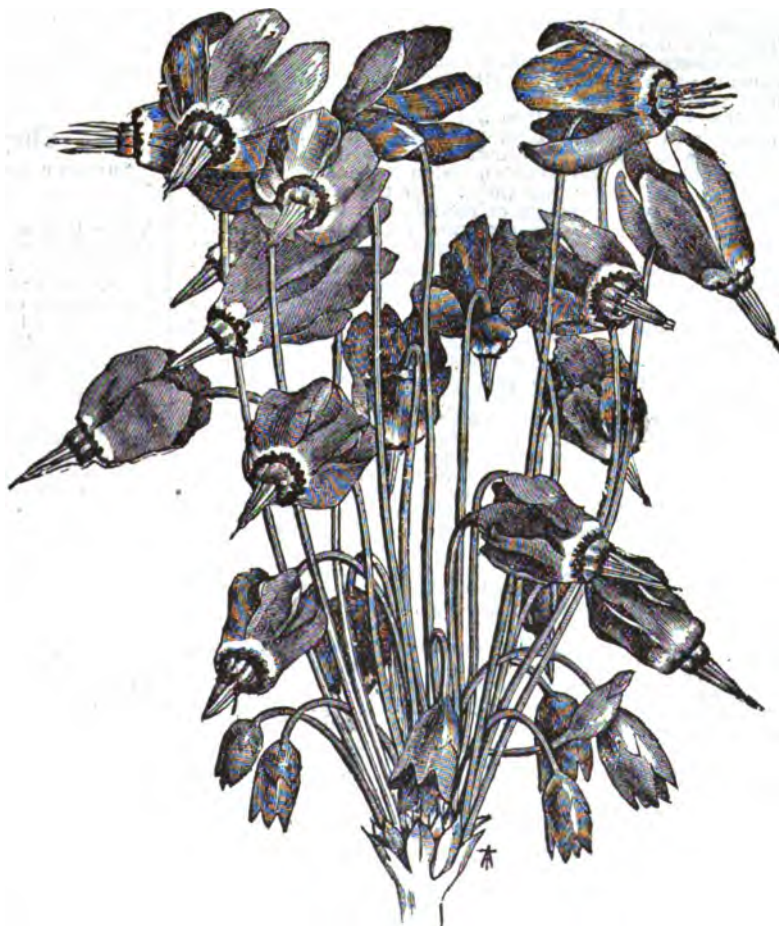


FIG. 104.—THE AMERICAN COWSLIP.

is a rare plant ranging from Illinois to Texas, the *D. Meadia* Frenchii, Vasey (1891), which has leaves abruptly narrowed, or cordate, at the base, and is, perhaps, the *D. cordatum* of Rafinesque in *Atlantic Journal*, pp. 179, 180 (1833), where that versatile author described ten others from regions within the now known range of *D. Meadia*, none of which are probably specifically different. It has recently been suggested, however, that the plant of the Alleghany Mountain region, from Pennsylvania to Georgia, may, perhaps, be different from that of the prairies.

When we pass from eastern North America to the Rocky Mountain region and beyond we find, however, that there is a marked differentiation of the genus into specific types. The first of these, historically, was described by Chamisso and Schlechtendahl (*Linnaea*, Vol. 1, p. 217, 1826), from the Island of St. Lorenz, in Behring Sea, whence it extends to the Alaskan coast and islands.

Hasker, 1834, made known *D. dentatum*, from the Northwest.

Dodecatheon Hendersoni was described by Asa Gray, in 1836, ranging from California to Idaho and Washington.

Dodecatheon Jeffreyi, Moore, from California, was described in 1865.

Nuttall, in 1855, described *D. ellipticum*, from California.

Between the years 1888 and 1896, Greene has described ten species from the western parts of the continent.

D. tetrandrum, from Oregon and Washington, was described by Sukdorf in 1895.

A species apparently different from all the rest, collected last year by Mr. Heller in Idaho, is about to be described.

It must be conceded that all the western plants differ specifically from the eastern *D. Meadia*. They are described as differing among themselves by features of the subterranean parts, some having a perpendicular tap-root, others a horizontal or ascending, often bulb-bearing, root-stock; others still a more short vertical crown. The foliage furnishes distinguishing characters, and also the flowers and capsules. Yet from the known variability of *D. Meadia* it is, perhaps, to be suspected that some of the described western species and varieties are but forms or conditions of each other and very much close, comparative work on living specimens must still be done to establish or destroy their claim to names.

I hope to be able to grow a considerable number of these interesting and critical plants from seed or from roots collected in their native haunts, and to be able to communicate to you such results as may be obtained.

Forcing Tomatoes.

(To S. S.)—This subject has been very fully discussed in previous issues during both last winter and the one before. Methods and varieties can be found by reference to last annual index. In due season the subject will again have place in these columns.

Loss of Color by Plants.

(To A. M.)—While a plant may lose its color on account of there being an insufficient supply of food, that cannot be said to be the only cause. Indeed, the same manifestation can be observed when there is a surplus of food available. Again, light is a necessity to plants, is indeed food for them, and if deprived of a proper supply loss of color ensues. The cause of loss of color may, therefore, be said to be indigestion or lack of material to digest, but more likely the former.

Salsify is Woody.

For many years past our salsify, or oyster plant, has had a woody fibre running through the root, so that it has been unfit to eat. What is the cause of this and how can it be prevented.—MRS. D. R. H.

The cause of the hardness is no doubt due to an absence of food for the plant and to the soil being so hard that its root does not grow easily. The land evidently needs deeper and more thorough cultivation. This had better be done in the fall, and at the same time manure heavily.

The Vegetable Garden.

Herbs.—All herbs may be sown out doors now, except, perhaps, in the most extreme North.

For Succession.—Sow peas, bush beans.

Lima beans sown now will, with steady warmth, give best crops.

Okra.—Sow now, where the plants are to remain, in rows three feet apart.

Corn.—Sow now for general crop. Stowell's Evergreen and Early Mammoth are excellent varieties; the Country Gentleman is smaller, but more delicious.

Squash, Pumpkin.—It is often the custom in many gardens to sow these among the corn, for lack of sufficient ground. But in this broad land it should not very often be necessary to resort to the practice. In such cases, however, as circumstances compel that course, it is better to plant the corn farther apart than is ordinarily done. In open ground plant few seeds in hills, six to eight feet apart, and the small bush varieties about four feet apart, thinning them out to three best plants per hill.

Insects.—This is the time to look out for the many insects, slugs and flies that attack vegetation, for no matter how good the seed or how carefully planted, success cannot be assured with protection from their depredations. Those unacquainted with their different habits should take pains to get a knowledge of their life histories before success in combating them can be assured. There are two general divisions of them—the chewer and the sucker. The chewer is the one that eats up the leaves (as the potato bug and the caterpillars) and can easily be destroyed by poison. The sucker class embraces such as the green and black fly, squash bug and scale. They destroy the vitality of the plants attacked by the use of a long beak, which they push into the tissue, and through this absorbing the sap. This class of insects cannot be reached with poison; kerosene emulsion is generally used to destroy them. For the green worm on cabbage or cauliflower, use Slug Shot; for green fly use tobacco dust, or they may be checked by spraying with hot water, in which a tablespoonful of common salt to two gallons of water is dissolved. It is difficult to kill the squash bug by spraying, but when the bugs are quite young, before the hard shell is formed, they may be destroyed by the use of the kerosene emulsion. Go over the young vines often and hand-pick all old bugs that can be found; also the clusters of eggs that may be hatching on the leaves; this is the surest remedy. For the striped lady bug, dust fresh air-slaked lime. As a preventative of the onion maggot while the plants are from three to six inches high, dust with fresh lime, soot or any similar material, thus making the bed too disagreeable for the onion fly to lay its eggs, and it will then seek pastures new.

Set Out Tender Plants.—On warm, dull days set out all tender subjects. Plant a few tomatoes in a warm situation for early crop; a south wall is excellent. Set two feet apart, two main stems to grow and train up the wall, keeping off all laterals. In the open ground they should be given some support to protect the fruit from the ground. Egg plants should be planted in rows two by three feet, in well-prepared, rich soil. Keep a few plants in reserve for second planting in case of loss by cold, wet weather.

Set Out Peppers.—These plants, if grown in pots, will grow on unchecked; if otherwise, with few roots; should be protected from strong sun until established. Cultivate often.

W. M. EDWARDS, N. Y.

Indiana Horticultural Society.—This body will hold its mid-summer meeting at Pendleton, Madison County, on June 15 and 16.

The Fruit Garden.

Plum Curculio.—Don't depend on killing the curculio by what you did for the trees last week, but examine the trees and fruit in the early morning. If you are not familiar with the insect you may look quite some time before detecting it, if perchance it be not very numerous, for it is very much the color of plum wood—a slaty gray—and is often taken for a rough bit of bark. The quickest mode is to examine the fruit for the insect's trade mark—a crescent-shaped scar in the flesh of the fruit—finding that, procure a white sheet or some canvas and spread under the tree, then take a slat of wood, padded slightly on one end, place this quietly against the upper part of the trunk, if the tree is small, and with a small hatchet strike the other end of the slat sharply, so that you jar the tree or branch strongly at the first clip, for Mr. Curculio will take a firmer grip and be ready to hold on at the second blow. Destroy all beetles that drop. This, the process of jarring the trees, must be persisted in every morning before the sun gets strong and warm, until no beetles can be found. There are, on the market, many devices for catching the curculio, and such are used in the large orchards, but in all the general principle is the same—jarring of the trees. Chickens are a good addition to the plum yard, and if tame get very much interested in the jarring process, making the sheet hardly necessary.

Strawberries.—Where these are grown for home use and the ground has been cultivated so far, a mulching of some kind should be placed under the fruit—salt hay or pine needles being, perhaps, the two best. Do not, in any way, give an indication of stable to the strawberry patch at this time. Clean straw is all right, but imagination is all powerful at times.

J. HOLLOWAY, L. I.

Chrysanthemums.

Summer Quarters for Pot Plants.—There can be no question but that plants are better inside all the season. There they are not exposed to the furious thunderstorms and winds nor will they suffer as they did outside last year, when plants were waterlogged for weeks at a time. If, however, there is no help for it and they have to go outside, why the sooner the better now, standing them on a bed of ashes in as sheltered a position as possible. If a house be at disposal clean out the soil from the benches and stand in the plants, giving each plenty of room; then bank up well all round the pot with coal ashes, which will keep the roots cool; probably one of the most important things in the blazing summer sun. If the glass can be easily removed from the sides it will be a great help, and the bottom ventilators should be thrown open and left so to keep the current of cool air blowing through underneath.

Cuttings.—Where these are being taken for bench work it will pay to go to a little extra trouble in making them, and if the bottom eyes are removed it will mean a good deal less bother with suckers later on.

Watering.—Plants of strong rooting sorts like Mrs. Twombly need just about twice as much water as weaker growers, like Helen Bloodgood (a beautiful pink by the way). Water each variety in proportion to its needs.—C. TOTTY, N. J.

Insects and Mildew on Chrysanthemums.

What is the best means of destroying and preventing further attacks of lice and worms on chrysanthemums? Should they be sprayed and how? What will prevent mildew.—SUBSCRIBER.

Tobacco dust sprinkled on will drive off the worms and lice. Mildew is usually caused by improper water supply, so not knowing more of your treatment and conditions, cannot advise further. Read the cultural directions for chrysanthemums, as they appear in these columns.

Destructive Insects and Methods for Controlling Them.—VI.

PROF. W. O. JOHNSON.

The Apple-tree Borers.

The apple tree borers, both native American insects, are very formidable enemies to apple trees. One is known as the flat-headed borer and the other as the round-headed borer.

Flat Headed Borer.

The former is a much more common insect than the latter and inhabits alike the frosty regions of the North, the great West and the sunny South. It is a very active creature and seems to delight to bask in the sunshine, running up and down the bark of the tree with great rapidity, but quickly taking wing if any attempt to capture it be made.

The adult beetle shown in the figure measures from three-eighths to half an inch or more in length. It is of a flat-tish, oblong form and of a shining, greenish-black color, each of its wing cases having three raised lines, the outer two interrupted by two impressed spots of a brassy color, dividing each wing into three nearly equal portions. The underside of the body and the legs shine like burnished copper.

It makes its first appearance the last of April or very early in May in Maryland; farther north it is not seen until June and July. The eggs are deposited early in the summer in the crevices and under the scales of the bark, being fastened in place by a glutinous substance. The larva, or worm, hatches in a few days and bores through the bark to the sapwood, in which it cuts broad, flat channels, and sometimes completely girdles the tree. As it develops it bores more deeply into the solid wood, and when full grown (See Figure) approaches the surface again. When ready to transform it gnaws partially through the bark and then casts its larval skin. About a fortnight later the adult beetle emerges by gnawing through the bark.

Round Headed Borer.

This is a very beautiful beetle, but very different from the one just described, as will be seen from a reference to the accompanying illustrations. This is also a widely-distributed insect. It appears early in the summer and deposits its eggs on the tree trunk in or under the bark, within a few inches of the ground, frequently placing them just above the surface or even below it, where the ground is cracked around the tree. The eggs hatch in a few days and the young worms gnaw their way into the inner bark or sapwood, where they feed throughout the season. As winter approaches they frequently burrow down below the surface of the ground, where they remain until spring, when they begin to work upwards, and gnaw their way still deeper into the body of the trunk, cutting cylindrical channels in every direction. Late in the summer they bore upwards and outward to the bark, lining their cavities at the end of their burrows, with a dust-like casting, and there rest until spring.

The full-grown larva is about an inch long, has no feet, is whitish, with a chesnut-brown head and black jaws, as shown in our illustration. It then changes to the dormant chrysalis, which is a little lighter in color than the larva. The adult beetle emerges about a fortnight later. It eats a hole through the bark with its strong jaws and comes forth to continue its depredations. From this it will be seen that three years are required for the development of this insect.

Remedies.

One might reasonably suppose that the larvae of both these beetles in their snug retreats would be safe from the attacks of outside foes, but they are hunted and devoured by woodpeckers and also attacked by insect parasites. Healthy and well-established

trees are not so liable to the attacks of these borers as are sickly or newly-transplanted ones.

All trees should be carefully examined early in the fall, when the young larvae, if present, may often be detected by the discoloration of the bark, which sometimes has a flattened and dried appearance, or by the sap exuding, or by the presence of the sawdust-like castings. Whenever such indications are seen the parts should at once be cut into with a knife and the intruder destroyed. Those which have burrowed deeply may sometimes be reached by a short wire thrust into their holes, or by cutting away the bark at the upper end of the chamber, and pouring scalding water into the opening, so that it may soak through the castings and penetrate to the insect.

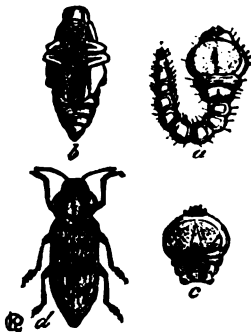


FIG. 105.—FLAT-HEADED APPLE-TREE BORER.

Among the preventive measures, alkaline washes or solutions are probably the most efficient. Soft soap, reduced to the consistency of thick paint by the addition of a strong solution of washing soda in water, is, perhaps, as good a formula as can be suggested; this should be applied to the bark of the tree, especially about the base or collar, and also extended upwards to

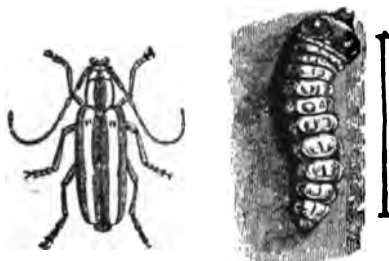


FIG. 106.—ROUND-HEADED APPLE-TREE BORER.

the crotches, where the main branches have their origin. If applied during the morning of a warm day it will dry in a few hours and form a tenacious coating, not easily dissolved by rain. The application should be made late in May or early in June and a second time early in July.

Trees, the trunks of which have been thoroughly white-washed, are not, as a rule, badly attacked by these borers. Where whale oil soap can be obtained it will be found more effective than the soft soap.

Md. Ag. Col. & Exp. Sta.

The Violet for Rhode Island.—Recently a vote was taken in the schools of the State for a State flower. The whole number of ballots cast was 42,209. The ten largest votes are as follows: Violet, 10,013; rose, 7,163; pansy, 5,275; pink, 4,897; arbutus, 4,317; golden-rod, 3,248; water lily, 3,049; lily, 1,548; daisy, 1,398; buttercup, 1,361.

Coal Ashes.

Are sifted hard coal ashes a good fertilizer for strawberry, raspberry and blackberry plants?—SUBSCRIBER.

All that coal ashes could do for such crops would be to lighten or drain the soil. The percentage of plant food present is very small.

Picking the Berry Crop.

How the Large Growers Do It.

Checks Given.

As we pay the same price for picking all small fruits, our system of keeping account of the work done is very simple, and we consider it as satisfactory as any that could be adopted. We use printed cards, 1x2 inches, with our name printed on one side and the number of quarts it represents beneath it. We have these tickets printed on differently colored card so as to avoid mistakes, which might occur were all values of one color. As we carry our fruit in carriers holding six quarts each, we have a large proportion of our cards with this number. Thus, in printing 1,000 cards we would have about 500 six-quart, 100 one-quart, 100 two-quart, and 200 five-quart. We also have some 50-quart and some 100-quart tickets, for which the smaller ones are exchanged each day. We carry the tickets in a wooden box divided on the same principle as a money till, keeping together all cards of the same number. In this way we lose no time in getting the card wanted. Of course, this system is the old one, but until we see something better than any we yet know of, we will make no change.

The pickers hold their tickets until the season is over and then exchange them for the value they represent. We often pay our pickers as they need money for a part of their tickets, taking up at the time the number for which they are paid. Thus we have no disputing over accounts, for each picker keeps his own book, which is represented by the tickets he holds. There is no more danger of pickers cheating in this way than others, as there are only two ways to do it; they must either steal the tickets from you or have a printer run off some cards, either of which trick is almost impossible to do without detection.—W. N. SCARFF, New Carlisle, Ohio.

Too Many Varieties.

We use a system of tickets. As our pickers arrive at the packing house they are given two stout picking stands, each holding four full quart boxes, and are directed to report to the field manager, who assigns them to such row or variety as desired.

If the berries are near the packing house they are brought in by the pickers direct and they receive their tickets from some one in charge. If at too great a distance a large canvas stack cover is rigged to serve as a temporary packing house and is headquarters for the time.

Our berries are assorted by carefully pouring from one box into another and gently shaking from time to time to settle the berries into place and are rounded up full as possible.

First-grade berries consist of large, perfect fruit, and are designated as selected. The second grade, No. 1, is all good fruit, but not so large. Our pickers are instructed to throw away all berries that are too soft or inferior, to pick each berry by itself, leaving a portion of the stem on, and not to pull them off in any case or bruise them. With a good man in the field to look after them, the proportion of culls in the packing house is not large. We demand good, honest work and are always ready to redeem the tickets or discharge pickers at a moment's notice, but have never had any difficulty in that direction worth mentioning, nor has it been hard to find plenty of pickers.

As a commercial grower, I have long since felt the disadvantage of fruiting so many sorts necessary in connection with the plant trade and for some years I have overcome this difficulty in a measure by allowing the country people for miles around to come and pick for their own use in the height of harvest at a low price per quart. This plan makes a sort of factory of our premises for the time, but is quite successful in working off odds and ends of rows that were left to fruit after the

plant season. Our regular pickers remain with us throughout the season, while the number of those who come to pick from four to six quarts to as many bushels for their own use is sometimes so great as to crowd out many transients who would otherwise pick for us. Our own pickers work on the firmer sorts that have to be marketed at some distance.

With the advent of some of our newer varieties, I think I can see a great discarding of many older ones, especially for this latitude, in the near future. We are certainly making great strides towards perfection, and with such helps for the fruit grower and special farmer as *The American Gardening*, the future is encouraging. It requires little insight to see that American Gardening is at least of double value to all in our line, as compared to what it was even one year ago.—C. N. FLANSBURGH, Leslie, Mich.

A Graphic Punched Ticket.

One-half the battle of success in the strawberry-growing business is the gathering of the fruit, getting it to market, and your money in return.

Those who make a specialty of growing fancy fruit for a fancy and appreciative market, in order to advance or maintain their reputation, must of a necessity look very carefully after this branch of the industry.

There must be a perfect understanding between you and your pickers; they must understand that their success largely is dependent upon your success; that their employer is perfectly

before commencing work. These rules and the strict enforcement of them become a necessity in a well-regulated business of considerable extent.

All the very fancy fruit is gathered by those who are working on my time, as I find that there is an inclination among all those who pick by the quart to slight the care necessary for the proper handling of such fruits. Women, I have said, were more largely employed by me as berry pickers; there is, however, one very serious objection to them. The long skirts, which are in fashion at the present time among country women, are a source of great annoyance and grief to me, for they smash and cripple the vines, thus preventing them from maturing the balance of the crop. The demands of fashion and the natural modesty of country women, both of which I consider my duty to respect, have prevented me from making any rules that would triumph over this objection, and oblige them to adopt a more convenient and a less expensive (to me) attire. However, I have hopes for the future.

In keeping account with the pickers who are paid by the hour or quart, I make use of a ticket as here shown: H stands for hour or hours; the numbers 1, 0, 2, 3 are the figures from which the price per hour is punched; the figures 1, 3, 5, $\frac{1}{2}$, $\frac{1}{4}$ are for the number of the hours; 2, $\frac{1}{2}$, 1 are the different prices paid per quart. The number of quarts picked at a certain price is represented by the numbers at the right, as punched on the right-hand of the number or numbers. W represents

I	H	I	W	3	5	W	$\frac{1}{2}$	$\frac{1}{4}$	W
0	2	I	W	W	3		10	W	
W 2	$\frac{1}{2}$	I			3		10	W	
3	1	I			3	W	W	W	10

FIG. 107.—WOOSTER'S BERRY PICKER'S TICKET.

capable of perceiving and appreciating the value of an honest and faithful service, and that policy alone should be a sufficient incentive to its performance.

As you must largely depend upon women to gather your fancy fruit, a thorough understanding of their nature and a little tact goes a great way. There is no class more susceptible to the influences of praise and flattery than the average young woman. Her nature requires it, and though she may be perfectly aware of the motive that prompts its utterance, she can no more resist its influences or effect upon her as the subject than we can resist the mighty power of the incoming tide of the ocean. There can possibly be no harm in it, if it has no baser object than to enhance the value of their service.

I have some pickers who stay with me through the whole season of small-fruit gathering. These I generally hire by the week and board them on my farm, so that I can have them at all times at a moment's call. These gather all my fruit, with the help of my family, and occasionally the hired men, with the exception of about three weeks in the rush of the strawberry picking, when I am obliged to have very much more help.

I always try to manage to first call up my reserve force of the experienced pickers living nearest at hand. Children under the age of fifteen I am very chary about letting into my fields till near the time of the last pickings; they demand too much looking after. We sometimes let them come in by their parents being responsible for them. We have rules posted up in our packing house and all pickers are required to make themselves familiar with them

the punch holes. To find the price per hour add the numbers punched and place their sum at the right of one. To find the number of hours, multiply the number by its number of punches and add their products. To find the number of quarts picked at a certain price, apply the rule for finding the number of hours. Thus the holder of this ticket is shown to have picked $6\frac{1}{4}$ hours at 12 cents per hour; 12 quarts at 2 cents per quart, and 29 at 1 cent.

I have no other way in keeping account with my pickers, who pick by the hour or quart. I require all my pickers to mark their initials on the boxes they fill, so that when I cannot inspect their work in the field, if I should find trouble in the grading or in the filling of the baskets, I know whom to call to account. On these tickets I record at noon the work done in the morning, and that of the afternoon is marked at the close of the day. Several days' work can be recorded on one ticket. The pickers present these tickets Saturday night or Monday morning for their pay, and after being cancelled are filed away as records. When my men or I gather up the baskets of berries in the fields we place an empty basket from where we have taken them, with the number of full baskets removed marked upon it with a colored pencil. The pickers must bring in these empty baskets with what they may have over at close of their work to get the record on their tickets. The price paid for the picking is according to the chance to pick and the size of the fruit. Ten cents is the lowest price we pay pickers by the hour and fifteen the highest, according to the care and ability of pickers.—E. W. WOOSTER, Hancock, Maine.

Checks Given.

Replying to your request for information, we use for our pickers berry stands with handles for carrying four one-quart baskets. When the picker returns with stand filled we give him a check as per sample inclosed (a stout card, $\frac{1}{4} \times \frac{3}{4}$ inches, with figure 4 conspicuously printed on it), which indicates that he has picked four quarts. We also have checks with figures 1 and 2, for use when the stand is not completed. These smaller checks can be replaced by larger ones, or they can be gathered by paying off. There are probably handier methods, but we are very well satisfied with this plan.—SAMUEL KINSLEY & CO., Kinsley, O.

General Pointers.

As to our experience in handling the berry crop, we will enumerate the different points as briefly as possible. In the first place, there ought to be a temporary shed erected as near the patch as possible. This need not be so very elaborately built, but so as to be easily moved to the different patches; it may be made of rough lumber that will keep the sun and rain from the berries while being packed.

Where large quantities are raised and the berries have to be held for a time before they can be sent away, avoid moving as much as possible until they are finally sent away. With some growers, as soon as a load is ready, the wagon is started off with them; others again have to hold the berries until a certain time in the evening and then haul them to some point and themselves load them direct on board the cars.

For long-distance shipping, the berries ought to be picked dry, as those picked wet are more apt to mould. Another point, especially in strawberries, is that they ought to be picked and not pulled, as too many berries are. A man ought to notice the hands of his pickers. The one that pulls will have his hands all stained. Such a one ought to be discharged at once, as the buyer is sure to complain and you are the loser. In a patch of any size, it is best to have some one follow the pickers to see that the crop is picked and handled aright. Let the packer occasionally turn a box and praise the best picker.

The best way we found to pay off was by one and ten-cent checks. These, well-made, with your name stamped on, will last for years. This saves bookkeeping in the patch, which is always troublesome. Have the berries with a piece of stem, discarding all small or indifferent fruit. Keep them as cool as possible, not letting the boxes stay too long in the patch, and keep out of the sun.—R. VINCENT, JR., & SON, White Marsh, Md.

Notes on the Season.

We have been picking berries, of the earliest varieties, for market, from May 1. Prices as a rule are lower this year than ever before.

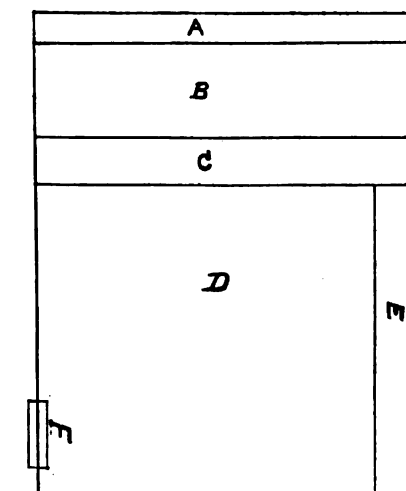
Our method of picking strawberries is in one-quart boxes, for which we give a one-cent ticket. It is our aim to have some men in the field to pick up each quart box and give a ticket as soon as full, so that the sun does not injure the fruit. In this way it takes a great many tickets, but if we run short we exchange a five or ten-cent ticket for so many of the one-cent ones. We make every Friday our pay day.

We endeavor to have all our berries picked with a short stem and boxes well filled; but this is not done always; some pickers have a great delight in not over-filling their boxes. Here we sometimes deduct a quart, while there may be more than one due. It is simply to make them next time fill the box properly. When boxes come in fast the packers are too busy to stop and fill up boxes. We use here the thirty-two-quart crates. One carrier holds from eight to sixteen quarts each, and if they get two full carriers it makes a full crate.

Our season has been very dry for the

As to our method of keeping tally: For several years we used the printed 1, 2, 5, 10, 25 and 50-quart checks. As long as they were used we had trouble in settling with pickers. Since we have been using the card we have had no trouble in regard to how much was coming to each one at pay day. As long as the card is in the possession of the picker it is wired to the stand, where it can be seen at any time, cannot get lost, and if an attempt be made

FIG. 108—BROWN & SONS' PICKER'S CHECK.



We allow no loud talking or hurrahing in the berry field, but each one must attend strictly to business. A boss usually has charge of from fifteen to twenty pickers. This part of the business is looked after by one of the family, who thoroughly understands what kind of work is necessary to be done in order to maintain the reputation of the farm.—M. H. RIDGEWAY, Wabash City, Ind.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 13, 1894.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1597.

REGISTERED CABLE ADDRESS

(Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Misling Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1597, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per page line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Checking the Berry Pickers. IN this issue will be found communications from a number of leading strawberry growers upon their respective systems of handling the crop and of keeping accounts with their pickers.

Briefly, all the systems may be placed in one of two classes. Firstly, the old expedient of giving the picker a printed check for work done, and, secondly, the record system of a punched ticket. The one has the recommendation of simplicity, the other is superior in safety, and the expressions of those who use it in some form or another, speak well of it from the fact that it obviates any questioning of the accounts by the pickers themselves—a very important item. As one correspondent observes, "each picker keeps his own book."

That the "dress reform" movement should be urged by the farmer will no doubt cause a smile of amusement in some who may read these pages, but to

those who have any practical experience of the work in hand, a feeling of sympathy will be extended to the writer who sacrifices so much on the altar of custom; but all honor to him and his motives!

Whether the returns for a crop of berries be satisfactory or not do undoubtedly depend very largely upon the good or bad work done by the pickers, and it is well worth the while of the grower to encourage a feeling of independence between himself and his help. Very plainly it appears that the best work is done by pickers on time.

As to just which one of the systems has the greatest merit, it is not for us to say; rather let the reader judge for himself after a perusal of the several letters. And, in conclusion, we thank those gentlemen who at this busy time have kindly and for the benefit of their fellows taken up the discussion of this interesting and seasonable topic.

Holding A PROMINENT official of the New York State for a Rise. Agricultural Society, in discussing the weather, said that he had noticed that his neighbors who waited until the weather signs and bulletins indicated fair weather, were usually caught by the rain; and further, that he himself made it a practice to disregard all signs and prophecies, simply going right ahead with the work in hand. It is perhaps needless, but may be as well to say, he is one of the few abundantly successful farmers in the State.

As it is with the weather, so it is with the markets. The grower who holds back his produce and seeks for signs with the idea that after a while there will be an advanced price, that man is usually one of many thousands who finally flood the market and sell their goods at a ruinous sacrifice. In these days of cheap freights and rapid transportation, it is next to impossible to corner the market for perishable goods in any of the larger cities; at any rate, if the market be cleaned out of any one article, and the price, in consequence thereof, materially advanced, the local traders usually reap the profit, since the announcement of the shortage usually glutts the market in a short time after, often indeed, within the space of a few hours.

The present conditions of raising and marketing produce are such as to prevent any reliable prognostication of the course of the markets until it is far too late to be of any material help to the growers; not only that, however, but very serious harm is done, and material losses result from the efforts of some of our contemporaries to mete out advice to their readers in such matters. Such guides are very much on a par with the turf tipsters, whose marvelous deductive gymnastics cause so much injury to the youth of our cities.

Men reason from the evidences at hand,

and venture to prophesy on the assumption that the conditions of their own environment prevail everywhere else, ignoring the time-honored saw, that "circumstances alter cases." A drought on Long Island does not necessarily mean a scarcity of strawberries, nor does the failure of the apple crop in New England foretell a corner in the apple market. The country is so large and its resources so available, it is only by the merest chance that the price of an agricultural product is seriously affected by local conditions.

An exception to the foregoing rule may, however, be noted, if the spring season be late in Florida, there is almost sure to be a glut in the Northern markets by the concentration of the crops of Florida, of the Carolinas, and of Norfolk region. This is a condition, however, that can hardly be avoided, and the results are often minimized by a late Jersey, Long Island, or New England season, leaving a loop hole for the surplus Southern product.

And it is indeed an ill wind that blows nobody any good. This spring a late freeze of a severe nature did very serious damage to Southern market gardeners over a very large area of territory; all the early crops which were just showing above ground were nipped, and a great activity was manifested in the seed trade by the receipt of repeat orders. The Northern gardeners and truckers were here, perhaps, reaping a benefit. They, too, had sowed the seed, but thanks to their colder climate, the plants had not yet pushed up. The frost struck heavily in both North and South, and while the Southerner had to re-seed, his brother of the North rested on his oars to await future developments, and possibly will not have to encounter so strong a competition as has been the case in some former years—perhaps we say, perhaps!

Again, with market reporters, "the wish" too often "is father of the thought." They want the price of certain produce to advance, and prophesy accordingly, and often in this way cut their own throats, since others, taking their advice, withheld goods or advance the immediate price, only to ultimately glut the market. With many things of a perishable nature, a low price to-day often means a high price to-morrow, and vice-versa. The way shippers have of rushing in their produce whenever there is an advance in quotations makes the life of commission men anything but a happy one, and does not add to the growers' returns. It would be all right were there but one such shipper, but there are others.

A large and successful grower of market produce recently told the writer that it was his invariable custom to market produce when it was in the best condition, without the slightest regard for market reports, advice of commission men, or sayings of the prophets. We should like

to be able to differ from him, and cherish the belief that our own market reports, made specially for us on the respective spots by men who have had a long experience in such matters, were infallible, but to be honest with our readers, we must admit that we think the grower who sends in his produce when it is in perfect condition, neatly packed and properly labeled, will average higher prices and more satisfactory returns than the man who spends valuable time watching the market reports, and is continually holding on for the higher prices which, alas, too often fail to materialize.

The spirit of speculation is inherent in most men, and the temptation to hold for a higher price is therefore great, but the produce market cannot be worked as in the stock and money market. The materials dealt in differ in fact and perishable material must be sold for what it will realize.

Yours is the best paper on gardening; full of sound, useful information.—F. B. E., Pembroke, Ont.

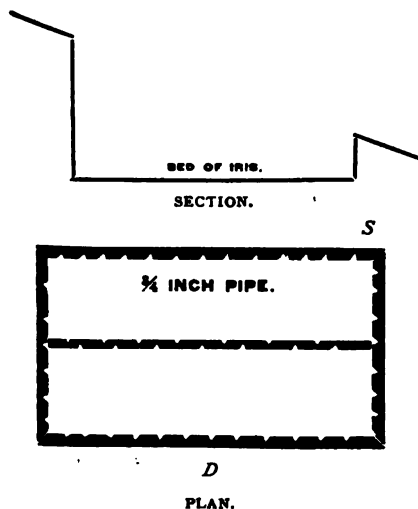
My premium of two hybrid sweet-briar roses arrived in first-class condition this evening and will be a good advertisement to both the shippers and American Gardening.—B. F. E., Pembroke, Ont.

I beg to acknowledge receipt of American Gardening premium of hybrid sweet briar roses, carefully packed and in good condition. I am much pleased with them.—J. H., Ottawa, Canada.

Bed for Japan Iris.

Cannot the irrigated bed mentioned on page 299 be described a little more in detail? And can any one tell us where perforated pipes and other necessary fixtures can be bought? One person within the writer's knowledge has been for two years or more in pursuit of something of the kind, and so far has been unable to find it.—SUBSCRIBER.

Ordinary iron piping is used, such as can be procured from any hardware store. Get it cut to the lengths required, with worm ends, and join with elbow pieces for the corners, and T-pieces for



the central pipe if such a bed as is shown herewith is desired. The perforations must be put in specially as ordered, by drilling. These are better for being arranged all on one side. Very small holes will suffice, and they need only to be set every ten inches. Lead piping may be used, but it would not be equal to iron in usefulness.

Brussels Sprouts.

The farmers of Long Island are beginning to find out that Brussels-sprouts is a money-making crop, always provided that it is properly grown, carefully packed and shipped, and marketed wisely. Those "ifs" are very easily managed; neither of them is a stumbling block in the way of success. To grow Brussels-sprouts in perfection is to follow, step by step, the same methods employed in growing cabbage. The cultivation of the two is precisely the same; in the same soil and with the same care and attention the results will be the same.

There are many minor details that must be respected to make the crop a profitable one. The first secret of success lies in growing for a winter rather than a fall crop, and herein comes the profit from it. One of our best Long Island growers, and we presume there are many others, has been shipping in a small way, say from two to ten crates per week, all winter, and for the week ending April 3 the returns were twenty cents per quart, so that a quart of Brussels-sprouts brought as much money as a bushel of potatoes! It is true some of the growers did not get half as much as this man, but why! In the first place the price is regulated largely by quality, and quality is a word of uncertain meaning. "How" an article is put up is quite as important as what is put up. The difference in the price of an article, particularly in fruits or vegetables, is proportionate to the care and attention paid in getting it ready for the market. Five per cent. of second-quality of fruit will make the first quality all second, with a corresponding result in price, and the same is true with Brussels-sprouts. One or two unsightly little heads on the top of the box will vitiate the whole. Now these little heads are undoubtedly as good as the best, but care was not taken to remove every discolored leaf, a very small neglect indeed, but the five per cent. saving of time cost the grower fifty per cent. in the price of his products. This is a very important matter, and one quite commonly overlooked by the farmer, who rushes everything to market with as little care as he puts his corn in the bin, or his potatoes in his cellar. Every little head in the box should be without spot or blemish, and they should be as even in size as possible; the eye should be pleased, as it is the eye that makes the purchase. Very many of the sprouts sent to market, instead of having a tempting look, are repulsive to the eye and their sale has to be forced.

The farmers have generally been getting this crop in the market too early in the season; at a time when the cauliflower is a drug and the taste is not yet ready for the new arrival. Brussels sprouts are not a delicacy until after they have been visited by several hard frosts; and they should not be marketed before. As a rule farmers dread winter's work, and so arrange their plans as to have as little to do in winter as possible; they put out their sprouts early so they can harvest the crop before snow falls. The result is a glut in the market and prices go down.

What the farmers should do is to set the plants about the first of August; then the little heads will not be ready to pick much before December; they will also be very much harder than those formed in warm weather, which has a two-fold benefit. They sell better and they will much better withstand the rigors of winter. More than that, a field of five acres will furnish steady employment for two men the entire winter, in picking, packing and shipping. Every acre set will yield 5,000 quarts, under favorable conditions, providing, of course, good seed and thorough cultivation are included in the conditions. Now this is by no means a large yield; it is nothing near what the average should be, or what we have seen, yet at five cents per quart it is very good farming.

But how shall they be kept through

the winter is a common and pertinent question, and it is an easy one. Sprouts which were selling at the end of the season at from 18 to 20 cents per quart were from plants left standing in the field where they grew, and, notwithstanding that last winter was the worst winter we have had for years, the heads suffered no great injury. We should advise, however, taking up say one-third of the plants just before the ground freezes hard, and setting them erect, as close together as convenient, without bruising them, in an orchard, or what is better, a piece of wood, if convenient, and lightly covering with newly-fallen leaves; they should not be covered so thickly but what the tops can be seen. These plants can be taken into the barn or shed as wanted, which is when the weather is not suitable for picking from the open field. Under the leaves the little heads will continue to grow all winter, as they will do in the open field on all days when the temperature is above the freezing point.

The amateur or the private gardener can safely let his plants remain in the garden, where they grow by filling the spaces between with leaves, which should be strewn in as lightly as possible, those on the outside of the bed being kept in place by a brush.

Brussels sprouts can be set closer than cabbages. In the garden they can be set two and one-half feet apart each way; in the field set in rows three feet apart and two and one-half feet apart in the rows. Sow the seed the first week in June and reset the plants when ready.

Some Diseases and Insects of Orchards.*

(Continued from page 361.)

Shot Hole Borer.

The most serious insect pest I have ever come in contact with is the shot hole borer. As giving you the best information possible on this pest, I shall give you my correspondence with United States Entomologist, Prof. L. O. Howard. During June of 1896 I noticed that some of our cherry trees commenced to look sickly without it being possible for me to see other cause than they were bleeding. In July some of those trees died, and more commenced to look sickly. From the middle of June I used all the time I could spare in trying to find out the cause. On the 10th of July I discovered the first insects. I had before seen any number of their larvæ. Then I commenced studying the habits of the insects. In this I looked for help in Prof. Saunders' book, "Insects Injurious to Fruit," but the book did not have it. I then turned to Prof. Comstock's "Manual for the Study of Insects." This work, published in 1895, is very extensive, but it does not treat of this insect. I wrote to Prof. L. O. Howard, sent him some insects, and gave him my observations, and received a reply partly as follows:

The various specimens which you send all belong to the shot hole borer (*Scolytus Rugulosus*). When Mr. Saunders wrote his book on "Insects Injurious to Fruit," this scolytus had attracted but little attention in this country, and was by no means as widely distributed as it is now.

The latest article is in Bulletin 68 of the Ohio Agricultural Experiment Station.

All published accounts, however, fail to emphasize sufficiently the two-fold nature of the attack of this scolytus on fruit trees, viz.: (1), the boring of short galleries in healthy trees, or, at least, in apparently healthy trees; (2), the construction of long galleries and oviposition in the latter in trees that are not in perfect health. Trees infested by this scolytus are doomed to death, and the first rule should therefore be to cut down and burn all infested trees. This should be done toward the opening of the spring, before the beetles of hibernating generation issue from the trunk, and also in June, before the beetles of the first summer generation issue from the trees. If there

* Read before Pennsylvania Horticultural Society March 16, 1897, by P. Peckersen.

could be co-operative and concerted action of all orchardists in the country, this measure would be sufficient to keep the scolytus in check. Hardly less important are measures to protect the still healthy trees from the attacks of the beetle, and, so far as our experience goes, application of whitewash is quite sufficient for this purpose. The wash should be applied during the first warm days of the spring, and should be repeated in June. A liberal amount of whale oil soap suds and also a small amount of Paris green or London purple should be added. Others recommend the addition of salt at the rate of one quart to three gallons of the wash. Quite recently the painting of the trunks with dendroline or allied substances has been recommended, but we have not yet sufficient experience to know whether or not these applications are injurious to the trees, although it seems to be an established fact that the scolytids and other borers are prevented thereby from boring into the trunks.

The longer I am combating this scolytus the more serious I find it. I shall here, in short, give you all of my personal observations. I have observed that the beetles first attack the trees with the short galleries, and, when the bleeding has weakened the trees and put them in unhealthy condition, then construct the long galleries in the inner bark, directly under the outer bark, where the eggs are deposited and the larvae hatched. I have seen strong and apparently healthy trees attacked with the short galleries going directly into the tree, in some cases, as deep as to the marrow. But I have never found eggs deposited nor larvae hatched in a strong and healthy looking tree; but in a sickly or weak one they are very abundant. I do not think that whitewashing alone can protect the trees, as it is almost impossible to get it all over; the beetles very often attack and enter the smaller branches right with the base of an eye, kill the branch and deposit their eggs. I think it requires the utmost vigilance and going over the trees frequently, cutting away every part affected and burning it. One day I found a small branch, having been broken while cultivating the day before. The branch was only 18 inches long, and there were already seven beetles at work on it. As an illustration of the rapidity with which this little beetle works, I shall mention that I have had several cases where some of them have eaten through a perfect cork, in a vial, in a time ranging from 24 to 48 hours. This pest can, of course, be controlled, but it requires close attention, as it is inconspicuous and difficult to detect, particularly on the small branches. This scolytus is not confined to the cherries alone; it also attacks the apple and pear trees.

Fireblight.

In conclusion, I shall draw your attention to the disease that I consider the most dangerous and most difficult for orchardists to combat. Many a man having done his best in taking care of his orchard, having kept it well cultivated, well fertilized, and in every way well taken care of, has had his hopes blasted and his trees killed or crippled in one single season. What did it? Fireblight swept through his orchards. During the years your trees are making the most vigorous growth, they will most easily fall as victims to the disease. When you take the very best care of your trees, with cultivation and fertilization for making your trees grow vigorously, you do at the same time make your trees more susceptible to the disease. It is now a well-known fact that the trees most healthy, most vigorous, which are well fed and well cultivated, in other words, those trees making the most rapid growth of new soft tissues, are the ones most susceptible to and most liable to contract the disease. Climatic conditions also greatly influence the disease; warm and moist weather, with occasional showers favoring it, while dry, cool and sunny weather hinders it, and very dry weather soon checks it altogether. Now, perhaps, somebody will ask if I mean to say that good care of trees favors blight, and that bad care or no care, of trees is, if not a preventive, then a check on blight. And in that case I answer yes. Trees pruned properly are more liable to the disease than trees pruned very little, because trees pruned well back in winter while the wood is dormant, will naturally make more new

Vigor and Vitality

Are quickly given to every part of the body by Hood's Sarsaparilla. That tired feeling is overcome. The blood is purified, enriched and vitalized and carries health to every organ. The appetite is restored and the stomach toned and strengthened. The nerves are fed upon proper nourishment and are therefore strong; the brain is cleared and the mind refreshed by

Hood's Sarsaparilla

Is the One True Blood Purifier. \$1. six for \$5.

Hood's Pills are the only pills to take with Hood's Sarsaparilla.

General Catalogue and Garden Guide for the South

Comprising summary description, degree of hardiness, hints to culture of 1500 sorts of plants. New enlarged edition. 88 pages. Free by mail.

Southern California Acclimatizing Association
SANTA BARBARA, CAL.

Mention American Gardening when you write

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE

CHRYSANTHEMUMS

NEWEST, EARLIEST, BEST.

In Splendid Assortment of Varieties,



Forms, Substance and Color.

Mrs. Higginbotham. Best of all Ostrich Plumes.
Gloriana. The pretty twisted petalled yellow.
Marie Louise. A grand white.
Pitcher and Manda. A variety of two colors.
Kate Brown. Earliest and best for the garden.
Pres. Smith. A robust pink.
Silver Cloud. Pale salmon.
G. W. Childs. Finest of the reds.
Major Bonaparte. The best yellow.
Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

AMERICAN GARDENING, P.O.B. 1697 N. Y.

CELERY PLANTS

We grow Celery Plants by the acre on land specially adapted to them. Sown thin, each plant is strong, stocky and well rooted. White Plume and Golden Self Blanching, etc. we ship safely to all parts of the United States. Price, 500. 75c. 1000, \$1.25; 5000, \$5.00.

WILSON BROS., Tecumseh, Mich.
Mention American Gardening when you write.

BEDDING PLANTS.

Coleus, Geraniums, Petunias, Verbenas and many other beautiful kinds at very moderate prices by mail. Send for our list.

DANIEL K. HERR, Lancaster, Pa. Box 66
Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the
Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

PLANTS WORTH HAVING.

	Per doz.
Abutilon Souvenir de Bonn.....	\$1.25
Aralia papyrifera.....	2.50
Chenostoma hispida.....	1.00
Cyclamen giganteum, 2 1/2 in. pots.....	2.00
Grevillea robusta.....	4.00
Maranta bi-color.....	1.00
Musa Ensete, 5, 6, 8 and 12 inch pots from 75c. to \$5.00 each.	
Strobilanthes dyerianus.....	1.50

Catalogues free on application.

SEAWANNAH GREENHOUSES,

P. O. Box 34. Oyster Bay, N. Y.

James C. Clark, Supt. Wm. L. Swan, Prop.

Mention American Gardening when you write.

...THE COMPLETE...

BOOK CATALOGUE.

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers

The Fruit Grower

The Nurseryman

The Private Gardener

The Market Gardener

The Seedsman

The Farmer

The Poultry Keeper

The Student of Botany, Entomology and Ornithology

and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE PTG. AND PUB. CO. Ltd.

P. O. Box 1697, New York.

wood than trees pruned but little. In the same way trees well manured with barnyard manure or nitrogenous fertilizers will give more growth of soft tissues than trees getting but little or no manure, and it is just the same with a tree well cultivated that makes a better growth than a tree laying in sods.

If you now ask me if I am in favor of planting an orchard and then doing nothing more to it, not pruning it properly nor feeding nor cultivating it well, I answer "No, I am not." I am in favor of taking good care of an orchard. In fact, it cannot get too good care. "Well, then, what about the fire-blight—is not that going to take your orchards?" Well, we will fight about it. Fire-blight seems to be like a thief. A thief likes best to steal where he can make a rich haul. "But will you give your riches away for fear of thieves?" No, you will say, as I do, "We will keep our riches and kill the thief if he comes." Well, that might be easier said than done—but it can be done.

(To be concluded.)

Obituary.

Mrs. P. J. A. Berkman.—On Wednesday, May 12, at Augusta, Ga., the wife of the much-respected horticulturist (of the Fruitland Nurseries) passed away. The great regard held for her by all who knew her will manifest itself in a general condolence with the widower and sons.

E. S. Nixon, of Chattanooga, Tenn., one of the most renowned florists of the South, died on May 5. Mr. Nixon was born in Mullingar, Ireland, on November 24, 1830, and came to America when sixteen years of age. During the war he was captain of the Fourteenth Michigan Company and earned a brilliant record. Previously to entering into the florist business he was engaged as a manufacturer of agricultural implements.

John Saul.—As briefly reported in last issue, this very well-known nurseryman and florist died at his home in Washington, D. C., on May 11, aged seventy-three years.

Mr. Saul, who was one of the best-known of the older residents of the District of Columbia, was born at Lismore, County Cork, Ireland, Christmas day, 1823. As he grew up he was trained in the science of landscape gardening, and soon after becoming of age removed to the Isle of Wight, and subsequently to Bristol, England, in both of which places he was manager of extensive nurseries.

He arrived in Washington in May, 1851, and was at once engaged by the government to lay out the Smithsonian grounds, Lafayette Square and other public squares, and also by Mr. W. W. Corcoran to plan the beautifying of Harewood Park. In 1852 he bought the property in which he spent the remainder of his life.

Mr. Saul was among the first in America to advocate a more general use of orchids and other rare and valuable plants, and a goodly portion of his establishment at Washington was given up to their cultivation. He was also an extensive grower of roses and nursery stock.

Deceased was a member of the Carroll Institute, American Pomological Society, the Society of American Florists and other organizations. He was appointed a member of the parking commission by Gov. Alexander R. Shepherd, and was reappointed by the District Commissioners after the office of Governor was abolished, and was continued in office by each succeeding board, being chairman at his death. He leaves eight children—three sons and five daughters.

Horace H. Alley.—This gentleman died at his home in Hilton, N. J., on Thursday, May 13, aged 74 years. He was a well-known strawberry grower and was the originator of a number of varieties, among them being the Alley seedling, Marie and the Henry Ward Beecher. The Marie berry was named after Mr. Alley's daughter. Mr. Alley leaves a widow and one daughter.

Orchid Notes.

Rare things in flower in the Hicks-Arnold collection, Eighty-fourth Street and Fifth Avenue, New York City, include the new *Cypripedium* Gertrude Hollington, of which Mr. Arnold owns, we believe, the only plant in this country; it is in flower for the second time. The plant is in a healthy, vigorous condition and evidently is a good grower. The style of stem and bloom shows a good deal of bellatulum blood. This is, perhaps, to the detriment of the flower, for it does not hold itself erect enough to show all its color to advantage. In coloring it resembles Paris, but lacks the distinctness of the markings seen in that rare variety, which is owing to the fact that the purple tracing on the white ground is not clean-cut, but runs more into the white. The side petals are the brightest part of the flower. The top of the dorsal sepal loses its brilliancy by a suffusion of dark green in the purple, the white also being over-balanced by the two colors already named. One feature of the flower is the great size of the side petals. These individually are an inch and a half deep by two and a half inches in length, so that the flower is nearly six inches in width.

Other *Cypripediums* in flower are *C. Greyanum* unicolor, *C. Mrs. T. W. Bond*, *C. Mastersii* and *C. Chamberlainum*.

Among rare *Laelias* are: *L. Schillerianum*, *L. elegans*, *L. grandis* Arnold-aeonium and *L. purpurata*.

Cattleya Skinneri alba (pure white) had several spikes. Mr. Morris, the gardener in charge, is very proud of this last-named piece.

There is no excuse on any farm for a cesspool; a pit two feet in depth, with cemented sides and floor is the proper thing. If the house has a bathroom, with closet, the drainage can go into this shallow pit, and be kept on the surface. The same with the kitchen drainage. Save it.—Farm Journal.

Offer No. 80. FOR ONE NEW SUBSCRIPTION 200 CELERY PLANTS



AS FOLLOWS:

- 50 Plants White Plume.
- 50 Plants New Rose.
- 50 Plants Golden Self-Blanching.
- 50 Plants Giant Pascal.

This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to AMERICAN GARDENING. Orders for celery plants will be filled from now until August 15th.


AMERICAN GARDENING, P.O. Box 1697, N.Y.

INCUBATORS \$25, \$15, \$12 each.
Brooders, 8 styles, \$6.
Fowls, eggs, Ill. cir., 2c. J. A. Chilton, Fairmont, Md.
Mention American Gardening when you write.

FLOWER QUERIES.

A book written in Questions and Answers, discussing 500 topics on flower culture, in ten chapters as follows: Chap. I.—Soil and general cultivation. Chap. II.—Bulbous Plants. Chap. III.—Lilies, Culture and Management. Chap. IV.—Roses. Chap. V.—Vines or Climbers. Chap. VI.—Shrubs. Chap. VII.—Ferns and Palms. Chap. VIII.—Insects and Diseases. Chap. IX.—Miscellaneous Queries. Chap. X.—Floral Hints. Every one who loves and cultivates flowers needs it. PRICE 25 CENTS.

THE COURIER, Chatham, N. Y.
Mention American Gardening when you write.



GOOD HEALTH MAKES ONE HAPPY.

and the happy man is best fitted for the duties of life. The happy heart is the strongest heart. To produce and maintain this condition, you should keep constantly on hand a supply of that health retaining, health restoring remedy

Warner's

Safe Cure

It is a purely vegetable preparation that corrects all derangements of the Liver and Kidneys and works a permanent cure for

**BRIGHT'S DISEASE
URINARY TROUBLES
GENERAL DEBILITY
FEMALE COMPLAINTS
AND MALARIA.**

In order that it may be handy for you we have placed it on sale in your nearest store. Beware of substitutes. There is nothing so good as Warner's Safe Cure.

INCUBATORS. Self-regulating. Catalogue free
G. S. SINGER, Cardington, O.
Mention American Gardening when you write.

Offer No. 45. COLLECTION OF ROSES.



- | | |
|-------------------|------------------|
| One Perle | One Meteor |
| One Safrano | One Papa Gontier |
| One Mme. Camille | One Hermosa |
| One Marie Guillot | One La France |
| One Iphigene | One Bride |
| One Nridesmaid | |

Surely the good things of this earth are open to everyone who exhibits a little energy. Realize you can obtain the above set of Twelve Magnificent Roses as a premium for one new subscription to AMERICAN GARDENING, and that it will not take you more than a few minutes' work to accomplish this, then send and get your reward.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

Market Gardeners

SHOULD TRY OUR

W. & D.'s Self-Blanching Celery
W. & D.'s "Bennett's" White Spine Cucumber
W. & D.'s Improved Am. H. Crown Parsnip
W. & D.'s American Beauty Pea
W. & D.'s Deep Scarlet Forcing Radish
W. & D.'s Improved White Bush Squash

Descriptive Catalogue Free, by mail.

WEBER & DOB, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, May 25, 11 A. M.

Palms and Decorative Plants and all kinds of summer bedding stock, including the new Cannas, Austria and Italia.

Friday, May 28, will be a sale of the same kind of plants.

CATALOGUES FREE.

Mention American Gardening when you write.

CLEARY & CO.,

60 Vesey Street,
New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on Tuesday, May 25, at 11 A. M., Roses, Dahlias, Canna Roots, Decorative Plants and a complete line of Summer Bedding Stock.

Catalogues free.

Sales every Tuesday and Friday.

Mention American Gardening when you write.

R. M. GARDNER & CO.,

199 Fulton Street, NEW YORK.

Will sell every TUESDAY and FRIDAY at their rooms at 11 a.m., a general line of Nursery Stock and Spring Bulbs and a large assortment of Bedding plants.

Catalogue on application.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

199 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

TUBEROUS-ROOTED

BEGONIAS.

Holland grown. English strain. Colors separate, per 100, \$3.00.

L. C. BOBBINK, Rutherford, N. J.

Branch Horticultural Co., Boskoop, Holland.

Mention American Gardening when you write.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Meetings.

Wednesday, May 26.—Newport (R. I.) Horticultural Society.

Friday, May 28.—Westchester Co. (N. Y.) Horticultural Society at Mount Kisco in conjunction with Bedford Flower Club.

Auction Sales.

Tuesday, May 25.—Hardy Roses, Standard Roses, Lilacs, Hydrangeas, Nursery Stock, Spring Bulbs and Bedding plants, at Elliott's Rooms, New York.

Roses, General Nursery Stock, Bulbs, Rhododendrons, Azaleas, and Bedding plants, at Cleary's Rooms, New York.

Paeonies, Flowering Shrubs, Bulbs, and Bedding plants, at Gardner's Rooms, New York.

Friday, May 28.—Sales will also be held as indicated above for Tuesday.

New York.

The exhibition of the American Institute, on May 11, was of a very high standard of merit and of great educational value. Over 300 vases were filled with shrubs and hardy flowers, the majority of which were correctly named.

A. Grierson, gardener to Hicks Arnold, Rye, N. Y., put up a valuable and interesting collection of fifty named Narcissi and tulip species; also Iceland Poppies and several kinds of Iris. Among these was the somewhat rare *I. lupina*. A certificate of merit was awarded for the display.

James Holloway, gardener to the Pratt estate, Dosoris Park, N. Y., staged seventy-four specimens, mainly shrubs, which included *Pyrus Malus floribunda*, *P. M. coronaria* fl. pl., *P. M. Parkmanni*, *Berberis Hakodeta*, *B. quinquefolia*, *Rhodotypos kerrioides*, *Staphylea colchica*, *Daphne Cneorum*, etc. This exhibit was awarded a certificate of merit.

John Lewis Childs, Floral Park, N. Y., made a remarkable display of seventy-four kinds, including tulips, Narcissi, hardy or border flowers, and shrubs. Among others were *Paeonia tenuifolia*, *Iris pumila*, *Iberis gibraltarica*, *Ribes sanguineum*, *Daphne Cneorum* and *D. Genkwa*.

W. A. Manda, South Orange, N. J., exhibited several spikes of a variegated leaved form of *Lilium longiflorum*. The margins of the leaves are white, which give the stem the appearance of *Dracaena Sanderiana*. The variegation is of fixed character. As a worthy novelty this was awarded a certificate.

W. Anderson, gardener to J. M. Constable, Esq., Mamaroneck, N. Y., exhibited three vases of Canterbury Bells (*Campanula Medium*).

S. B. Huested, Blauvelt, N. Y., exhibited Japanese maples, purple-leaved *Berberis Thunbergii* and double-flowering Almond.

J. Miller, Oasis Nurseries, Westbury Station, N. Y., staged several kinds of double and new lilacs, *Magnolia stellata*, etc.

W. Turner, gardener to W. Rockefeller, Esq., Tarrytown, N. Y., exhibited double flowering peaches, *Halesia tetraptera*, *Cornus florida*, var. *rubra*, and *Azalea amoena*.

A. Herrington, gardener to H. McKay Twombly, Esq., Madison, N. J., staged *Spiraea prunifolia*, fl. pl., *Exochorda grandiflora*, *Cercis canadensis*; also *cornus* in variety.

J. G. Aitken, gardener to G. R. Cook, Esq., Bayonne, N. J., staged several kinds of *Rhododendron*, *Azalea Mollis*, *Magnolias* *Loniceras*, etc.

Siebrecht & Son, New Rochelle, N. Y., put up *Iris siberica*, *Prunus sinensis*, *Lychnis diurna*, *Eleagnus longipes*, *Magnolia Lehmanni*, etc.

Mrs. C. S. Valentine, Cranford, N. J., made an interesting display of native wild flowers, including *Arabis*, *Podo-*

phyllum peltatum, *Peduncularis canadensis*, *Viola canina* Muhlenbergii, *V. lanceolata*, *V. cucullata*, *Aphyllon uniflora* and others.

Farmers' Club.

At the Farmers' Club meeting, held on the same day, Dr. N. L. Britton, director of the New York Botanical Garden, gave a very interesting talk on the American cowslip (see page 373).

Mr. S. B. Parsons, of Flushing, N. Y., and Mr. Heusted spoke on the effectiveness of the Japanese maples as decorative subjects, the latter recommending *atro-purpureum* as being best adapted to our soil and climate. He showed Schwendler's Maple, a sport from the Norway.

C. L. Allen advised leaving bulbs of lilies, narcissus, etc., in the ground, affording them protection from frost in winter. *L. auratum* so treated now showed immense stalks.

James Holloway, Glen Cove, L. I., said he had from twenty-five to thirty varieties of Japanese Maples and all had proved hardy, though fully exposed to the winds of Long Island Sound.

A. Herrington made a strong plea for natural growth of tree and shrub life, adding that from the appearance of some of these subjects in Jersey it almost seemed as if there was a compulsory law to clip them within bounds.

(This is especially true of the shrubs in the station grounds of the Central Railroad of New Jersey.—Ed.)

For every yard of wood so cut away, ten thousand blossoms were lost.

Other speakers were Mr. Henshaw, Mr. Barron, Dr. Ward and Dr. Hexamer, all of whom recommended the more general planting of flowering shrubs and herbaceous gardening.

Syracuse, N. Y.

The officers of the New York State Agricultural Society have generously appropriated an additional five hundred dollars for the horticultural section of the premium list. The premiums for the past two years have been entirely inadequate, causing great dissatisfaction among the exhibitors. The new schedule, re-arranged by the members of the Central New York Horticultural Society, should now be satisfactory, as all classes were well represented when the list was changed. Special attention was paid to the amateurs and generous premiums were voted in the cut flower section in all the classes, this with a view to encourage outside competition, which unfortunately is usually lacking. Fruit trees here seem not to be hurt by the recent frosts, as there is an extraordinary showing of bloom.

The park superintendent, Mr. Thomas Bishop, is making extensive improvements this season, and under his able management this city will soon be right up to date in the matter of parks.

Mr. Campbell, gardener to Major Davis, has added considerably to the beauty of the magnificent place of which he has charge. A visit to this place is always interesting and members of the craft are sure of a cordial welcome at all times.—C. BARSON.

\$100 REWARD \$100

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages, and that is Catarrh. Hall's Catarrh Cure is the only positive cure known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO., Toledo, O

Sold by Druggists, 75c.

ROSE AND DUANE STS., NEW YORK.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL
AFIATEUR.

Sweet-scented Pansies.

The scribe speaks not from experience, but from the dealers' description with regard to these. They are said to have been obtained by crossing the choicest pansies with the large, sweet-scented violets, to bear pansy-like flowers, from two to two and one-half inches in diameter, in great variety of color; to form hardy and vigorous plants in fine clumps, which live over winter, and bloom on from year to year. They bloom heavily in spring and abundantly also, at intervals through the season. As they are to be obtained from seed, the cost need not be great and, doubtless, they will prove as amenable to window culture as other members of the family. The fragrance of the pansy, though delightful, is a very delicate and elusive thing. Pansies with the violet fragrance will seem, to many, a grand advance.

What Price for Plants?

Almost any price you choose to pay. If you can afford to pay fifty and seventy-five cents for rose bushes of standard sorts, and having age, that is a matter that concerns your pocket-book only. Your neighbor, whose purse is lean, may buy precisely the same sorts, in stock well rooted, though small, for ten and fifteen cents. If even this is beyond him, and he can bring himself to let the dealer select the sorts sent, he may have plants in great variety for five cents apiece.

Allamanda Nerifolia.

This plant of the season, the oleander-leaved Allamanda, very fully bears out its name, as it strongly resembles an oleander, the chief difference being that the leaves are in whorls of four. It is easily amenable to good window treatment, and the blooms are clustered, and of a good yellow. An individual bloom is quite similar in appearance to that of our native yellow foxglove, but with the addition of some brownish-yellow shadings. The plant takes the bush form readily, though most of its genus are climbers. Another bush form lately mentioned in these notes, *A. Williamsii*, is being much more fully advertised, but our own success with it has not been so good as with *A. nerifolia*. Longer trial might, however, reverse this experience.

The Wind's Rough Touch.

One of the most harmful things for house-grown plants, especially if they are full of young growth or of bloom, is a strong wind. Gourmands as to fresh air, they are yet too tender to bear rough blowing about. If to be put outside, even after the temperature is warm enough, they need gradual exposure, both to sun and to wind, for the hardening process. Otherwise all young foliage will be lost, and all fresh growth become bruised and drooping. Even indoors a very strong draught upon the plants is never helpful. That this warming is needed, too many ruined plants testify.

Leaf Mould for the Window Gardener.

If one can buy a ready-prepared, rich, potting soil and can afford to pay for it, well and good. If one prefers a cheaper plant medium and is within reach of a bit of woodland, equally well and good; for there is no other potting soil at once so safe and in every way so desirable for seed pans, for transplanting flats and for general potting soil, with all such plants as like a light medium. It is virtually impossible to over-water it, and if it needs added richness, a trifle of bone meal will give it safely. The fact is hardly appreciated that with these two ingredients the window-worker is amply furnished, except for a few plants which persistently desire a heavy soil. Plants taken direct from seed-pans of leaf mould without transplanting will have more and better roots than those from ordinary soil, which have had the benefit of an extra transplanting.

Variations in Leaf Mould.

One needs to note that there are many different qualities of leaf soil. The desirable kind is loose and friable, takes water readily, is fairly moist, and usually black in color. Indifferent sorts are filled with old roots, or composed largely of harmful rotten punk and wood; or they may be full of yet undecayed leaves, and, therefore, not quite desirable. Sometimes one finds the actual layer of decayed leaves in woodlands very thin, while below it is pure sand or clay. These are not leaf mould, though they may be added for some plants.

Fifteen Cents a Pound.

In answer to an inquiry, the editor of what is perhaps our best poultry paper for amateurs affirms that it will cost about fifteen cents a pound to raise chicks up to two pounds, when all the food must be bought. While this may be true from the editor's

The Woman,
The Man,
And The Pill.

She was a good woman. He loved her. She was his wife. The pie was good; his wife made it; he ate it. But the pie disagreed with him, and he disagreed with his wife. Now he takes a pill after pie and is happy. So is his wife. The pill he takes is Ayer's.

Moral: Avoid dyspepsia by using

Ayer's
Cathartic Pills.

point of view, counting the cost of expensive eggs and the interest on buildings, etc., it is likely to be misleading to those who know little about poultry. When feeding stuffs were higher than they are now nearly every poultry paper and farm paper in the country assured its readers that five to six cents a pound was the average cost of feed for broilers. In our own experience we have bought baby chicks at nine cents apiece, raised them to about two pounds weight at an entire cost of twenty cents each (buying all the feed) and groaned in spirit because we had not managed well and the chicks had cost too much!

Early and Late Hatching.

There are many who will not hatch chicks after the last of May, unless compelled to do so by untoward circumstance early in the season. Others aver that it pays to hatch nearly all summer, if one is making a business of poultry. Whatever may be the cause, it is a fact that June-hatched chicks do not always thrive so well as those brought out either earlier or later. The July chick is often the prize chick of the season, for rapid growth and early maturity. Dry, warm air and soil and plenty of bugs for the taking are among his advantages.

"Luck" With Poultry.

Have you ever noticed how great a majority of people dealing with poultry have "bad luck" with the layers, "poor luck" with the sitters, "ill luck" in raising the few chicks hatched? Don't believe it! A certain amount of poor luck or adverse circumstance may befall any one, even the expert; but nine-tenths of the poor luck, so called, should be rightly attributed to ignorance, carelessness or poor judgment. A lack of judgment is not so invariably a thing to be ashamed of as is popularly supposed. Experience is necessary as a basis of judgment in most cases. This people fail to realize.

A Majority of Pullets.

This is what egg farmers are always after, but seldom obtain. It is what fanciers often aim at, but seldom hit. Nevertheless, all over the country are people who can tell you just how to do it. The only trouble is that their rules do not work out the right answer. Round eggs or pointed eggs, or eggs from fowls mated this way or that, all persist in defying rules, and hatching out, on the average, about one-half males. Early in the season, if they don't give three-quarters males their possessor is fortunate. There are those who say and claim that their own yards prove that a cockerel mated with old hens, or an old cock with pullets will give a preponderance of pullets.

MYRA V. NORRIS.

ARMSTRONG & McKELVY
Pittsburgh.
BEYMER-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANOKA }
KOKSTEIN } Cincinnati.
ATLANTIC }
BRADLEY }
BROOKLYN } New York.
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MISSOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALEM
Salem, Mass.
CORNELL
Buffalo.
KENTUCKY
Louisville.

IT is a significant fact that responsible dealers sell and responsible painters use Pure White Lead (see list of genuine brands) and Pure Linseed Oil. They know their business. Those who don't know, try to sell and use the "just-as-good mixtures," "so called White Lead," &c., &c.

FREE

By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

WHOLESALE MARKETS.

New York.

Cut flower business is about as poor as it possibly can be, and prices are at a ridiculously low ebb.

Fruits and vegetables are moving only moderately well.

Hothouse grapes are now very abundant, and sales are dropping; prices vary for No. 1 stock from 75 cents to \$1.50 per pound.

Strawberries, despite the opposition of Southern stock, are still for very choice fruit, making 50 cents per cup or \$1.50 per quart. Maryland berries are in, and sales are good, in fact, all strawberries sold well early in the week.

California cherries are plentiful in the market, and are selling moderately well.

Hothouse cucumbers are selling at 50 cents per dozen for No. 1 stock; Florida from \$2 per 100.

Lettuce per barrel, \$1.50 to \$2.

Asparagus is moving freely, and prices are well maintained. Local "grass" of good quality is worth \$2 per dozen.

Hothouse tomatoes are in over supply, and are being offered at 10 cents per pound.

Mushrooms are difficult to keep in condition, consequently only a limited quantity realize fancy figures.

Apples—Ben. Davis, cold storage, fancy, 2.50@3.50; Northern Spy, cold storage, fancy, 3@3.50; Red fruit, cold storage, fair to prime, 2@2.50; Baldwin, w'n N. Y., choice, per barrel, 2.25@2.75; Russet, Golden, State, per barrel, 2@2.37; up-river Golden, per barrel, 1.75@2.

Strawberries—Maryland and Delaware, average best, per quart, 8@10; Maryland and Delaware, inferior, per quart, 6@7; Norfolk, fair to good, per quart, 7@9; Norfolk, inferior, per quart, 5@6; North Carolina, prime, per quart, 10 cents; North Carolina, fair to good, per quart, 6@9; Charleston, fancy, per quart, 14@16; Charleston, good to prime, per quart, 10@12.

Asparagus—Near by, extra large, per dozen, 1.75@2; near by, average prime, per dozen, 1.25@1.50; Maryland and Delaware, per dozen, 1@1.50; inferior, 60@87 cents.

Beets—Charleston, per 100 bunches, 4@5; Norfolk and North Carolina, per 100 bunches, 2.50@4.

Cabbages—Savannah and Charleston, large, barrel crate, 75@1; Savannah and Charleston, small, barrel crate, 75@1; North Carolina, per barrel crate, 75@1; Norfolk, per barrel, 80@75.

Cucumbers, Savannah, per basket, 2@2.25; Florida, per basket, 1@1.50; Florida, per crate, 1@1.25.

Celery—Florida, per dozen stalks, 25@75.

Egg plants—Florida, per 1/4 barrel box, 1.50@2.

Lettuce—near by, per barrel, 1.50@2.

Onions—Bermuda, per crate, 2.10; N. O., per barrel, 4@4.25; Egyptian, per sack, 2.25@2.50.

Peas—Maryland, per 1/4 barrel basket, 1@1.25; Eastern Shore, per 1/4 barrel basket, \$1; Eastern Shore, per crate, 60@75; Norfolk, per 1/4 barrel package, 75@1; Norfolk, per bushel basket, 50@60; North Carolina, per bushel package, 25@60.

Radishes—Near by, per 100 bunches, 50@60.

Rhubarb—Per 100 bunches, 75@1.

String Beans—Charleston, wax, per basket, 1@1.50; Charleston, green, basket, 1@1.25; Savannah, wax, per basket, 1@1.50; Savannah, green, per basket, 1@1.25; Florida, wax, per basket, 75@1.25; Florida, green, per basket, 60@1; Florida, green, per crate, 50@75.

Tomatoes—Florida, best arriving, carrier, 1.50@2; Florida, poor to fair, carrier, 1.25@1.50.

Boston.

Hot house grapes are fairly plenty, but market is not so much overstocked, but what they easily bring \$1.50 per pound; and while peaches are not any more plenty they find a ready sale at \$4 per dozen.

Hot house cucumbers, 4 to 5 cents each, with a large consumption; Florida stock so far in very good condition, and brings about \$1.50 per crate.

Consumption of lettuce is larger, likewise a larger supply at figures ranging from 30 to 40 cents per dozen; dandelions about out of the market.

Squash firmer, 3/4 to 4/5 cents per pound; carrots higher, 7/8 cents per bushel; beets and turnips unchanged, \$1 to \$1.50 per barrel.

Cabbage from Savannah and Florida, \$1.50 per crate; Norfolk stock, \$1 per barrel; the difference between the price and quality is not enough, but was caused by

large arrivals of Florida stock getting here late Saturday.

The last cargo of Bermuda onions said to be here, selling \$2.25 per crate; Egyptains steady, \$2.50 per bag; the advance on the other side not having affected this market as much as was expected; at present time cannot be delivered in Boston to cost less than \$2.75 per bag.

Potatoes, Maine Hebrons, in good demand, 45 to 50 cents; all other varieties find a slower sale at prices somewhere between 25 to 40 cents. Some Georgia potatoes appearing, and find very good sale at \$4 per barrel.

Field rhubarb brings 1/2 cent to a full cent a pound, according as the supply happens to be each morning.

Asparagus arrives daily in large quantities from the Cape as well as from our nearby towns; consumption immense; prices satisfactory to buyer as well as producer, at 70 to 90 cents per dozen.

Hot house tomatoes took a sudden tumble, and can be purchased, 8 to 10 cents a pound; Florida stock coming in better condition than ever before; some stock a little bit too green sometimes, therefore a range of from \$1.50 to \$2.50 per six basket-carrier.

Virginia peas in fine condition, \$1 per half barrel basket; Georgia wax beans, \$2.50 per basket; green, \$2; some Illinois wax beans here bringing \$2 per crate.

Virginia strawberries take a range of 7 to 8 cents, while Maryland stock sells anywhere 10 to 15 cents; fancy large berries do not show up, if they arrive we could quote 15 to 22 cents.

Apples are finer; and good nice Baldwins bringing \$2 to \$2.50; fancy russetts, \$2 to \$2.25, with some extreme gilt edge stock of any variety bringing yet higher figures.

Hot house radishes find limited sale at about 20 cents a dozen.

Mushrooms steady, 40 to 60 cents, but so many other fruits and new vegetables are offered that they are not quite so much in demand.

Philadelphia.

The market has been slow during the past week, with the exception of Friday, the 14th; that was a good day, owing to the large influx of visitors to the Washington Monument ceremonies. Hotels and restaurants bought very heavily for the two days.

While strawberries do not seem over plentiful, yet prices keep low; really first-class stock is scarce; that on the market can be bought from 7 to 12 cents per quart; a few choice sold at 16 to 18 cents.

Hot house tomatoes are in good supply and are selling at 20 to 25 cents per pound. Apples are held firm; Baldwins at \$2.75 to \$3.25; russetts at \$2.25 to \$3 per barrel.

Asparagus is selling very well; choice Jersey at \$3 per dozen bunches; Southern at \$1.50 to \$2, and Delaware at \$1.75 to \$2.50.

Beets are much improved, and sell more freely at from \$4 to \$5 per 100 bunches.

Potatoes as yet are going slowly, \$4 to \$4.50 per barrel is asked for No. 1, while inferior grades from \$1.75 to \$2.25.

Bermuda onions remain firm at \$2 to \$2.25 per crate; so far only very few received from the South.

Peas are more plentiful, and prices have dropped: Norfolk choice, \$1.75 to \$2.25 per half barrel basket; N. C. per bushel basket, 75 cents to \$1.

String beans: Charleston green, \$1.50 to \$2; Savannah green, \$1.75 to \$2.25; Wax, \$2 to \$2.50.

Mushrooms are rather poor in quality and go slowly at 20 to 30 cents per pound.

Tomatoes, Florida choice, per carrier, \$2.25 to \$2.50; fair, \$1.75 to \$2.

Cabbages still remain somewhat of a glut; the highest price reached this past week has been \$1.75 per barrel crate, while on Monday last they were down to \$1 to \$1.35.

Egg plants, Florida, per half barrel box, \$2 to \$2.25.

Squash, Florida, white, per barrel crate, \$1.75 to \$2.

Fainting Spells and Dizziness Follow La Grippe.

WE HEAR LESS ABOUT THIS DISEASE FORMERLY,
BUT IT IS STILL VERY PREVALENT.

From the New Era, Greensburg, Ind.

A noteworthy instance of the fallibility of even the most skillful physicians is furnished in the case of Mrs. J. E. Smith, of Greensburg, Ind.

For four years Mrs. Smith was afflicted with a nervous affection that finally left her almost completely helpless and which the physician who first attended her said positively could not be cured. Subsequently, a number of physicians in this and other cities declared her case to be hopeless.

To-day, in spite of the verdict of the doctors, and without their aid, Mrs. Smith is perfectly well. To a *New Era* reporter she told the story of her extraordinary recovery.

"Five years ago I had a severe attack of la grippe, followed later by another. During the four years following, my health continued to decline, until finally I was hardly able to move.

"After having the grippe," said Mrs. Smith, "I was able to be about for awhile, and to do some work. But in a short time after the second attack I began to experience nervousness, and often had fainting spells, my trouble being similar to hysterics. I gradually grew worse, and in a short while I became subject to such spells of nervousness that I could do no work, being scarcely able to move about the house. I could not sleep and could not eat. I would lie awake nights, my muscles twitching continuously. My physician called it nervousness of the throat and breast, and

after treating me for several months said that my case or any case like mine positively could not be cured. Different physicians in Greensburg and other cities who attended me agreed that my case was hopeless. For three years I lingered in misery, trying different doctors and remedies, but none did me any noticeable good. Finally my druggist advised me to try Dr. Williams' Pink Pills for Pale People, which was so highly recommended by newspapers. As a last resort I tried them, thinking that if they did me no good death might soon give me relief. The first dose helped me, and with every dose I improved. I took about three and a half boxes and was completely cured, as you see me to-day, perfectly healthy and able to do all my own work."

Dr. Williams' Pink Pills contain, in a condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. They build up the blood, and restore the glow of health to pale and sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork, or excesses of whatever nature. Pink Pills are sold in boxes (never in loose bulk) at 50 cents a box or six boxes for \$2.50, and may be had of all druggists, or direct by mail by addressing Dr. Williams' Medicine Company, Schenectady, N. Y.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

**We cannot undertake to reply by mail.*

Heading Back an Arbor Vitae

We have an arbor vitae tree about eighteen feet high, and desire to grow Clematis paniculata upon it. The branches are very open now. Would they thicken up and the tree become more dense if about eight feet of the top were cut off and the ends of branches cut back to induce new branches?—C. O. R.

If the clematis is to be grown upon the tree it will be hardly likely to thicken if the top be cut back; the climber if vigorous would prevent its doing so. Under ordinary circumstances when headed back, lower and thicker growth would be induced.

Names of Plants.

(To W. E. C.) The weed which is growing in your meadow land is *Barbarea stricta*. To eradicate it strong measures must be taken; the clumps may be carefully dug out, but the best method is to put the ground to some cultivated crop so that the weed cannot get a foothold.

(To West Vermonter.) The plant you sent is *Geranium sanguineum*.

(To E. A. PATTERSON.)—The "novelty violet," of which you send specimens, is a native plant, *Viola pedata* bicolor. It occurs sparingly from Massachusetts to Maryland. Dealers in herbaceous plants regularly catalogue it.

Lily of Valley Not Flowering.

Can you give the cause of my Lily of the Valley not flowering, and say how it should be treated.—MRS. N. T. P.

Possibly the plants want pushing along a little. Try a little liquid manure water during growing period, if it is outdoor valley, to which you have reference.

Propagating Carnations.

What is the best method of raising carnations; from seeds or cuttings, for outdoor summer blooming only.—SUBSCRIBER.

Carnations are better raised from cuttings; seed raising is interesting, but doubtful in results.

Mushrooms Too Dry.

How is it my mushrooms take so long to grow to any size? The beds are covered with pin heads, but it takes them from one to two weeks before they are of any size.—A. UNSWORTH.

There is not sufficient moisture in the atmosphere or in the bed itself. Keep away the light and increase the moisture.

Apple Tree Borer.

Kindly give a remedy for a white worm about one-half inch long, which eats its way along under the bark of the larger branches of an apple tree. The affected branches are in full bloom, but the bark is brown instead of green and looks dead.—A. HEINE.

See the illustrated article on apple tree borers in this issue.

Plant Peonies Now.

Please let me know where you plant peonies, and how you sell the bulbs or roots.—MRS. N. T. P.

Peonies should be planted immediately; dormant roots are yet to be had from the nurserymen, but if planting be not done at once it will have to stand over till fall or next spring. We do not handle plants of any sort. Apply to some of our advertisers.

Insects on Roses.

What is the best preventive of lice and worms on rose bushes and how applied? What will destroy the red spider.—SUBSCRIBER.

Hand pick for the grubs, and for lice syringe with soap suds or kerosene emulsion. Red spider can be driven off by water—it hates water.

Other answers appear on other pages.

Seed Trade Association.—The annual meeting of the American Seed Trade Association takes place at the Ebbitt House, Washington, D. C., June 8, 9, 10 next. An interesting programme has been prepared, which includes several papers by well-known experts; also provides for a full discussion of the government free-seed distribution and the Davidson bill to regulate imported seeds.

\$1000 Free to You

A Contest of Skill & Education by a Responsible Magazine. . . .

We wish to introduce "THE HOME VISITOR" into 20,000 new homes and will spend above amount in doing so. Name the States that the following Nicknames have been given:

1. THE LONE STAR STATE,
2. THE CREOLE STATE,
3. THE OLD BAY STATE,
4. THE GOLDEN STATE,
5. THE MORMON STATE,
6. THE KEYSTONE STATE,
7. THE EMPIRE STATE,
8. THE BUCKEYE STATE,
9. THE FLOWERY STATE,

Premiums To nearest correct answer \$100; 2d, \$50; 3d, \$25; 4th, \$15; 5th, \$12; 6th, \$10; 7th, \$8; 8th, \$6; 9th, \$4; 10th, \$2. To next 15, \$5 each. To next on hundred answers \$1 each. Besides every contestant who sends in three or more correct states will receive Free our Ladies' Work Basket Companion Set, containing darning, wool, yarn and carpet instruments, and five dozen steel needles that cannot be purchased for less than 50 cents and which makes a desirable present to any woman. All solutions will be judged according to distance of contestant so as to show no partiality. It will be necessary for each contestant to send 25 cents for 6 months' subscription. No solution will be recorded unless amount is enclosed in same letter. Names of successful contestants will be given in "HOME VISITOR," and premiums will be fairly awarded. Send your answer now. If you have tried in other contests without reward, you may be successful this time. We refer to any bank in Philadelphia as to our reliability and reputation. Address letter to "Home Visitor" Publishing Co., 1813 N. 16th Street, Philadelphia, Pa.

Mention American Gardening when you write.

THREE NEW CANNAS. **BAY TREES,**
40 NEW IRIS. **HARDY PALMS,**
AND EVERYTHING FOR DECORATING.
SIEBRECHT & SON, 409 5th Ave., New York.

Mention American Gardening when you write.



The TWIN COMET (Stationary) \$5.00
The LITTLE GIANT (Traveler) 15.00

LAWN SPRINKLERS.

Best Sprinklers made for Florists and Nurserymen's use. Will save labor of one man, for they sprinkle 4 times greater area than any other sprinkler.

E. STEBBINS MFG. CO.

Made for J. B. FELLOWS & CO., SPRINGFIELD, MASS.
40 Warren St., N. Y. City. Will send on 5 days' trial.
Agents Wanted. Can make big money.

Mention American Gardening when you write.

GELERY PLANTS. Best varieties. Lowest prices.
H. K. Hammond, Decatur, Mich.
Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodora B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.

Mention American Gardening when you write.



SOLD BY
THE SEED
DEALERS OF
AMERICA.

For pamphlets
address,
B. HAMMOND,
Fishkill-on-
Hudson, N. Y.

Mention American Gardening when you write.

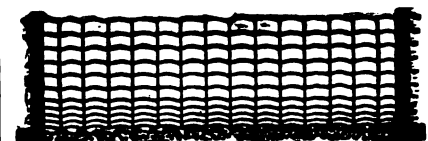


EARN A BICYCLE

600 Second Hand Wheels. All Makes. Good as new. \$5 to \$15. New High Grade \$8 models, fully guaranteed \$17 to \$25. Special Clearing Sale. Shipped anywhere on approval.

We will give a responsible agent in each town free use of sample wheel to introduce them. Our reputation is well known throughout the country. Write at once for our special offer.

N. L. MEAD CYCLE CO., Wabash Ave., Chicago, Ill.
Mention American Gardening when you write.



Confidence Restored.

Not Page confidence, that was never lost. Sales increased every year through the late "unprosperousness." Now comes 35-per-cent increase for the month of April. This shows that people like the Coiled Spring and like to buy it of the owner, rather than those who attempt to appropriate it without leave or license.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write.

Offer No. 81.

For Two New Subscriptions

We will send postpaid this wonderful Combination Tool needed in every garden and by every Gardener and Fruit Grower.

PRUNING SHEARS FLOWER GATHERER GRAPE PICKER

AS A SHEARS.—In pruning Rose bushes, or any shrubbery, the prunings are held firmly by the shears and do not come in contact with the hands.

AS A FLOWER GATHERER.—In picking flowers or removing dead leaves they are held firmly by the shears until released by the operator.

AS A GRAPE PICKER.—In picking Grapes the bunch cut off is firmly held by the shears and placed in the basket without touching them with the hands, preserves the bloom on the grapes, and leaves the left hand free to hold up the vines or basket.

IN ADDITION.—The holders do not extend to the point of the shears, thereby facilitating the trimming off small branches, leaves and defective grapes.

They Are Always Ready For Use. Just Fits The Hand. Made of Solid Steel.

Every one who gathers flowers or fruit has been annoyed by the difficulty in catching the fruit or bloom after it was severed from the parent stem. With this instrument there is no danger of fruit or flower dropping to ground, or of spoiling trees, vines or plants when clipped from high places. "Once with, never without."

Every pair of Shears mailed out by us is made from High Grade cutlery steel and fully warranted, and should one be found defective, when used for the purposes advertised, purchaser's money will be refunded. Patented March 16, 1897. When not wanted as a premium these shears can be obtained from the publishers of AMERICAN GARDENING, postpaid, for \$1.00.

AMERICAN GARDENING, P. O. Box 1907, NEW YORK

OUR LEADING PREMIUM OFFERS.

THE CHOICEST INTRODUCTIONS FOR 1897

And the Three Best Cannas Known are

OFFER

No. 66.

Austria, Italia and

Mrs. Fairman Rogers

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed Madam Crozy type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of Mme. Crozy, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{4} \times 1\frac{1}{4}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.

ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. Austria is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. Italia has flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the Gladiolus, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of Austria with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 83 growths, and attained a height of 42 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and Italia were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.

One Plant for One new subscription; the set of Three Plants for Two new subscriptions.

Plants can be bedded out to advantage until well into June.

AMONGST OTHER PREMIUMS WHICH MAY STILL BE OBTAINED, WE MENTION:

The justly celebrated "YELLOW RAMBLER," the Rose Sensation of 1897.

Lord Penzance's NEW HYBRID SWEET BRIAR ROSES; should be in every garden.

TWO DISTINCT ROSE COLLECTIONS; twelve good plants in each; offers good until July.

Collections of **CHOICE DAHLIAS;** their cultivation is meeting with revived interest.

CHRYSANTHEMUMS—We are still offering **Two Choice Collections** of the Queen of Autumn.

GLADIOLUS—Choice Bulbs. May be planted until quite late for full flowering.

Nearly all of these offers are for just One new subscription, and it would not take you ten minutes to earn one of these unexcelled premiums. Full descriptive list mailed on application.

AMERICAN GARDENING; P. O. Box 1697, NEW YORK.



Corn

is a vigorous feeder and responds well to liberal fertilization. On corn lands the yield increases and the soil improves if properly treated with fertilizers containing not under 7% actual

Potash.

A trial of this plan costs but little and is sure to lead to profitable culture.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.



SNIPS Then The best for florists, Holders, gardeners, etc., is **Kelley's Florists' Shears** and Flower Gatherer. Circular free. **FLORISTS' SHEAR CO., Fremont, Ohio.**

Mention American Gardening when you write.



Steel Wheels

Staggered Oval Spokes.

BUY A SET TO FIT YOUR NEW OR OLD WAGON

CHEAPEST AND BEST

way to get a low wagon. Any size wheel, any width tire. Catal. FREE.

ELECTRIC WHEEL CO., Quincy, Ill.

Mention American Gardening when you write.

PROFITABLE

FRUIT CULTURE

finds an important adjunct and a valuable assistant in

GOULDS' "POMONA"

A new Spray Pump which embodies new and distinct features of great value. The

Plunger, Plunger Connections, Gland, Valves,

Valve Seats and Strainer are all made from best brass and are

practically indestructible. Every

stroke of the handle works the agitator as will be seen in cut. Long

handle makes it work easy. Will supply 1 or 2 leads of hose. Valuable book on "How & When to Spray," FREE.

THE GOULDS MFG. CO.

11 Ovid St., SENECA FALLS, N. Y.

Mention American Gardening when you write.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.

CYPRESS SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.

GREENHOUSE
AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.
Neposens, Boston, Mass.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price with list extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.

BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

GLASS For Greenhouses, Grap-eries, Conservatories, Hothouses and Hotbeds. GLASS

VANHORNE, GRIFFEN & CO.

Importers of French Glass.

19, 16 & 17 LAIGHT ST., AND 52, 54 & 56 VARICK ST., **NEW YORK.**

Mention American Gardening when you write.

"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and . . . **THE AMERICAN JADOO CO.**
Testimonials, Address:

513 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

LORD & BURNHAM CO., HORTICULTURAL ARCHITECTS AND BUILDERS

STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York

Mention paper

Offer No. 35.

SENT postpaid, for ONE \$1.00
NEW subscription at

....BEAUTIFUL....

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection

and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle F. Kruger
The Bride

Virginia Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Flaman Cochet

Cornelia Cook
Maurice Rouvier
Catherine Flernet

Prince Hohenzollern

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, all finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 127.
COMBINED SERIES VOL. LI.

NEW YORK, MAY 29, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Azaleas, Care of.....	391	Earthworms.....	390	Market Reports: N. Y.,		Questions Answered....	398	Watering During Sun-	
Bedding, Hints for.....	394	Ferns Going Brown.....	399	Boston, Phila.....	400	Readers' Notes.....	396	shine.....	395
Berry Crop, Picking the	392	Flower Garden.....	391	New and Old, The.....	394	Shading.....	402		
Celeriac Culture.....	398	Fruit Garden.....	390	Nitrogen, Cure for Ex-		Spinach, New Zealand.	390	Illustrations.	
Celery.....	390	Fruits of Experience...	392	cess of.....	394	Strawberry Runner Cut-		Berry Pickers' Check...	392
Cinerarias, Hybrid.....	394	Grapes.....	390	Peas.....	390	ter.....	393	Crozy, Portrait of Mr...	391
Crozy and His Work...	394	Herbaceous Perennials.	393	Poison Ivy.....	391	Strawberries, Forcing..	398	Currant Girdlers' Work	390
Cucumbers.....	390	Home Plot, The.....	402	Potted Plants.....	402	Teas, Defoliated.....	399	Dracæna fragrans.....	389
Currents.....	390	Label Stake, A.....	397	Poultry, Ruff.....	398	Vegetable Garden.....	390	Label Stake, Improved.	397
Dracænas.....	389	Marketing, Points in....	398	Poultry Notes.....	402	Window Gardening.....	402	Runner Cutter, A.....	393

Dracænas.

Among popular decorative foliage plants, the *Dracæna* perhaps leads in public favor, and is more extensively grown than any other ornamental foliaged plant, unless it be the ever present but far less graceful rubber tree (*Ficus elastica*).

Varieties of *Dracænas* at this time are almost legion, and embrace great range of coloration and contour of foliage, but many of these only find homes with those who are seeking a collection or in public institutions; commercially, or for general purposes, the list is under a score. *D.* (or *Cordyline*) *indivisa* is one of the most hardy kinds, very graceful, and is well adapted for vases, window boxes, etc. *D. gracilis* is another useful green foliaged one.

Among higher colored types *D. terminalis* and seedlings from it have for years been the most generally grown, and for vases and outdoor sub-tropical bedding it seems to be the most satisfactory of all, and stands the weather better than does the majority of other highly colored kinds. For toning and coloring up a group of plants in a large vase or window box, its brilliant red is of the greatest value.

D. Cooperii is a little more pendulous in habit, and of darker color. *D. Duke of*

Wellington is a comparatively new variety with a deeper color than is seen in *D. terminalis* and more pendulous yet brighter, and of better form than *Cooperii* and furnishing up well. It is indeed a grand *Dracæna*. *D. Sanderiana* (new) is gaining many friends, and is being bedded out freely this season, (results will

be published later),

Kinds adapted for stoop, verandah, and house purposes are *D. Baptistii*, *D. Bausel*, *D. congesta* discolor, *D. Lindenii*, and last but not least the subject of our illustration, *D. fragrans*. Its perfect contour, freedom of growth and pleasing color make it what it is, one of the most desirable all round kinds. Its good nature makes it of special value for draughty hallways, staircases, window and room adornment. Providing it is not allowed to dry out at the roots, it will last in good condition for a considerable season in any of the above positions. Its heavy foliage renders it liable to injury from the wind, so for that reason it is not so good for vases, unless in positions where strong wind is not likely to affect it.

Propagation.

All of the foregoing are tolerably easy to grow, and young plants can be raised annually. Among commercial growers, stock is generally raised from canes. These either are brought from tropical



FIG. III.—DRACÆNA FRAGRANS.

countries such as Trinidad in the West Indies or different parts of Australia and distributed through dealers into America and Europe. The canes carry well and remain in good condition for a long time.

When they finally reach the hands of the propagator they are nicked between the sections formed by the leaf-scars, using a sharp knife for the purpose. They are then laid on shelves or benches in a warm house and covered with a little moss, which is kept dampened. The warm, moist atmosphere soon plumps them up and growths begin at each ring. Should any of the stems suffer from an emission of sap at the wounded parts a little lime is applied and that usually stops it. When growth is fairly started the pieces are severed and the parts potted up.

In a smaller way or for home purposes plants that have become barren of leaves and unsightly can be cut up into pieces about two inches long and young plants started in that way, and at this season any one who has an old plant and likes to make the experiment can get good results out doors by placing the pieces of stem in a warm border and covering them an inch deep with earth. These can be potted up later and nice stocky plants will be the result.

After Treatment

To obtain well-grown, stocky, high-colored plants suitable for table decoration next fall and winter an outdoor frame is required; if an old spent hot-bed so much the better. Plunge the pots right up to the rim in the old dung and give careful attention to watering; shade the glass a little; put on a little air during the day-time and close down and syringe in the afternoon while there is still some sun heat. It will be found that plants thus treated will be making better progress than those in greenhouses. They need to be taken indoors when chilly nights set in in early fall.—J. W.

Earthworms.

A discussion on the subject of earthworms and vegetable mould appeared in a recent issue of Longman's Magazine. The writer, Grant Allen, states that it was Gilbert White, of Selborne, who first of all pointed out the importance of earthworms as producers and maintainers of the living layer of vegetable mould. It was the patient investigations of Darwin, however, which fully established the fact, and raised it to the rank of a scientific discovery, his first writing on the subject appearing in the Gardeners' Chronicle. Later he issued an entire book on this interesting matter. Darwin showed that earthworms act upon the soil in three ways. In the first place they open up and loosen the ground for the roots to penetrate, more perfect aeration of the soil being thus obtained. The acids they secrete also act chemically upon the layer of rocks beneath in a way that assists the disintegration of the latter. In the second place they crush in their gizzards small fragments of stone and liberate their component elements. In the third place they drag down into their burrows countless numbers of leaves, which they eat, and carry up the refuse to the surface. It is computed that no fewer than 53,000 worms inhabit an acre of garden soil. These worms pass through their bodies ten tons of material in a year, and throw it up as mould at the rate of one inch in depth every five years. The greater part of this mould is composed of a refuse of vegetable matter, and is teeming with myriads of bacteria. Even after allowing for other co-operating causes, earthworms are responsible for the formation and renewal of this layer of vegetable mould.

Seed Sowing.—Sweet Williams, Fox-gloves, Canterbury Bells and Hollyhocks should be sown during May. Pansies and Myosotis can be left until August.

The Vegetable Garden.

The Cabbage Tribe.—Sow now for winter use.

Carrots.—Sowings for general crop may be made until June 20.

Beets.—Sow for succession every two weeks until July 15.

Beans.—To insure constant supply of young beans, sowings should be made every week or ten days until August 1.

Cucumbers.—For pickling, sow now and till July 1. The Gherkin gives the best satisfaction for this purpose, although the Boston pickling is excellent.

English Cucumbers.—It is surprising how rarely we meet with this, the finest and best of all the cucumbers. Outside of large gardens where professional gardeners are employed, it is seldom grown. It is practically a seedless variety, and for seedling purposes it requires to be artificially fertilized, hence the greater cost of the seed. Wherever cucumbers are grown for home use this variety should be tried, and from its fine, long, smooth appearance and good eating qualities it is sure to give satisfaction and prove interesting to the amateur.

New Zealand Spinach should now be established and growing in the garden. It is a very fine vegetable for the hot months and will also keep on growing through the season, and does not run to seed like the ordinary variety. The leaves can be frequently gathered

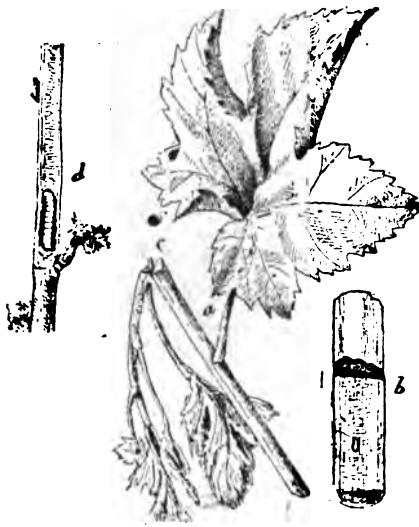


FIG. 112.—THE CURRANT GIRDLER'S WORK.

for use and will be a constant source of supply. Wherever a large supply of summer vegetables is required it cannot be too highly recommended.

Peas.—If the peas are heavily mulched on each side of the rows with some suitable material, as litter and lawn grass rakings, this process will tend to keep the roots cool and moist, and will, to a certain extent, ward off the ever-recurring mildew on the vines, with a resulting larger and better crop. If the ground is dry a thorough soaking of water will prove beneficial.

All seedlings that are coming up should be properly thinned out as soon as they are large enough to be handled. Never leave more than three or four stalks to a hill of corn. Onions and carrots to be thinned out at first to one inch apart, to be gradually thinned later to three or four inches apart, according to the variety, always leaving the strongest plant to grow. Salsify and parsnips should be thinned out to two inches at first, to be finally allowed five to eight inches from plant to plant.

Backward crops can be pushed if a little sprinkling of nitrate of soda be given before rain. It should not come into contact with the stems and leaves of the plants, but be spread over the surface, and if possible hoed in before rain. It should not be used for peas,

beans or tomatoes, unless the ground is in very poor condition, as it has a tendency to make these grow largely into vines.

Celery.—Seedlings intended to follow early crops, in the garden, for winter use, should not be left to grow large in the seed beds. It is much better to prepare a rich bed and transplant three or four inches apart. They will then make much better plants with a good ball of roots, so that when they are ultimately planted out where they are to remain, usually in the hottest season, they will not be liable to wilt and will at once commence to grow.

Celery for fall use should now be all planted. For this purpose we prefer to plant 6 inches apart in rows 18 inches apart. The ground should be well enriched and cultivated before planting, otherwise good celery cannot be expected. Cultivate often between the rows, and if possible, when dry, give water, thoroughly soaking the ground down to the roots. Few amateurs realize the quantity of water required to soak the ground to a depth of two or three inches, and anything less than that is quickly evaporated in hot weather. If this cannot be done mulch heavily between the rows, with partially decomposed manure. It is an excellent plan to experiment in such matters. Cultivate and water regularly one part, the other mulch as directed, noting the results, and send your report to this paper, so that others may learn. Celery treated generously is not so liable to the attack of blight. Keep the roots cool and moist either by a mulch of dust or litter.

W. M. EDWARDS, N. Y.

The Fruit Garden.

Currants.—During the latter part of May withered tips of the young growths may be noticed here and there. This is the work of the currant girdler or matured female insect of the currant borer. If the affected parts are cut off three or four inches below the withered portion the eggs or the hatched insects working down the pith will be obtained and so may be burned. It is surprising how quickly such a minute insect can demolish the finest bushes when left alone.

Grapes.—Look over the vines and disbud. There is nothing gained by having two or four shoots on a spur. On the contrary, there are, say three weak shoots left (to see which has the largest bunch) for next year's bearing wood, and probably there are two extra bunches on them, which will bring forth at cutting time regrets and good intentions for next year. That is one reason why I believe in bagging. If we use bags we want decent bunches in them. It does not need a mathematician to decide that it is cheaper to grow one pound of grapes in one bag than in three, not to mention the balance in favor of having much stronger wood for fruiting next year. Another item sometimes overlooked is the damage a few hundred rose bugs can do when the grapes are in flower. I find that a lad with a small quantity of kerosene in a pan or an old corn can will make a decided difference in the setting of the berries. Try it.

Strawberries.—The berries will be swelling freely now; have new or perfectly clean quart boxes ready to pick them in. All cultivation should be stopped and the ground mulched. Any strong weeds which have pushed through the old mulching (where left on) should be removed by hand. I mention quart boxes because I have not seen any larger size filled with strawberries, which looked attractive; indeed they look quite ordinary, especially when the basket has a weather-beaten appearance.

Raspberries and Blackberries.—Keep the suckers cut out from between the lines. Now is a good time to note the hardness of the different kinds,

also in plants of the same kind, which vary considerably in that respect.

Fruit Room.—This will be nearly empty, so on some wet day any repairs needed should be done. General house-cleaning is in order. One of the cleanest tools for the work is the whitewash brush.

JAMES HOLLOWAY, L. I.

The Flower Garden.

Annuals.—We are now planting out our annuals for a summer's display and for cutting. Hyacinthus candicans, Gladiolus, Montbretias, Tigridias and other summer flowering bulbs are all in. In the background, or as a shield, we plant the miniature and silver-leaved Sunflowers, Dahlias, the Lion's Tail (Leonotis Leonurus) or other coarser showy plants. We follow this work with our regular summer bedding, which, fortunately, is limited. But we have corners to fill and this is our opportunity to do effective work with tender plants.

Design in the Flower Garden.—The English flower garden is generally an enclosure where designs may be worked out effectively, but the places where this system can be carried out harmoniously are few, and generally where such attempts are made the results are unsatisfactory. Bedding for the most part is better done by massing plants of one color, where they will show off best from a distance.

Suggestions for Beds.—Bright Coleus, of distinct colors—yellow and red—go well together, with probably a Canna or other good foliage plant for a centre piece. A mass of the dwarf Salvia splendens was one of the most effective beds we had last season. A bed of dwarf pink or yellow Lantanas is effective. Ageratum, though generally too rank, is, nevertheless, always full of bloom. Then there are geraniums; good single varieties are better than double ones—Henry Jacoby for crimson, Jean Ill for pink, or even the old General Grant (scarlet) are bright when kept trimmed of dead flower stems.

Sub-Tropical Bedding.—What is known as sub-tropical bedding is effective and admits of quite a mixed arrangement, although Cannas, which may be included amongst plants of this sort, make a fine display alone. Ferdinandias, Wigandias, Hemp, Tobaccos, Humea elegans, Alocasias, Cannas, Grevilleas, Dracaenas, Rubber plants, Begonias (shrubby), Abutilons and Fuchsias make a fine mixed bed.

Stock for winter decoration and for cut flowers will go into the open ground this week. Carnations, Violets, Marguerites, Stevias, Libonias, Jerusalem Cherries, Bouvardias, Centropogon Lucyanus (splendid as a winter pot plant treated to a summer growth in the garden), Cheronia exifera, Callas, Heaths (in shady places), Browallia speciosa, pot-bound Cytisus (but not small plants), Acacias, Eriostemons, Boronias and what we know as hard-wooded or Australian plants are safer kept in pots in a shady place.

Indian Asaleas we plant out in a mixture of sandy loam and leaf soil, and we have had good success by this treatment. They will need water in abundance, especially when making the season's growth. Still many old practitioners persist in keeping them in pots; but even such as regard with suspicion the planting out plan should make a trial on a few plants.

Chinese Primulas.—It will be time to sow seeds of these.

The Greenhouse.—In summer this is not considered an attractive resort, but by the use of shading and plenty of air it can be made quite comfortable. We aim to keep something growing all the time, for an empty greenhouse has a deserted look. Fuchsias, Hydrangeas, Petunias, Mimulus, Begonias and Gloxinias will keep up a display for a long time.

T. D. HATFIELD, Mass.

Crozy and His Work.

Whenever the name of Crozy is mentioned, our thoughts naturally turn to the large flowering French cannas and the wonderful improvement in this class of plants that has been effected through the skill and painstaking of this noted French hybridist.

We have pleasure in presenting to our readers a photograph of Crozy himself and a brief sketch of his work in connection with canna hybridization, both of which are reproduced from Möller's Deutsche Gärtner-Zeitung. "So closely connected with the canna is Crozy's name," says that journal, "that it makes no difference whether or not our new cannas had their origin in his place, they are and will be called 'Crozy cannas.'"

Mr. Crozy writes to our German contemporary in regard to his success in hybridizing the canna as follows:

"I began alternative hybridization between Canna Warscewicz and C. nepalensis, a species with large, yellow flowers and very long, creeping tubers. My first cannas obtained from this cross were named Boneté and Plantieri, the latter of which showed green foliage and orange flowers. The first one came close to C. Warscewicz, with dark red-brown foliage and pretty large



FIG. 113.—M. ANTOINE CROZY.

flowers, was very free flowering and a favorite for quite a while. After this, by crossing with Canna aureo-pictata, I succeeded in getting hybrids with yellow spotted flowers, which year by year grew larger and rounder. I then tried to get an early bloomer and finally succeeded in obtaining a type which was very floriferous. I constantly threw inferior plants away and kept only the best.

"As to the number of hybrids raised by me, I suppose that I have raised, without exaggeration, some 180 to 200 varieties, which, step by step, showed improvement over the older kinds. Among my varieties not yet in commerce are cannas with flowers measuring from 4½ to 6 inches in diameter. These have all very glowing colors and bear immense flower trusses.

"My new cannas are a very carefully-selected lot, and their superiority has been confirmed by many visitors. My constant zeal for superior varieties shows successes every year in regard to color as well as size and number of flowers. The flowers now are borne more erect, are of better substance and show broader, rounder petals and some are of a size not known before.

"These cannas for our climate have the advantage of being dwarf and early flowering, and they stand well rain and other adverse weather conditions which the older varieties do not."

As regards the new type of cannas

seen in the varieties Austria and Italia, M. Crozy states he awaits the competition of these without fear, and comments adversely on the lack of substance and early wilting of the flowers.

"We may add," says the Gärtner-Zeitung, "that M. Crozy is known in Nancy, France, under the name of 'Papa Canna,' and one of his best novelties is named 'Papa Canna.'"

Poison Ivy.

I was much rejoiced to find in the issue of May 15 of your interesting paper two articles upon the pest called poison ivy, and that damages had been given a person for injury sustained through it. There certainly should be some law to oblige people to destroy it, as the suffering it causes to many persons is as great, and almost as much to be dreaded, as small pox or diphtheria, although not contagious. The plant is allowed to grow everywhere along roadsides, whence the seeds blow over and root in gardens. I have even seen it in fine places climbing a tree, where the owner professes to think its bright autumn leaves add to the beauty around. When remonstrated with the answer given with a smile will be, "Oh, it does not poison me." At the same time he or she would not perhaps touch the vine.

I am a blonde and until a few years ago ivy did not harm me, but at one time when recovering from a fever I handled some autumn leaves, was badly poisoned, and ever since have been a martyr to it. On one occasion I had my tongue and mouth so swelled I could not swallow. The physician said if the inflammation had gone to the mucous membrane I could not have lived.

The vine should be cut at the roots (when climbing a tree this can be done with a scythe or sickle without hurt to the person) and in this way it could be kept down. There should be a law passed that every land owner must go over his place every spring and cut down all ivy vines and that any one who may be poisoned by vines on any place where they are living, such as at a summer hotel or boarding house or an employe on the place, could get damages. It has been an astonishment to me, when so many sanitary laws are passed, that this has not been taken up, as I know of some, and have heard of many, who have been made very ill suffering from this ivy. Also it should be enacted that it must not be permitted to grow on a highway, the roadside being kept clear by the owner of the land behind it.—ORANGE COUNTY.

Hybrid Cinerarias.

Mr. J. James, the English Cineraria specialist, has entered the ranks of the hybridizers and his efforts have been very successful. The first step consisted in hybridizing C. hybrida with C. cruenta, the result being flowers rather larger than those of C. cruenta and distinctly marked with some of the more clearly-defined colors of the hybrid strain. The second step consisted in hybridizing this cross with C. lanata. The results of the last effort are both interesting and beautiful, and one in particular should have a great future before it. The plant is of vigorous habit and elegant form, throwing out numerous branches with long stems, which are covered with a white, downy substance, and terminate in large flower heads of white flowers, about one and one-quarter inches in diameter. There is a very faint shade of color in the centre when the plant is standing in a clear light, but for all general purposes the flower is white. Its elegant form will render it very valuable as a pot plant, while the long stems and the color render it serviceable for every branch of the florist's art. The plant does not appear to produce pollen, but there should not be any difficulty in obtaining a supply of plants.

Picking the Berry Crop.

How the Large Growers Do It.

(Continued from page 377.)

There are three methods of keeping account with berry pickers and their work, each one well suited to the wants of one of three classes of growers.

Firstly: For an acre or two of berries, when few pickers are required, an ordinary pasteboard ticket specifying the number of quarts thereon, may be given to pickers as boxes are taken up; these tickets to be redeemed in money every week or as soon as needed to use again. By this method tickets may be used again and again for several years.

Secondly: For several acres the card system seems well adapted. This consists of a card two or three inches wide and four or five inches long, around the edge of which are printed figures, 1, 2, 3, 4, 5, 6, etc., amounting in the aggregate to two, three or five hundred or more, as proprietor may desire. As fast as berries are brought in figures to correspond with number of quarts or boxes picked are punched out with a conductor's punch. An eyelet should be placed in top of card, also the proprietor's name and a blank line for name or number of picker. When settlement is made the card is taken and the amount paid entered thereon. This makes an accurate record of the season's work and is practical for most growers.

Thirdly: For a large plantation when a more perfect record is required, the check system, introduced some years ago by the Thayer Fruit Farms, Sparta, Wis., and here illustrated, is very complete. This consists of checks in three different colors, representing one, two and six boxes. These checks are $1\frac{1}{2} \times 2\frac{1}{2}$ inches in size, five to the page, numbered consecutively, perforated, and bound in books of 500 each, making a convenient pocket check book. The checks are numbered, no two checks bear the same number, and a check is never used more than once. By noting the number on the first check used and at any time deducting same from next check to be issued, one can at the close of any hour, week or month or season determine just how many boxes have been paid for. By checking up at any time you can always know whether you have paid for more boxes than have been picked, thus detecting errors or dishonesty in issuing checks. This also gives a perfect check on any number of pickers and for any amount of fruit.

These checks are obtained in quantity, at a cost of about twelve cents per thousand boxes, and are the most convenient, accurate and satisfactory of any system used. The same is adapted to job or piece work in all variety of fruit.

Whatever system is used, establish a minimum price for all pickers, and give a premium for each 500 or 1,000 boxes picked, according to the prescribed rules of the plantation. This insures a continuation of best workers during the season of poor picking and is an incentive to good work at all times.—M. A. THAYER, Sparta, Wis.

Simple Checks.

Just before the berries are ripening I put up my berry houses; they are sixteen feet long and eight feet wide, made out of hemlock boards. The side towards the berry patch I leave open for a table. The table is three feet high and three feet wide. I put these sheds at the end of the patch and if the patch is very long I have one at each end. Then when I commence to pick I give to each berry picker a picking tray that holds four boxes, and also five boxes. After the tray is full they can carry one box in their hands to the picking house. The party that has charge of the picking house gives the picker a five-quart ticket for the five quarts she has just delivered and also five more boxes. At night the pickers change their tickets for a larger ticket. My

tickets run 1, 2, 3, 5, 25, 50 and 100 quarts. I always keep one man in a patch to every twenty-five pickers to see that they pick clean, and also to see that they keep their own rows. I always have girls (not too small) and women to pick all my berries. They do not jam the berries as do boys and men.—A. L. WOOD, Rochester, N. Y.

The Best Method.

The most satisfactory method of keeping track of the amount of berries picked is similar to Ridgeway's, described in your last issue. I use picking stands holding six quarts each and have picker's card to match—that is, six quarts printed in the place of four quarts. I have never had cards tied to handle of stands, but it is a good suggestion and shall practice it this season. The berries are delivered to the packer, who punches the number of quarts from the ticket. Tickets are kept by owner until pay day, which with me is every Monday, when the whole number of quarts is entered in the field book and credited against the amount charged against the picker's name. All tickets are taken up at night and distributed in the morning. No account is kept with the pickers other than the ticket, so that if they lose them it is their own lookout. Wishing you the success which your paper deserves.—ELMER BRINTNALL.

A Double Check System.

When I went to work for a fruit grower, who employed at times thirty to forty pickers, he had been in the habit of hiring one man whose sole work was to look after the pickers. When this overseer found berries left on a row or mashed, it was sure to be

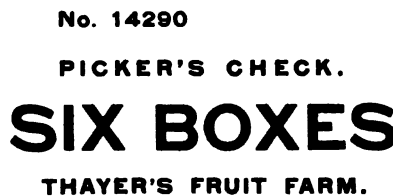


FIG. 114.—BERRY PICKER'S CHECK.

"someone else's row" and not that of the one of whom he inquired.

To end this confusion, I adopted the following plan: Each row of berries had a stake set opposite to it with its number. Whenever a picker was started on a row his name and the number of the row were entered in a memorandum book. He was told how to pick—if a new hand—and that he was to finish his row properly before taking another.

After this plan was adopted it was only necessary to go over the rows once or twice in a half day to see if work was all right. The rest of the time the overseer picked or attended to other work.

When more berries were left than should have been, the picker was sent over the row again, and if he did not then do better he was discharged.

We kept track of the number of quarts picked on cards, one carried by the picker and a duplicate retained by the one who punched the tickets.

If we could use the plan we would prefer it would be to give a check for each quart picked, dropping a duplicate in a till for each picker at the same time.—CHAS. H. SUMNER, Sterling, Ill.

Simple Checks.

To keep track of our picking we have always been using small checks of tough cardboard, printing on the name and address of the grower and the number of quarts for which the check is used. We use only the denominations of one and four quarts, about 80 per cent. of the latter, as they are used for all full stands of berries, which hold four quarts each, and which we aim to furnish each of our pickers, the single

quart tickets only being used to pay for accidental odd quarts. Our aim is to have enough checks to last at least a week, when we order our pickers to bring them in and get all or part pay, as we deem best. We think by reserving a part of their pay until the close of the season we have better attendance at the last of the season.—E. M. BUECHLY, Greenville, Ohio.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Fertilize the soil around the raspberry hills by scattering on the ground and working in with cultivator, but not too deep.

Watch for frosty nights.

Green suckers of red raspberry carefully taken up now and transplanted into nursery rows will make extra plants for next spring's planting.

Are the berry boxes made up? Look out. They may have to be made up in the rush.

Each gentleman's place should have all the choicest varieties of grapes, from one to two of each variety.

More melons on one-fourth acre of ground, says one man, can be grown by mixing fresh cow droppings and water and sprinkling each hill very early every morning for the first few weeks of their growth, than on two acres not thus treated.

We will protect the trunks of our young trees from sun scald by sharpening the end of a 1x6-inch board and driving it into the ground on the south side of the tree about six inches from the trunk.

An acquaintance who has had many years' experience in small fruit growing thinks the Kansas is a strong rival of the Eureka black-cap raspberry. I think favorably of both varieties and have set largely of them this spring for my plant trade.

Marshall P. Wilder proves to be a vigorous growing rose.

When setting a tree on light, sandy soil it is advisable to throw out the upper soil for about four feet across, then draw and mix with the sub-soil about two to three inches of clay, then draw back the upper soil and set the tree.

A crust should not be allowed to form around any of the berry plants from now until next August, as concerns raspberries, and until October as regards strawberries.

Let each one of us resolve to get at least one new subscriber for American Gardening during the summer.

Now is a good time to make a chart of the young orchard and take the wire labels off the trees.

We are to try Golden Hubbard squash.

Some ashes should now be worked in the soil close to the trunk of those peach trees.

American Gardening of May 8 should be preserved for the article on pages 333 and 334, "Flowers From Seed Sown Now."

Have we advanced and made any improvement over the past and are our plans laid more carefully than in any previous year? They should be.

St. Louis (Mo.) Flower Sermon.—The Rev. Dr. David H. Greer, of New York City, preached the annual flower sermon provided for by the will of Henry Shaw, founder of the Missouri Botanical Gardens, in St. Louis, on May 14.

Germination of Corn.—Tests recently conducted by Professor Pammel at the Iowa Experiment Station indicate that all corn kept in open crips or shock where rain has had easy access should not be used for planting. Seed kept in dry places germinates well, so that farmers need not purchase expensive seed. The changeable conditions of moisture and drying greatly injuring the capacity for germination. Corn may show a high percentage of germination in laboratory and yet fail to germinate well in the field.

Herbaceous Perennials in Ornamental Gardening.

There are certain special reasons for advocating the large use of these plants for ornamental gardening. My first and principal reason is that they lend themselves most readily to the production of, or at least to the imitation of, natural effects, and to the development of that style of landscape ornamentation known as the "natural" style. And just a word as to this system: It is, as its name suggests, the copying of nature's methods of arranging trees, shrubs and other plants, and the putting into practice the principles taught us by nature's own work. I believe myself to be safe in saying that there is no landscape gardener of any prominence to-day who does not use and advocate this system wherever it is at all practicable to do so. And I believe it to be equally true that the men who stand highest in that profession admit that they have never yet been able to produce effects as beautiful and as refined as those that we can frequently see produced by nature. These men are ardent students of nature and her methods.

The oft-quoted assertion that our art "is an art that doth mend nature" is true in but a very limited sense, and as it is generally applied, is born of impertinent egotism and conceit. To me the true spirit of our art is to sit at the feet of nature and learn from her; to place our hands within hers and suffer her to lead us.

I have seen masses of the Mountain Fringe, *Adlumia cirrhosa*, climbing and trailing naturally over rocks and bushes, the delicate beauty of which it would be difficult to equal. A shaded ledge of rock covered with green moss and gray and silvery lichens, through which grew clusters of wintergreen, with its wax-like flowers in spring and scarlet berries in fall, and adjoining it the rock *Polypodium* growing from every crevice; the hillside covered in September with the graceful wands of the golden rod; the brookside, with the Meadow Rue in graceful panicles, and the meadow lilies (*L. superbum* *L. canadense*) growing among the tall sedges and grasses, and in October, with its native asters in various forms and colors; the marshes of the Hudson River and the coasts of Jersey literally covered in August with the swamp or rose mallow, *Hibiscus Moscheutos*, with its rose-pink flowers; and the pond or lake in its setting of verdure and its surface dotted with the leaves and flowers of our native *Nymphaea* or pond lily—all these are examples of nature's arrangements that we cannot do better than endeavor to reproduce or at least to study diligently. And these herbaceous perennials will aid us greatly in putting into practice the lessons in arrangement that we have learned from nature.

Another reason for using them is that a number of species and genera may be grown upon the same space of ground, affording a variety of effects at the different seasons of the year. By planting late autumn flowering plants at a fairly wide distance apart, other midsummer flowering subjects may be planted between them, and again all the space, practically, may be filled with spring flowering bulbs, thus giving a mass of flowers at the three seasons of the year. This method is capable of still further extension, so that a certain space would present a show of flower the entire season through.

Another reason for the extensive use of herbaceous perennials is that they are inexpensive, and this, to persons of limited means, is an important reason. Once these plants are established the amount of labor or other expense attached to their cultivation is not great.

Still another important consideration is that among them may be found plants that are specially adapted to special conditions of the soil, from the dry, rocky or sandy hillside to the half-submerged bog or marsh.

Propagation.

Let us now consider general methods of propagation and cultivation, which will apply to the greater number of the plants. Exceptions to the general rule will be noted later, so far as it is practicable to do so. Propagation is effected by seeds and by division. The bulk of my plants are grown from seeds sown during July and August, in a prepared bed, either in the open ground or in a cold frame.

Seeds sown in July will generally give plants strong enough to plant into their permanent positions in September and will then become well established before hard freezing sets in. Plants from later sowings are transplanted to a cold frame and are kept there during the winter, the sash not being placed over them until hard freezing sets in, after which the frame is seldom, if ever, opened until the sun gets strong enough to start them into growth in the spring. The sash is then partly opened or removed altogether, and as soon as the weather will admit the plants are planted in their permanent positions. The greater part of the plants thus treated will flower the first season.

A considerable number of plants is grown from seeds sown in flats in the

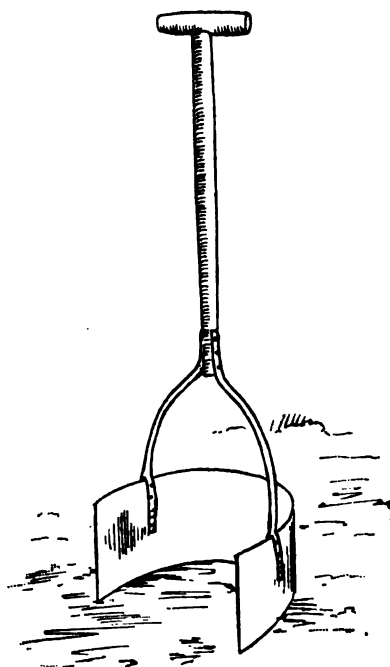


FIG. 115.—HOME MADE RUNNER CUTTER.

greenhouse during January or February, the seedlings being transplanted to other flats and planted in the open ground as soon as danger of hard freezing is past. With a few exceptions, plants grown this way will not flower until the second season.

Propagation by division can, of course, only be accomplished by having a stock of established plants, and may be done either in the early fall or early spring.

Preparation of Soil.

Unless the soil happens to be in an exceptionally poor and bad condition, I find it unnecessary to do more than have it dug or spaded to a depth of eight to twelve inches, at the same time working in some good fertilizing material. If lilies are to be planted, or if the amount of space to be prepared is not great, and if exceptionally fine plants and flowers are desired, it will pay to work the soil to the depth of two feet. These remarks refer more particularly to those who intend using the plants extensively and where the preparation of the soil necessarily becomes laborious and expensive.

I have had good success with plants that have been planted in soil that had not been worked more than ten inches

deep, and we have had three exceptionally dry summers.

After Planting.

After planting and watering thoroughly, the surface of the soil is kept freely stirred during the first season. Any tall growing plants that are likely to be beaten down by winds or rain should be supported in some manner, such supports should be made as inconspicuous as possible. Dead flowers and flower spikes should be removed, except such as are reserved for seed.

As soon as hard frosts have killed the plants above the soil, all the tops are cut off at a distance of three or four inches above the surface of the soil. Good, well rotted manure is spread over the surface of the soil to a depth of three or four inches, and afterwards a light mulching of forest leaves is applied, evergreen branches being laid over any subjects that are considered partly tender. If the location happens to be unusually bleak and exposed partly decayed leaves are used for the mulch, as they are not so likely to be blown away. This manuring and mulching, while not being absolutely necessary to the general collection of these plants, is, nevertheless, very beneficial, and we prize our plants highly enough to give it to them all.

There is, however, danger of doing harm by this mulching. Should it be neglected in spring and not removed before the plants start into growth, early-growing subjects will be damaged, if not destroyed. *Narcissus* and other spring flowering bulbs will most likely push their growth into it at all events, and when they are uncovered a few of the leaves should be shaken lightly over them and left for a few days. In removing this covering only the leaves and coarser parts of the manure are removed, the finer particles being left to act as a summer mulch.

Later Attention.

From this time on the soil is disturbed as little as possible, only sufficient to remove or destroy weeds. If the surface of the soil is not disturbed seedlings of many of the plants will spring up in abundance and will soon cover the ground almost to the exclusion of weeds, a fact of which we have taken advantage to get many established in various places about our grounds. By working up a section of the surface of the soil and planting a few strong plants to flower the first season, keeping the weeds under control and the surface of the soil stirred until after their flowering period the seeds from these will germinate and get established before winter. The following year it would be but little trouble to remove the weeds in the early season, after which the plants would take possession of the soil. Many unsightly places may thus be rendered beautiful with comparatively little labor or expense. With a few dollars for labor and fertilizer each year a mass of beautiful flowers may be had, where before was a mass of weeds.

I. L. POWELL, Millbrook, N. Y.

A Strawberry Runner Cutter.

The best practice in strawberry culture calls for a bed set the first year and for the whole season kept free from runners (or nearly free) and from blossoms. The plants thus get growth and strength for enormous fruiting the second summer. It is no small job to keep the runners from a strawberry patch for a whole season if one must stoop and cut each runner by itself. The cut shows a handy, labor-saving contrivance. It is a stout piece of sheet iron bent into a half circle and attached to a handle, as shown. The lower edge is sharpened.

With one downward push, while standing erect, one can cut all the runners from one-half the hill. Another stroke completes the work. Often the runners are so situated that one stroke is sufficient to sever them all. The half-circle should be large enough so the blade will clear all the leaves of the plant.

W. D.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE BLDG.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 3154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

The New and **M**ANY writers often bewail the fact that with the host of introductions among new fruits, the old varieties still maintain their place on the market, and after a few years the novelties are dropped out.

While this may be so to some extent, it is not true in all cases. The fact is, many introducers offer new varieties merely to have something new, without regard to its value, and this has been done too largely. Varieties are pushed out before they have been tested at all, simply because some enthusiastic grower has an individual tree or plant that has done well. Some tree agent or propagator hears of it, and without further preparation a quantity has been propagated and sold, only to prove a disappointment a few years later. Often

the original tree is destroyed to prevent others from securing scions. This was the case with that prodigy of the nineteenth century, the "Wonderful" peach; wonderful only in name, for we have plenty of Smocks far better.

Then again, commission men and hucksters find sale for a certain variety, and sell anything else under the same name. The old Lady Finger strawberry has not been on the market for twenty-five years, yet the Haverland is easily sold for it to unsuspecting customers. We have seen dealers sell Ben Davis apples for Northern Spy, and "one big dealer in Philadelphia," writes a well-known grower, "sold my Oldmixon peaches for Mt. Rose and Early York three weeks after these varieties were gone."

It is a good deal like the dinner at the country hotel, where they cut "roast beef" and "roast mutton" from the same joint.

There has been less perceptible improvement in apples than in other fruits, still there has been a good deal. We still find Baldwins, Greenings and Spys among the prominent sorts on the eastern markets. This fact is accounted for because all the old orchards were of the well-known market kinds, while a good share of those planted of late years are not yet in full bearing. But we have made improvements, for we now have many first-class sorts that grow and fruit well in the Middle and Western States, where these varieties do not, as a rule, succeed.

A notable instance is the Wealthy which grows so well in Minnesota, the Paragon or Mammoth Black, Twig which has been so largely planted in the southwest, Missouri Pippin, Yellow Transparent, and others.

It has been a comparatively short time since the Ben Davis was rather new, but to-day there are more trees of this planted than any other. The Winesap, Willow Twig and others, while not new are really new to the markets. Still these varieties may be found in most of our western and southwestern markets. In peaches and plums the change has been far greater. The old Fréth's Early is but rarely called for now, and Elberta, which has not been out a score of years, is more in demand than any other. In fact the bulk of the largest orchards in the world are of this variety.

Kelsey's Japan, Burbank and Abundance plums, all new, are seen on our markets in quantity. In fact, were it not for the introduction of the Japans and many new native sorts, many sections would be out of the plum business, as the old varieties cannot be produced.

The Kieffer and Le Conte pears are other notable instances in the same line, it being of but little use to expect profit in same localities from Bartlett, Clapp's, Duchess and other older sorts.

Watering in **O**NE of the perennial questions which regularly crop up in the summer time to the anxiety of the amateur gardener is, should plants be watered during sunshine. But it is not only the amateur to whom the problem presents itself; professional gardeners are at times much exercised among themselves on the question, but more especially as regards overhead watering. Some advocate the practice, others condemn it and with a view to opening what we hope will be a fruitful and profitable discussion, a few gentlemen well-known in their profession were asked to give their views on the point at issue. Their replies appear elsewhere in this issue, and it is desired that a free discussion be given by others, remembering that, "In the multitude of minds there is wisdom."

Excess of **I**N our issue for March 7, 1896, reference was made to carnations not properly developing their flowers, owing to the petals cohering, and so forming a more or less solid mass. At the time the evidence pointed to the too free use of nitrogenous fertilizers, which as is well known, cause an increased leaf growth. The vegetative functions are over exerted, and it seems at the expense of the reproductive parts (i.e. the flowers). A corroboration of the theory and a demonstration of how, in some cases, growth can be controlled by fertilizers, is given in the subjoined communication which calls for more than a passing mention.

My attention was recently called to a number of rose bushes, which were covered with buds that were very hard and would not open. Bushes of the same varieties in yards nearby were covered with well-developed flowers. Inquiry elicited the information that the bushes in question had been heavily manured with horse manure, while the bushes that were doing well had not been so treated. The color and profusion of the foliage on the affected bushes suggested that there was too much nitrogen as compared with the potash and phosphoric acid in the soil.

Remembering that a similar trouble among florists with carnations was accompanied by liberal manuring with nitrogenous materials in each case, I advised that the soil be given a heavy surface dressing with ashes, and then thoroughly watered. The buds that had begun to be discolored were removed, while those just forming were left on the bushes. After two weeks the bushes are covered with perfect flowers and the trouble seems to have disappeared.

In this case it seems reasonably clear that too much nitrogen was the cause of the buds failing to open and that they were made to develop by a liberal dose of potash.

JOHN FIELDS, Stillwater, Okla.

Can any of our readers inform another reader where plants of the Alpine strawberry can be procured?

The unparalleled premium offers made for new subscriptions by our publishers have excited much activity in the ranks of old readers. Have you given due consideration to these offers? Surely some of the old favorites or a few of the novelties are wanted for your garden. Read and digest.

WATERING PLANTS DURING SUNSHINE.

ARE THEY INJURED BY IT?

Would Water When Shaded.

I am most heartily in favor of watering both flowering and decorative plants at such time as the plants are shaded from the direct rays of the sun; in other words, in our capacity as gardeners, it should always be our province to follow in our work as closely as practicable the established principles of nature, because the gardener who ignores the voice of mother nature is hopelessly lost.

Whoever heard or read of a bountiful rain to supply the forage of the earth during sunshine? How many of us are familiar with the composition of water—that is, the material parts of the same? In volume it is oxygen one, hydrogen two. By weight it is oxygen 16, hydrogen two, or eight to one; hence the importance of acquiring a proficient knowledge of the action of these two important chemicals when applied to plants baked with the heat of a July sun.

Plants left to the goodly care of nature are never watered while the sun shines on them, consequently, if we are to assist nature, it can hardly be deemed wise on our part to cast aside one of nature's most ancient rules and traditions by watering while the sun shines.—H. M. HUGHES, head gardener Hospital for the Insane, S. E. District of Pennsylvania, Norristown, Pa.

Give Water at any Time.

Should plants be watered during sunshine? Why not, if they need it?

The watering of a plant should be governed by its condition and surroundings. The whole thing, in a nutshell, is, water a plant when it requires it, and know when it does require it.

From my own experience I have never had any bad results from watering plants during sunshine, any more than in dull weather. During sunshine and bright weather the evaporation from most plants is more excessive than in dull weather; consequently plants call for more nourishment in the form of water, and if the plants are growing fast and the pots are full of roots, I often find it necessary to water them three or four times during the day.

Air, sun and light are important factors in building up the plant, and one is not much use without the other. Water containing soluble matter is absorbed by the roots and travels through the plant as crude sap, passing upwards to the leaves; there it forms a combination with carbonic acid gas, derived from the air, then by the action of sun and light is refined and digested. As the sun plays such an important part in the disintegrating (as it were) of the food of the plant, I cannot see where it would have any injurious effect to water plants during sunshine; but would look at it as a thing essential if the plants needed it. I always aim to have watering done early in the morning or about three or four o'clock in the afternoon, for the simple reason that it facilitates the work, as well as economizes the water; but as I said before, I would not scruple to water a batch of plants during sunshine if they needed it, and would consider I was helping nature by doing so.—T. HARRISON, Rhinecliff, N. Y.

It Depends on other Conditions.

This question opens up the much-discussed and broad subject of watering and I think much of the answer must be left to the good judgment, experience and facilities of the individual. Watering during sunshine may be done in such a manner as to be harmful and also in such a manner as to be beneficial. My own experience has been that under proper conditions watering operations may be carried on at all times of the day, "during sunshine," without injury to the plants, and am

positive that plants in pots, boxes, tubs, etc., may be watered at any time of the day, and, indeed, should be whenever dry. But I am of the opinion that cold water should not be used to water plants that are growing in a high temperature. I consider that would be injurious to plants either when applied to the roots or foliage.

This is a point upon which the late Peter Henderson and George Nicholson do not agree. Peter Henderson, in his Handbook of Plants, says, he "rarely used water at a higher temperature than 45 degrees, and in twenty-five years' experience saw no bad plants." George Nicholson, in Dictionary of Gardening, says: "Water should not be applied to plants at a lower temperature than that to which they are at the time subjected. Particularly does this apply to such as are grown in heat."

I agree with George Nicholson, because my practice and experience (unless circumstances have made it impossible to follow such practice) have always been upon these lines, and I have seen no bad results consequent from such practice; but on the other hand I have seen palms badly spotted as a consequence of using cold water upon the foliage (this had been used from necessity and not preference). With a palm house at a temperature of 80 degrees does it appear reasonable that without injury to the plants cold water can, say twice a day, be applied to the roots, thus lowering the temperature of the root and its surroundings by 30 or 40 degrees? And then twice a day, with a hose pipe, applying to the foliage water 30 to 40 degrees lower than the temperature of the house?

Can we be surprised if the stomata refuse to act properly or perform their necessary functions under such treatment as this? If it were a human body we should expect to see it take a severe cold or rheumatic fever. Such treatment is likely to bring spot upon palms, mildew and spot upon roses, and mildew upon grape vines and cucumbers. I am of the opinion that these fungoid diseases are caused by the water stomata being surcharged with water, which, because of the sudden lowering of the temperature from the application of cold water, have closed, and so transpiration has, for the time, ceased; and possibly growth also, the result being a diseased plant.

All horticultural establishments, be they great or small, should be amply provided with facilities for warming water for watering purposes. Even grape and peach borders, where early forcing is practiced, need warmed water. In England few good establishments ever think of watering inside fruit borders, except with water at a temperature of at least 60 degrees, while pine stoves would get the water at 70 degrees, the temperature of the bottom heat.

With facilities for applying warm water watering operations may be carried on during sunshine or where a high temperature is kept up under glass, at any time of the day. The application of warm water to the foliage, too, in sunshine, is not injurious, but highly beneficial, and is generally practiced in good establishments, the houses being closed after such operation and run up to a high temperature. Were cold water used under these circumstances the results would be highly injurious to the plants.

The same reasoning applies to outside watering on a hot day, under a bright sun. With water at or near the temperature of the atmosphere, watering could be done without fear; but, except in cases of necessity, or under proper conditions, few care to do it; for unless very large quantities of water are used the plants would derive small benefit from the treatment. For naturally, falling upon a hot, parched earth,

in full sunshine, nearer noon than either end of the day, the water would quickly vaporize and pass off into the atmosphere. And so much labor and water would be wasted.

Trees and shrubs that need watering may be watered at all times of the day; and where much of this work has to be done it could not be accomplished by watering mornings and evenings only. If the shrubs are growing on a steep hillside I thrust in a fork behind the plant, then give the fork a pull forward. This leaves an opening for the water to get down. In some cases a spadeful of soil is taken out from behind the plant, leaving a hole for the water to be poured into. All trees and shrubs need the soil around them opened with a fork before being watered, thus insuring the water getting down to the roots. If mulched afterwards one watering will serve for a long time, depending, of course, upon the holding nature of the soil; and no matter how hot the sun may be, if the watering be carried out in this manner there is little loss from evaporation.

For watering ordinary crops in the vegetable garden or flower beds, I prefer the evening, although by mulching and frequent stirring of the soil I try to avoid watering as much as possible, for if commenced it is necessary to continue the operation; and unless an adequate supply of water is assured for this purpose, it is better not to commence at all.—WALLACE G. GOMER-SALL, N. Y.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogue notes here. They are sent free to our readers except when otherwise stated.]

ENOS W. DUNHAM, Stevensville, Mich.—Strawberry list.

ELECTRIC WHEEL CO., Quincy, Ill.—Steel wheels for wagons and farm implements.

JAMES MORTON, Clarksville, Tenn.—Chrysanthemums, flowering plants, small fruits, etc.

NATIONAL PLANT CO., Dayton, O.—Special offers in Roses, Geraniums, and bedding plants.

J. B. COOPER, 355 Fulton st., Jamaica, L. I.—Seeds, plants, and bulbs for market gardeners and farmers.

GOULD NURSERY, Beaver Dam, Wis.—General Nursery stock, plants, roots, seeds, potatoes, etc.

L. L. WOODFORD, Berwyn, N. Y.—General list of nursery stock, fruit trees, bulbs, and flowering plants.

L. R. FREEMAN, The Garden of Eaton Poultry and Fruit Farm, Charlotte, Mich.—Poultry and small fruits.

STARK BROS., Nurseries and Orchards Co.—Album of chromolitho plates of fruits, small fruits, shrubs, etc.

M. CRAWFORD, Cuyahoga Falls, O.—Strawberries, an interesting descriptive list of the best varieties.

LOVETT CO., Little Silver, N. J.—Bargains in Roses, Cannas, Water Lilies, Chrysanthemums, and herbaceous plants.

THEODORE JENNINGS, Port Chester, N. Y.—Summer flowering bulbs, tuberous plants, etc. A useful bulb list.

JOSEPH BRECK & SONS, 47 to 51 North Market st., Boston, Mass.—Annual Catalogue of Seeds, with novelties and specialties.

LIVINGSTON'S SEED STORE, Locust st., Des Moines, Iowa.—Garden, field, and flower seeds. Roots and appliances.

FARMERS' NURSERY CO., Tadmor, O.—Exhaustive price list of fruit trees, flowering shrubs, etc., with several colored plates.

WEBSTER BROS., Hamilton, Ont.—"Canadian plants for Canadian people." Roses, plants, and flower seeds; a general comprehensive list.

SIEBRECHT & SON, New Rochelle, N. Y.—Illustrated Catalogue of Palms and other Decorative Plants, etc., with handsome colored plates of cannas and Japanese iris.

PINE TREE STATE SEED CO. (Wm. R. Kimball, proprietor), Bath, Me.—General seed list of Northern grown stock, also select list of novelties and flowering plants generally.

Some Points in Marketing.

Success in market gardening lies in producing something which is above the average in quality, and then in so presenting it as to induce moneyed people to buy it. In this way we get out of the general competition. Perhaps my experience in marketing strawberries will be timely at this season.

Strawberries are my first money crop that is grown in large quantities for market. There are several summer resorts within one or two hours' drive, and many more along the line of the railroad, which goes through my village. I have had some success in working up a trade with them and obtain good prices. Some of these houses accommodate rich people who pay large prices for board, and the proprietors can afford to pay good prices for luxuries from the garden. I have been able to get orders from them in the following way.

Obtaining the book published by the railroad company advertising these summer resorts, I made a list of those which could be reached within two or three hours by rail and wrote to these addresses offering to ship sample crates C. O. D., so that they can see the berries before accepting them. Usually this results in plenty of orders, which are filled from that part of my field where the berries are grown especially for this trade.

This special section is in large-fruited varieties, such as Bubach and Marshall, which are kept in narrow rows, the ground having been made very rich, then well mulched and irrigated, and the result is extra large fruit. These, picked but a short time before being shipped, are put into new baskets and painted crates and everything is done to give them an attractive appearance to assist in making a favorable impression on the buyer, and I generally get another order, which reads, "Ship me another crate just like the last one."

I prefer to ship C. O. D. to parties unknown to me and have the express company make collections for me. I find that people do not often order berries unless they want them, and that they will accept and pay for them if the quality is good enough. But it would never do to ship poor berries C. O. D.

The trade from these summer resorts is somewhat irregular, and with sometimes thirty to fifty bushels of berries a day to dispose of I have a surplus after filling their orders. This is sold from the market wagon in my own and near-by villages, and keeps one or two men on the road during the rush of berries, which generally lasts about two weeks.

The berries that go on the market wagon are picked late in the afternoon and kept over night in the cooler. I start the wagon very early in the morning, for my experience is that I cannot depend upon my customers to wait for me. They will buy of the first wagon that comes along if they think they are getting the berries at a cheap rate. The berries are all sold for some price and usually for cash, while they are fresh.

This plan of selling from the wagon and shipping C. O. D. enables me to do a cash business. The express company make a small charge for collecting and returning money, but I prefer to pay it than to take risks. I have also found that it does not pay me to leave berries to be sold on commission, with grocerymen, for unless they have money invested in them they do not always make very great effort to sell them while they are fresh.

There is everything in the appearance in marketing berries. Small berries are more profitable to buy, if one wishes to take the question of economy into consideration, but if rich and fashionable people want the large berries and are willing to pay a fancy price for them, why it pays the grower to produce them and put them on the market in the best condition possible. I have sold the fancy fruit for fifteen cents when that of a small or medium grade went

slowly for five or eight cents. At the former price there is money in strawberries, but one must work for it and one should not expect the greatest success without years of experience, and it may be many failures.—W. H. JENKINS, Delaware County, N. Y.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

A Vigorous Tomato Plant.—In my tomato house I have one plant of Livingston's Beauty that was one year old last February and has been in continuous bearing since last August. It now has 245 tomatoes on it, varying from the size of a marble to three inches in diameter. From my plants that I have been forcing all winter I picked eighty-six pounds of ripe fruit last week.—A SUBSCRIBER, Lowellville, Ohio.

Trees and Weather.—In an article of mine which you quote (in part) from the American Cultivator, you make me say "When our people learn to grow timber trees as a crop as well as they now know how to grow corn and other farm crops, the rainfall and the moisture of the atmosphere, freshets in spring and autumn and low streams in summer will all be altered by means of the trees." (See page 361.) I have never said or written that trees would thus affect the rainfall and streams, but I have quite often combated the extreme views of others upon this subject. I have very little faith in regulating the rainfall, making the flow of streams regular, and causing the air to be moist by means of trees. But I do most emphatically believe in covering our waste and cheap lands with timber trees and by so doing adding hundreds of millions of dollars to the wealth of our country, and almost infinitely to the beauty of its scenery, and when urging this I have sometimes added if the trees improve the rainfall, the flow of streams and the moisture of the air this will be clear gain.—J. D. LYMAN.

Parsnips Rotting.—This spring I found all my parsnips rotted in the ground, though I planted them just the same as I have for the past forty years. Did any one ever hear of a similar experience, and can the cause of the rot be explained?—W. S. D.

Willow for Baskets.—There is a demand for willows from which to make baskets, and I should be glad if some of your readers could say where such can be bought.—JOHN NEMETH, Pa.

Hudson Valley Fruit Prospect.—Our cherry crop of Black Tartarians and Napoleons, of which we usually market tons, are a complete failure, on account of the late cold wave. We never had a finer set of blossoms than the trees bore. Governor Wood and sour varieties will have some fruit, while Reine Hortense is well loaded with perfect fruit. Peaches are somewhat injured, noticeably Crosby, but plums came through pretty fairly and were loaded with blossoms, now well set with fruit. Summer apples and pears are blooming profusely. Baldwins, nil.—S. B. HEUSTED.

Water-Proofing Cloth.—Take fish-skin glue, 2 pounds; alum, 5 pounds; water enough to cover the cloth; dissolve the glue in one-half the water and the alum in the other. When the glue is all melted mix the whole and put in the cloth and keep stirring till all is covered. Take out and let drip, but don't wring; spread out to dry.—E. S. WILEY, Denison, Tex.

Composition of Plants.—Clear and distinct ideas and clearly understood facts are of great importance. In the first article in your paper of the 15th inst. you inform us briefly and admirably how to grow fancy strawberries. In that article you say fully ninety-five per cent. of all agricultural plants by weight comes from the atmosphere, and the same week another paper says that nearly this amount is water. As the water in the plant is taken from the ground by the roots the two statements may seem to conflict. I presume that water is included in the ninety-five per cent. taken from the air.—J. D. LYMAN.

(The two statements are equally correct so far as they go. The difference lies in the assumption that the reader has some acquaintance with the composition of plants. When we speak of ninety-five per cent. of the plant coming from the atmosphere the dry weight of plant substance is supposed. Water, while it is present in the living plant in about the quality referred to by our correspondent, is not a part of the plant substance, but is present as a vehicle and passes out from the body by various means, chiefly transpiration; whereas, that great part of the plant taken in by the leaves refers to the assimilation of carbonic dioxide through the chlorophyll or green matter of the leaf.—Ed.)

Leaf Mold Wanted.—I read American Gardening very carefully and find many valuable advertisements in it. There is one, however, I never have noticed, that is where I can purchase a quantity of leaf mold or peat. There is no use in referring me to the seed stores or florists of Philadelphia, because I have been with half a dozen of them, but could not get what I wanted. I am not a florist, but take great pleasure in cultivating my own garden, and if any one can enlighten me on the question asked it would oblige a subscriber.—ROBERT COTTINGHAM, 510 Walnut Street, Philadelphia.

Help Wanted.—I have eight acres of the very best land for fruit and gardening. In shape it is nearly square. I wish to drain and set out in peaches, plums, pears, cherries and berries for a livelihood. I also expect to build on it, and while I have my ideas on how it should be laid out to the best advantage, I don't want to make any mistake to regret the balance of my life and would be pleased if some of the readers of American Gardening would tell in its columns how best to arrange an ideal fruit garden—where soil and situation are as near perfect as can be—what proportion of each fruit to plant, etc., etc. At present there isn't a stone or a bush to be removed and the lot is waiting for suggestions which I hope will be made in the early future and oblige.—SUBSCRIBER.

Gardening in Texas.—On the coast of the Gulf of Mexico, in this great Texas, they have been growing and sending to the more northern markets the hardier vegetables all through the winter. We in this more northern part of the State are thankful if we can begin using our spring-planted onions in February, radishes do, peas, first week in March; turnips, do.; lettuce, do.; strawberries, third week March; Irish potatoes, third week April; beans, do.; cabbage, fourth week April; peaches, pears, plums, dewberries bloomed second week April; some before that; blackberries, third week April; early corn, blooming first week May; prospect for fruit crop splendid. The prairies have been for two months and are now one grand picture of floral glory. The gardens here, while much behind in cultural taste yet, show a most beautiful display of choicest roses.—WM. LOMAS.

Missouri State Horticultural Society.—By the invitation of the Greene County society the summer meeting of the State society will be held at Springfield, Missouri, on June 8, 9 and 10.

An Improved Label Stake.

Up to the present time one of the great sources of expense and of inconvenience in variety testing and experimental field work has been the name or number stake used. In station work it does not frequently happen that the same label will be desired for two seasons in succession; if name stakes are used a new set must be painted each season to correspond with the crops under test, and the same is true in the trial grounds of our seedsmen.

The annual label painting is not only a tedious and expensive operation, but it demands the employment of skilled workmen. It is not every novice that can paint a name or number neatly and artistically upon a stake. In this case, as in many others, the old adage of necessity and invention become a reality, and after several years' experience with numbered and named label stakes, the erasing of old legends and the re-painting, even where dipping was resorted to, amounted to so much that some labor-saving device became a necessity.

What are the requirements for a good garden or experiment station stake?

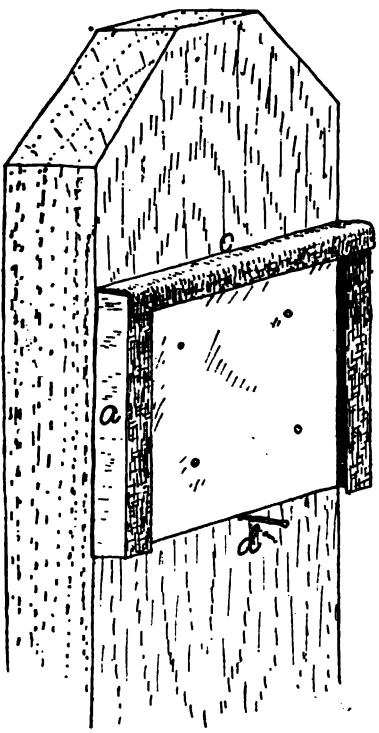


FIG. 116—A SERVICEABLE LABEL.

First, ease of changing the inscription; second, unless some indestructible material is used the label must be protected from the weather; third, it must be durable and cheap.

In order to fulfill these requirements a card holder in which the card should be replaced by a piece of celluloid or mica first suggested itself, but its expense precluded further consideration, and a device like that shown in the accompanying illustration was finally settled upon. It is a combination of a tin card holder with three sides closed and a card protected by a pane of clear glass.

In forming the card holder or glass holder, the following order of folding the sides from the tin should be observed. Sides A and B should first be turned so as to make the desired width and so as to allow the glass to move easily. Side C should then be left long enough so that as it is shaped over the end it forms a cap for the grooves formed in folding the sides A and B. A small scrap of glass is next fitted to the holder and a card containing the number, name and date, with any required data is made to fit in the holder, under

(Continued on next page.)

That Tired Feeling

Is conclusive evidence of impure, impoverished blood. Purify and vitalize your blood with Hood's Sarsaparilla and be well and strong.

"I was afflicted with a terrible tired feeling. I began taking Hood's Sarsaparilla and the tired feeling soon disappeared and I was better in every way." CHARLES S. POH, Sassafrasville, Pennsylvania.

Hood's Sarsaparilla

Is the best—in fact the One True Blood Purifier

Hood's Pills act easily, promptly.

FLOWER QUERIES.

A book written in Questions and Answers, discussing 500 topics on flower culture, in ten chapters as follows: Chap. I.—Soil and general cultivation. Chap. II.—Bulbous Plants. Chap. III.—Lilies, Culture and Management. Chap. IV.—Roses. Chap. V.—Vines or Climbers. Chap. VI.—Shrubs. Chap. VII.—Ferns and Palms. Chap. VIII.—Insects and Diseases. Chap. IX.—Miscellaneous Queries. Chap. X.—Floral Hints. Every one who loves and cultivates flowers needs it. PRICE 35 CENTS.

THE COURIER, Chatham, N. Y. Mention American Gardening when you write.

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE

CHRYSANTHEMUMS

NEWEST, EARLIEST, BEST.

In Splendid Assortment of Varieties,



Forms, Substance and Color.

Mrs. Higginbotham. Best of all Ostrich Plumes. Gloriana. The pretty twisted petalled yellow. Marie Louise. A grand white. Pitcher and Manda. A variety of two colors. Kate Brown. Earliest and best for the garden. Pres. Smith. A robust pink. Silver Cloud. Pale salmon. G. W. Childs. Finest of the reds. Major Ronsonoff. The best yellow. Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

INCUBATORS \$25, \$15, \$12 each. Breeders, 5 styles, \$6. Fowls, eggs, ill. etc., 3c. J. A. Chelton, Fairmont, Md. Mention American Gardening when you write.

CELERY PLANTS. Best varieties. Lowest prices. H. N. Hammond, Decatur, Mich. Mention American Gardening when you write.

50 BEDDING PLANTS FOR \$1.00

All are fine plants in bud and bloom; too large for mailing; must be shipped by express.

JNO. E. DE WALT,

Box 82. Carlisle, Pa. Mention American Gardening when you write.

General Catalogue and Garden Guide for the South

Comprising summary description, degree of hardiness, hints to culture of 1500 sorts of plants. New enlarged edition. 98 pages. Free by mail.

Southern California Acclimatizing Association SANTA BARBARA, CAL.

Mention American Gardening when you write.

DON'T HAVE SOUR MILK
USE THE
CHAMPION AUTOMATIC MILK COOLER AND AERATOR.
Simple, cheap, effective. "Pays for itself in a week." Ask for free book, "Milk."
CHAMPION MILK COOLER COMPANY.
61 Bank St., Oortland, N. Y.
Mention American Gardening when you write.

Offer No. 81.

For Two Now Subscriptions

We will send postpaid this wonderful Combination Tool needed in every garden and by every Gardener and Fruit Grower.

PRUNING SHEARS
FLOWER GATHERER
GRAPE PICKER

AS A SHEARS.—In pruning Rose bushes, or any shrubbery, the prunings are held firmly by the shears and do not come in contact with the hands.

AS A FLOWER GATHERER.—In picking flowers or removing dead leaves they are held firmly by the shears until released by the operator.

AS A GRAPE PICKER.—In picking Grapes the bunch cut off is firmly held by the shears and placed in the basket without touching them with the hands, preserves the bloom on the grapes, and leaves the left hand free to hold up the vines or basket.

IN ADDITION.—The holders do not extend to the point of the shears, thereby facilitating the trimming off small branches, leaves and defective grapes.

They Are Always Ready For Use. Just Fits The Hand. Made of Solid Steel.

Every one who gathers flowers or fruit has been annoyed by the difficulty in catching the fruit or bloom after it was severed from the parent stem. With this instrument there is no danger of fruit or flower dropping to ground, or of spoiling trees, vines or plants when clipped from high places. "Once with, never without."

Every pair of Shears mailed out by us is made from High Grade cutlery steel and fully warranted, and should one be found defective, when used for the purposes advertised, purchaser's money will be refunded. Patented March 16, 1897. When not wanted as a premium these shears can be obtained from the publishers of AMERICAN GARDENING, postpaid, for \$1.00.

AMERICAN GARDENING, P.O. Box 1697, NEW YORK

the glass slip. The overhanging side of the tin makes a roof for the card and its glass cover, thus preventing injury to the card from moisture. The glass and card are held in place by the tack D, as shown. All writing upon cards used upon out-door label stakes should be done with pencil, as it is not easily injured either by sun or accidental moisture.

By a slight modification, the same arrangement is transformed into a tree label. Instead of being nailed to a stake, a wire bale is made in the cap end, the wire being of sufficient length and of soft copper so that it can easily be wound about a small rod (say $\frac{1}{4}$ in.) and formed into a spiral. By nailing or stapling this to the trunk of a tree the spiral can be drawn out as the wood grows over the nail. A small tin clip is left attached to the back part of the label holder and is turned over the lower end of the glass to hold it and the card in place. This is merely a substitute for the tack shown at D in the cut. By drawing the tack D the glass and card can be removed for changing the card, or for storing the stakes while they are not in use.

The cost of the card holder, exclusive of the stake, should not exceed two cents. Stakes 2 feet long, $\frac{3}{8}$ inches thick and $2\frac{1}{4}$ inches wide can be made from pine or chestnut for about one cent each, exclusive of painting. Before painting the card holder should be nailed to the stake and then the whole thing may be dipped in liquid paint and stood on end to drain. This will keep the tin from rusting and will paint both the holder and the stake at a single operation.

This device, if brought into general use by experiment station workers and seedsmen, will save a considerable annual outlay.—L. C. CORBETT.

Buff Poultry.

The newest and favorite colors in poultry are the so-called buff shades. The magnificent Buff Cochins, with their large, loose feathers, have long been the only yellow-colored fowl. A few years ago Buff Leghorns were introduced, but several years elapsed before they were perfected enough to be popular with the public, but now they are largely bred and equal any Leghorns for practical use. Now the two great varieties of American origin, and best fowls for market and eggs combined—Plymouth Rocks and Wyandottes—are represented by creditable buff-colored specimens. The former has sprung to the front, but both are enjoying a boom and give promise of a great future.

True buff color is a very soft light shade of yellow, similar to chamolais skin, but in poultry the color runs from light lemon through all the shades of orange to cinnamon and red. The more deeply colored birds, if of bright shades, attract the most attention, provided they are one uniform shade all over, and are greatly to be preferred, to lighter birds of several shades, for beauty or exhibition. Practically the buffs fully equal the other colored birds of the same class, and are superior to them as dressed poultry, as the pin-feathers are same shade as skin and are not seen where black or white pin-feathers are noticeable. If you decide you want buff fowls, the largest sized and fullest feathered are the Buff Cochins. The best layers and smallest eaters, the Buff Leghorns; but for dressed fowls for table and egg combined, the Buff Plymouth Rocks or Wyandottes will give the best satisfaction.

CLIFFORD W. BEMAN.
Port Dickinson, N. Y.

To Employers of Gardeners.—The publishers of American Gardening are at the present time in a position to recommend several very capable gardeners to those requiring the services of such.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

** * We cannot undertake to reply by mail.*

Culture of Celeriac.

What treatment should celeriac have to insure smooth, large roots for next fall and winter use?—L. M. S., Ill.

Celeriac, which is merely a variety of celery, needs practically the same treatment as the latter, while in the young state. Seeds should be already sown; if not, sowings must at once be made. When seedlings are large enough to handle transplant a few inches apart into a prepared bed. When large enough to plant into regular quarters set the plants twelve inches apart between the plants and eighteen to twenty-four inches between the rows. Avoid deep planting. The soil needs to be in good condition and to have been liberally manured. On toward fall, when the roots are getting formed, draw a little soil around the base. Remove side shoots from time to time.

Dandelion for Salad.

When should dandelion seed be sown and what after treatment is requisite to fit it for use as salad next fall and the following spring?—L. M. S., Illinois.

Dandelion seed should be sown now; for cultural details refer to page 355, issue of May 15.

Smilax for Pots.

Will you please tell me how to treat a pot of smilax, the leaves of which are turning yellow and falling off?—R. C. SCOTT.

Smilax does not take kindly to pot culture; the roots do not like the restriction, and more than that there is always the danger of the soil drying out. Perhaps better results could be obtained by cutting away the whole of the colored strings and replanting in a square box with soil and drainage six inches deep.

Forcing Strawberries.

Can strawberries in pots be forced in an even-span hothouse heated by hot water? The dimensions being 50x18, height of ridge from ground, 4 feet; height of foundation above ground, 1 foot; a walk to be dug through centre of house the depth of 2½ feet; width, 2 feet; the soil on both sides of walk to serve as benches for plunging the pots.—W. EYER, Del.

(Continued on next page.)

CELERY PLANTS

We are growing celery plants by the million on ground specially adapted. The roots are long and heavy. White Plume, Golden S. B., Giant Pascal, and all popular sorts. Evenly sorted and safely packed at \$1.25 per 1000; 5,000, \$6.00.

KIRKWOOD CELERY CO., Kirkwood, Ohio.
Mention American Gardening when you write.

Offer No. 80. FOR ONE NEW SUBSCRIPTION 200 CELERY PLANTS


AS FOLLOWS:

- 50 Plants White Plume.
- 50 Plants New Rose.
- 50 Plants Golden Self-Blanching.
- 50 Plants Giant Pascal.



This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to AMERICAN GARDENING. Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P.O. Box 1697, N.Y.



A Good Start

for the seasons operations on the farm, and one which will yield the most satisfying returns is to thoroughly renovate and rejuvenate the system by the aid of that time tested and reliable remedy

Warner's Safe Cure

It quickly corrects that clayed condition of the liver so productive of Biliousness and Dyspepsia after the long winter of inactivity. In addition to the above good qualities it is a positive cure for

**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

Beware of substitutes. There is nothing "just as good" as Warner's Safe Cure.

INCUBATORS. Self-regulating. Catalogue free G. S. SINGER, Cardington, E.
Mention American Gardening when you write.

Offer No. 45.

COLLECTION OF ROSES.

From Maryland. Strong 2-inch pot grown



plants. Delivery on and after April 1, postpaid.

- | | |
|-------------------|---------------------|
| One Perle | One Crimson Rambler |
| One Safrano | One Meteor |
| One Mme. Camille | One Papa Gentier |
| One Marie Guillot | One Hermosa |
| One Iphigene | One La France |
| One Nridesmaid | One Bride |

Surely the good things of this earth are open to everyone who exhibits a little energy. Realize you can obtain the above set of Twelve Magnificent Roses as a premium for one new subscription to AMERICAN GARDENING, and that it will not take you more than a few minutes' work to accomplish this, then send and get your reward.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

There is no reason why strawberries should not be grown successfully in such a house if proper care be exercised. The chief danger would be from mildew, so that special care needs to be taken in providing such ventilation as will maintain an atmosphere not likely to breed that trouble.

Thinning Timber Growth.

How is it desirable to treat oak and chestnut trees which were cut four years ago and have sprouted? Does it pay to thin out the sprouts to one or is it better to leave them all for the survival of the fittest?—P. E. B., Mass.

If wanted for timber purposes thinning out is necessary and will pay for the trouble, as straighter, cleaner and more valuable trees are thus produced and in a shorter time.

Tips of Ferns Going Brown.

I enclose portions of frond of *Microlepia hirta cristata*, and as you will notice the outer edges appear as if burnt. I have grown this fern successfully for years without the least difficulty and never noticed such discoloring before. I have quite a number of plants at present, and although the fronds will remain a brilliant green up to a certain stage, they will all get brown on the edges before they are a foot long. I have two or three specimens with magnificent fronds over three feet long, but the discoloration ruins their appearance. My own theory is that it is due to lime or chalk in the water and probably in the soil; yet it would seem as if some other plant would be affected by the same cause, yet the only other plants I have noticed similarly affected are my stock of *Abutilon Souv. de Bonn*.—A. M.

The specimens have been examined, but they were too dry for us to determine the cause of the trouble. However, a similar browning is often produced by a small insect, related to the mites, working on the lower surface of the leaves. There are, however, none of these present. A similar dying at the tips also takes place if the houses in which the ferns are growing are kept too light and the atmosphere too dry and warm. We should be pleased

to have some fresh material, packed in damp moss, so that it will not dry out in transit. We should be glad also to have our correspondent describe the conditions under which the plants are growing, whether he has fumigated the houses in which the ferns are, and any other useful data.

Beetles Defoliating Trees.

Can you suggest any preventive of the ravages of the destructive beetle that infests the country for a few weeks at about this season of the year? A dozen pin oaks, ash trees and young chestnuts on my place have been entirely stripped of their tender foliage and look almost as they did in March. The beetles work entirely at night and does not seem to attack the maples or earlier trees; or if they do, the effects are not noticeable on account of their heavier growth; but they do play sad havoc with the later ones and it seems to me must injure the vitality of the tree by forcing it to produce a second growth of leaves. The pest seems to be worse some seasons than others, depending doubtless on the severity of the winter and the consequent destruction of their larvae.—K., Phila.

There is little or no doubt but that the insects responsible for the damage to the pin oaks and ash trees are what are popularly known as May beetles or June bugs. These creatures are the adults of the white grubs, which are common in grass or sod lands. There are a great many species in the United States, but their life history and habits are very much the same. The creatures are two or three years in transforming from the egg to the adult. The parent insects generally appear in the spring, feeding at night (as described in the letter) upon the foliage of various plants, oftentimes completely defoliating them.

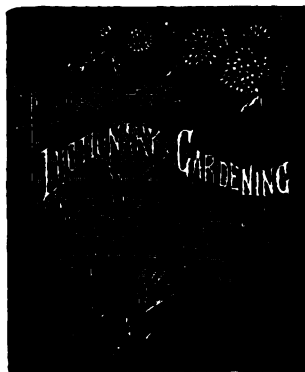
There has been no satisfactory remedy suggested for their control, but there is little or no doubt that spraying the trees which are attacked with some one of the arsenites, such as Paris green, in the spring just about the time the beetles begin their work of destruction, would be of great service. For this purpose I would suggest the following formula: Slake

about two pounds of good stone lime, then dilute with water until it is of the consistency of thick cream, add to this about six ounces (no more) of Paris green; stir well and then pour the whole material into forty gallons of water, which should be thoroughly stirred and kept agitated while it is sprayed upon the trees. This can be done by any good hand sprayer, which can be drawn up into the tree by means of a rope and pulley, setting it upon a shelf, which should be made in the tree for that purpose, from which point the spraying can be accomplished. The material can be drawn up as needed and poured into the vessel holding the sprayer.—W. G. J.

The killing of bugs and grubs by dusting vines and bushes with a poisonous powder is largely adopted now and has brought into use quite a number of different makes of apparatus. There are several in the bellows line; the powder is put into the bellows and a large flaring pipe or nose, something similar to a painter's sanding bellows, is added, which sprays the powder. One of these called the Electric Bug Killer is manufactured by Joseph J. Churchyard, of Buffalo, N. Y. This naturally comes to him, as he is one of the oldest manufacturers of blacksmiths' and moulders' bellows in the United States, having been making them since 1857. The Churchyard bellows have always had a high reputation and the probabilities are that their Bug Killer will add to their reputation.

Dr. Austin Flint, late professor in Bellevue Hospital Medical College, fellow of New York Academy of Medicine, honorary member of the State medical societies of New York, Virginia, Rhode Island, Massachusetts, etc., says in speaking of Bright's Disease, or advanced kidney disease: "The minor effects are headache, loss of vision, impaired hearing, involuntary muscular twitching, cramps, drowsiness, vomiting and diarrhoea. These are but some of the common symptoms of this malady which accounts for Warner's Safe Cure curing so many diseases, but are symptoms of advanced kidney disorders."

HOW'S THIS FOR A PREMIUM?



DICTIONARY OF GARDENING

A Practical Encyclopædia of Horticulture.

AMATEURS AND GARDENERS have long experienced the want of a full and reliable book of reference to which they could turn with confidence for an accurate description of any plant of horticultural value, and practical instruction in its cultivation. The *Dictionary of Gardening* is the most complete work of the kind ever published, as it gives full information about all Flowering and Foliage Plants for the Open Garden, Ferns, Palms, Orchids, Cacti and other Succulent, Greenhouse and Stove subjects, Bulbs, Trees, Shrubs, Fruit, Herbs and Vegetables, as well as particulars of the various Garden Structures and Implements.

This unique and exhaustive work has had neither labor nor money spared upon its production, and having had the enormous advantage of being edited by such a thoroughly competent—practical as well as scientific—authority as MR. GEORGE NICHOLSON, Curator of the Royal Botanic Gardens, Kew, England, assisted by the most eminent Botanists and Cultivators, its accuracy, both Scientific and Cultural, can be relied on—a point of the utmost importance in a work of this kind. That this is the fact will at once be recognized when it is stated that such world-renowned men as SIR JOSEPH HOOKER, Professor W. H. TRAIL, Professor OLIVER, Dr. M. T. MASTERS, Rev. PERCY W. MILES, J. G. BAKER, WILLIAM BOTTING HEMSLEY, JOHN GARRETT, WILLIAM WATSON, JAMES VEITCH, PETER BARR, &c., have contributed to perfect the work.

The Practical Information and Botanical Classification have been brought down to the present date, and in all respects the *Dictionary of Gardening* has been made the Standard Work on Horticulture in all its branches, from the growing of the hardest Plants to the cultivation of the most delicate Exotics.

A most important part of the work is that relating to Insect Pests and Fungoid Diseases; both these subjects are treated very fully, and more reliable information concerning their cause and cure will be found here than in any other book.

For convenience of reference, the *Dictionary of Gardening* is arranged alphabetically, the Species and Varieties of the plants described being placed alphabetically under their Genera. Under the name of the Genus will be found the Derivation of its name, the English name, Synonyms, Order, General Description and Cultural Directions, including Methods of Propagation. Then follow, in alphabetical order, the Species and Varieties of garden value, description of their Flowers and Leaves, Time of Flowering. Height and particulars of any Special Treatment required; and the best and most distinct of the sorts described are specially pointed out.

The number and beauty of the Illustrations in the *Dictionary of Gardening* are without a parallel in any book on Floriculture, and are of themselves sufficient to secure for the work the highest place in the Literature of the Garden. More than 2370 First-Class Engravings are given in the complete work, and the Colored Plates are magnificent examples of Chromo-lithography, and are remarkable as much for their correctness as for the beauty and delicacy of their finish.

To make the work complete in every respect, a Supplement has been added, which, among other features of value, contains a Pronouncing Dictionary of the Scientific Names of every Plant; a list of Genera and their Authors; Indices to Flowering Periods, Heights and Colors of Plants and their Blossoms; Plants for Special Purposes and Positions; and indices to Ferns, to Cacti, to Palms, to Orchids, &c., and other matter of real utility.

This splendid work, complete in 4 volumes, with Colored Plates, will be forwarded, carriage free, to any part of the United States, on receipt of \$20.00.

Circular and commendation will be mailed on application.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK.

TO OBTAIN THIS DICTIONARY ...FREE...

The above described set of Four Magnificent Volumes will be given, free, as a premium, for 30 subscriptions to *American Gardening* at \$1.00 each. To those who desire to obtain this Work without delay, we offer this equitable arrangement: If you will faithfully carry out, to the best of your endeavors, the following agreement, we will at once forward you the four volumes, express paid, on receipt of \$14 in cash, giving you three months in which to send us sixteen subscriptions, at \$1.00 each, to complete the payment. A receipt in full will then be sent you, but naturally you will want to earn back your first payment to us of \$14.00, and this you can accomplish by continuing to solicit subscriptions until you have taken fourteen more at \$1.00 each, the names as received to be sent to us to be placed on our mailing list, and the money (\$14.00) to be retained by you, as collected, to make good the first \$14.00 paid us. We give you three months more in which to do this. In this way you send us in all \$30.00 and 30 subscriptions, and obtain, absolutely free, this perfect series of four unparalleled volumes, embracing all that is necessary to know in the literature of Horticulture. Address all orders and correspondence to

Now! is the Time to Sow

W. & D.'s Bennett's White Spine Cucumber
W. & D.'s Improved White Bush Squash
W. & D.'s Selected "Snowball" Turnip
W. & D.'s Musk and Water Melons (all kinds)
W. & D.'s Sweet Corn for late crop
W. & D.'s "American Beauty" Pea

Illustrated Catalogue Free to applicants.

WEEB & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Wednesday, June 2, 11 A. M.

Palms and Decorative Plants and all kinds of summer bedding stock, including the new Cannas, Austria and Italia.

Owing to Monday being a holiday, there will be no sale Tuesday or Friday. But a special sale on Wednesday instead.

This firm will sell on the premises of James Dean, Bay Ridge, all the plant of that well known establishment, June 9-10.

CATALOGUES FREE.

Mention American Gardening when you write.

GLEARY & CO., 60 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on Tuesday, June 1, at 11 A. M., Roses, Dahlias, Canna Roots, Decorative Plants and a complete line of Summer Bedding Stock.

Catalogues free.

Sales every Tuesday and Friday.

Mention American Gardening when you write

R. M. GARDNER & CO., 199 Fulton Street, NEW YORK.

Owing to the holiday, sale will be Wednesday instead of Tuesday.

Catalogue on application.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

Every Lady is Interested in the AMERICAN KITCHEN MAGAZINE

The title tells the story, and although the Magazine is One Dollar a year, we will send it, in club with AMERICAN GARDENING, for only \$1.50. Or will send it free one year for two new subscriptions to A. G. at One Dollar each.

AMERICAN GARDENING, P. O. Box 1697, New York.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

Thomas Powell, who was in the employ of the Nova Scotia Nursery, Halifax, N. S., has been appointed head gardener to E. H. Hill, Esq., Oaklands, Halifax, N. S.

George M. Stratton, lately at the experiment station, Morgantown, W. Va., and an occasional correspondent of American Gardening, has now taken charge of the extensive kitchen gardens and pleasure grounds of Mrs. L. C. Carnegie, of Pittsburg, Pa., at Dungeness, Cumberland Island, Fernandina, Fla. It is anticipated that considerable landscape work will be done here.

G. Cook has resigned from the superintendent's position at Meadow Grove Farm, Danville, Pa., and is now engaged in the Department of Public Parks in New York City.

W. F. McARA sailed on Saturday for Europe. He will visit his friends in Scotland and England and return in about two months.

Meetings.

Thursday, June 3.—Massachusetts Horticultural Society. Rhododendron Show (4 days).

Friday, June 4.—Monmouth Co. (N. J.) Society at Oceanic.
N. Y. City Gardeners Ass'n.

Saturday, June 5.—Lenox, Mass. Horticultural Society.

Auction Sales.

Tuesday, June 1.—Roses, General Nursery Stock, Bulbs, and Bedding plants, at Cleary's Rooms, New York.

Wednesday, June 2.—Hardy Roses, Standard Roses, Lilacs, Hydrangeas, Nursery Stock, Spring Bulbs and Bedding plants, at Elliott's Rooms, New York.
Paeonies, Flowering Shrubs, Bulbs, and Bedding plants, at Gardner's Rooms, New York.

Friday, June 4.—Sale of Roses, general Nursery Stock, Bulbs, Bedding Plants at Cleary's Rooms.

American Carnation Society.

We are in receipt of a copy of the proceedings of the sixth annual meeting held at Cincinnati, Ohio, last February. All growers of the carnation will find in this much of sound practical value, good advice from the most expert growers. The secretary is A. M. Herr, Lancaster, Pa.

New York.

The Gardeners' Society has issued a preliminary schedule of the classes for its second annual exhibition to be held, as previously announced, on June 19, in the City Hall. As many as fifty-eight classes are provided, of which only five are open to all. Entries in the rest are restricted to amateurs and private gardeners. Prizes are offered for fruits and vegetables.

Maranta Flowering.

Who of our readers are acquainted with the flower of Calathea (Maranta) zebrina? Not many, we suspect, though the plant itself may be quite familiar. The reddish flowers are borne in a dense head on the end of a fairly long stalk, and though they may be regarded with interest are not objects of great beauty. Owners of plants need not be unduly anxious for them to flower. Our Newport correspondent, Mr. Alex. MacLellan, has very kindly forwarded for our inspection an inflorescence which was produced on a plant under the care of Mr. Patrick Reynolds on the J. P. Kernochan place. He has had the plant for over twenty years and this is its first flower.

WHOLESALE MARKETS.

New York.

Fruits and vegetables are moving freely at moderate figures.

Hothouse grapes are very plentiful, but many of them are far from ripe or lack proper color; for these prices are uncertain. No. 1 stock realizes as high as \$1.50 per pound.

Hothouse strawberries, 25c. per cup. Jersey-grown, outdoor berries, made their appearance in quantity on Tuesday morning, realizing about 8c. per quart.

Hothouse peaches, 4¢ per dozen. Mushrooms are selling well; fancy stock is making 50c. per pound; other grades run down to 20c.

Tomatoes, 10c. per pound; market overstocked.

Cauliflowers are abundant and sell from 1.75¢ to 2¢ per dozen.

Hothouse cucumbers are not in the demand they were last week; prices are now from 2¢ to 3¢ per box.

Lettuce is coming in now from open fields in nearby parts of Jersey and Long Island. Prices rule from 1.25¢ to 2¢ per barrel.

Spinach comes in from the same localities and is selling at 50¢ to 75c. per barrel.

Radishes are now only worth 25c. to 3¢ per 100 bunches.

Rhubarb is selling at 12¢ per 1,000 bundles, 3 pounds to a bundle.

Asparagus is a little on the decline in prices unless very fancy; nearby, average prime, per dozen, 1.25¢ to 1.75¢; Maryland and Delaware, per dozen, 1.25¢ to 1.75¢; inferior, 60c. to 75c.

Beets—Charleston, per 100 bunches, 1.50¢ to 2¢; Norfolk and North Carolina, per 100 bunches, 1.25¢ to 1.50¢.

Cabbages—Savannah and Charleston, barrel crate, 50c. to 60c.; North Carolina, per barrel crate, 75c. to 85c.; Norfolk, per barrel crate, 75c. to 85c.

Cucumbers—Charleston and Savannah, per basket, 1.50¢ to 2.25¢; Florida, per basket, 1.25¢ to 1.75¢; Florida, per crate, 1.50¢ to 2.00¢.

Celery—Florida, per dozen stalks, 2.50¢ to 3.00¢.

Egg plants—Florida, per half-barrel box, 1.50¢ to 2.00¢.

Lettuce, nearby, per barrel, 1.00¢ to 1.50¢.

Onions—New Orleans, per barrel, 1.50¢; New Orleans, per bag, 1.40¢ to 1.50¢; Egyptian, per sack, 1.20¢.

Pears—Maryland, per barrel, 3.00¢ to 3.50¢; Maryland, per half-barrel basket, 1.50¢ to 1.75¢; Eastern Shore, per half-barrel basket, 1.25¢ to 1.50¢; Eastern Shore, per crate, 1.50¢ to 1.75¢; Baltimore, per bushel basket, 1.00¢ to 1.25¢; Norfolk, per half-barrel package, 1.00¢ to 1.50¢; Norfolk, per bushel basket, 75c. to 1.00¢.

Radishes, near-by, per 100 bunches, 50c.

Rhubarb, per 100 bunches, 75c. to 1.00¢.

Tomatoes—Florida, best arriving, carrier, 1.50¢ to 1.75¢; Florida, fair, per carrier, 1.25¢.

Apples—Ben Davis, cold storage, fancy, 2.50¢ to 3.25¢; Eastern, per barrel, 2.00¢ to 2.50¢; Northern Spy, cold storage, fancy, 2.50¢ to 3.00¢; red fruit, cold storage, fair to prime, 2.00¢ to 2.50¢; Baldwin, W. N. Y., cold storage, fancy, 2.75¢ to 3.00¢; Russet, Roxbury, State, per barrel, 2.25¢ to 2.75¢; Russet, Golden, per barrel, 1.75¢ to 2.25¢; inferior, per barrel, 1.00¢ to 1.50¢.

Strawberries—Jersey, fair to choice, per quart, 6¢ to 10c.; Maryland and Delaware, average best, per quart, 7¢ to 8c.; Maryland and Delaware, fair, per quart, 5¢ to 6c.; Eastern Shore, fair to good, 5¢ to 6c.; Norfolk, fair to good, per quart, 6¢ to 7c.; Norfolk, inferior, per quart, 3¢ to 5c.; North Carolina, prime, per quart, 8¢ to 9c.; North Carolina, poor to fair, per quart, 5¢ to 7c.; Charleston, fancy, per quart, 10¢ to 12c.; Charleston, good to prime, per quart, 6¢ to 8c.

Pineapples—Indian River, reds, standard crates, 24s, \$3.50; Indian River, reds, standard crates, 30s, \$3; Indian River, reds, standard crates, 36s, \$2.25 to \$2.75; other sections, per 100, \$6 to \$10; Porto Rico, each, 65¢ to 70c.

Melons—Watermelons, Florida, per 100, \$40; muskmelons, Florida, per basket, 1.00¢ to 1.50¢; muskmelons, Florida, per barrel crate, 2¢ to 3¢.

Peaches—Florida, per carrier crate, 4¢ to 5¢.

Boston.

To show our readers that it pays to take pains in packing we give an incident: A farmer in Maine who had kept his apples in bins just now sent in some fancy Spies, with a card on the top of each barrel saying, "Every apple perfect." They sold readily at 38¢ per barrel. Think of that price for the spring of 1897!

ROSE AND DUANE STS., NEW YORK.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Blossoming Qualities of Vulcan Begonia.

This plant of the coral blooms is the offering of the season, in the line of begonias of the Vernon type. A mailing plant four inches high came to hand a few days ago, carrying four clusters of bloom. This is pretty good promise as to its free blooming qualities, while the vivid color of the blossoms is sure to find favor.

Plunging Potted Plants.

For plants that are to be turned outside, this is most desirable if properly done, so that water may not settle at the roots, or the roots push through the pot. It is, however, a troublesome task for self-dependent women. A fair substitute for it may be found in setting the pots on their reversed saucers near the ground, and filling in among them with moss, which is a great conservator of moisture. Not all who place plants outside realize the value of having them very near to the earth. A high and dry stand has ruined many a fine plant.

Two New Violets.

California came near having things all its own way for a time, but now no collection is complete without the Princess of Wales. A message received the other day said: "Oh, you must have the California violet." But from present promise it would seem that California will be cast very much in the shade by her titled relative. The blooms of Princess of Wales average larger; the petals are broader, the form better, the foliage unequaled by anything hitherto known.

A New Asparagus.

An exchange has a prominent article on a lately-introduced asparagus known as A. Comorensis, to follow A. Sprengeri in introduction. A French journal refers to it as "a precious acquisition." This is with special reference to window culture. The plant resembles A. plumosus more than any other well-known form, the fronds being similarly flat and feathery. It is climbing also. As a matter of fact, this asparagus was offered at retail in this country at least as far back as 1893. It is, however, still virtually unknown.

Common Plants for the Window Garden.

Given a famine of good window plants or an unusually lean purse, it

may sometimes become necessary to furnish forth the window garden with plants commonly grown outside. Some plants will thus adapt themselves while others can never be coaxed to do so. But in any case, they will require a superabundance of fresh air (if one may so speak) especially if transferred from outside to the house, instead of being raised from seed indoors. Sweet Alyssum makes a good window plant, as also do Nasturtiums, Verbenas, Lobelias, Wall-flowers, Petunias, etc.

Green Versus Dry Bone.

Experts generally admit the necessity of bone in some form for fowls, and it is the proper thing to praise green bone, at the expense of the dry. In many cases, however, the fowls themselves speak a decided preference for the granulated dry bone. This may be because of cloying, from the frequent use of meat and green bone. At any rate it is a fact, and its bearing should be studied.

"Clean for Hens."

A recent writer affirms positively that "very dusty" is clean for hens; that the henry is "perfectly clean" only when it is dry and dusty. Dust, however, must be free from all foreign matter. It needs to be added, perhaps, that there are hundreds of grades of dust, and that dust that is composed of powdered droppings, or of any sort of filth is not clean dust, and, therefore, not "clean for hens." Dry leaves form a raw material from which the hens themselves manufacture any quantity of light and "dusty" dust, which will settle an inch deep on every ledge in every crevice, and will turn white fowls into veritable chimney sweeps for color.

Heading Off Lice.

The principle involved in the homely saying, "A stitch in time saves nine," is nowhere better illustrated than in advance work against lice. Do your fighting before the breeding season begins—the hot, lice-breeding season, I mean—and it will be a mere bagatelle. Wait till the enemy is entrenched, millions strong, and you may bewail the day that you ever became a poultry keeper. Plenty of poultry keepers, in their zeal, do more work than is necessary. If the chicks are raised free from lice, which is an easy matter with insect powder and tobacco dust at hand, two or three cleanings a year, and a judicious use of kerosene will keep the poultry premises in good shape.

The Pullet Question Again.

Some one writes: "Please give experience as to relative egg-produc-

Poor Pilgarlic,

there is no need for you to contemplate a wig when you can enjoy the pleasure of sitting again under your own "thatch." You can begin to get your hair back as soon as you begin to use

Ayer's Hair Vigor.

ing power of pullets, and two or three-year-old hens!" If we look at the question for the year there seems little doubt that the pullets in nearly all cases will be ahead, since early pullets begin laying in the fall and keep it up until moulting time, if properly fed. If we look at the spring season only production is often about equal, or at times the hens may seem to be ahead, for too often they have had a complete rest throughout the winter. The cost of raising the pullets also bears on this question, as a hen will be kept through the moult (not through the winter) at considerably less cost than the raising of a pullet, at the lowest estimate of the latter. But, again, winter eggs bring the good prices. Breed, too, makes a great difference.

MYRA V. NORRIS.

Shading.

I am not an advocate of shading rose houses, still it is better to lightly shade plants that are to bloom during the summer. The shading should be done by the best workman. I have to mix it to the proper thickness and put it on to suit my fancy.

Naphtha and white lead is by far the best mixture to use. Kerosene oil can be employed instead of naphtha, but it does not dry so quickly, and is more liable to run. The mixture should be stirred every once in a while while being put on, as the lead settles to the bottom. It is much easier to syringe it on than to paint with a white-wash brush, but I prefer the latter method, as a more uniform coating over the glass can be obtained, and the extra labor is saved in the quantity of the mixture used that would be otherwise wasted. Be careful not to make it too thick; when dry, it is just about twice as heavy as when first put on.

When not wanted on the roof, the material is very easily rubbed off with a dry rag.

If young stock for summer cutting is not planted by this time growers should lose no time in doing so; five or six weeks from now roses will be largely called for, as most growers will be re-planting by that time.

Young stock wanted for another year requires a good deal of time and attention just now. Some plants may need a shift, and others, resetting. It is well to bear in mind that we cannot expect the best results if the plants receive a check in any way. In going over some of mine I find quite a number have not yet started a shoot; these are placed in the front row and will make as good plants as the others. Perhaps the wood of these was a little harder than that of the others; if so, they will make up for lost time.—H. H.

ARMSTRONG & McKELTY
Pittsburgh.
REYNOLDS-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHRENHOE
Pittsburgh.
ANCHOR } Cincinnati.
BOKSTEN
ATLANTIC }
BRADLEY } New York.
BROOKLYN }
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MISSOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
BALEH
Salem, Mass.
CORWELL
Buffalo.
KENTUCKY
Louisville.

THERE is no getting away from the fact that Pure White Lead (see list of brands which are genuine) and Pure Linseed Oil make the best paint.

Properly applied, it will not chip, chalk or scale off, but will outwear any of the mixtures offered as substitutes. It is, therefore, by far the most economical.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

OUR LEADING PREMIUM OFFERS

AND

THE CHOICEST INTRODUCTIONS FOR 1897

The Three Best Known Cannas are

Austria, Italia and
Mrs. Fairman Rogers

OFFER

No. 66.

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed Madam Crozy type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of Mme. Crozy, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{2} \times 1\frac{1}{4}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.



ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. Austria is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. Italia has flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the *Gladiolus*, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of Austria with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 33 growths, and attained a height of 42 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and Italia were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.

One Plant for One new subscription; the set of Three Plants for Two new subscriptions.

Plants can be bedded out to advantage until well into June.

AMONGST OTHER PREMIUMS WHICH MAY STILL BE OBTAINED, WE MENTION:

The justly celebrated "YELLOW RAMBLER," the Rose Sensation of 1897.

Lord Penzance's NEW HYBRID SWEET BRIAR ROSES; should be in every garden.

TWO DISTINCT ROSE COLLECTIONS; twelve good plants in each; offers good until July.

Collections of CHOICE DAHLIAS; their cultivation is meeting with revived interest.

CHRYSANTHEMUMS—We are still offering Two Choice Collections of the Queen of Autumn.

GLADIOLUS—Choice Bulbs. May be planted until quite late for Fall flowering.

Nearly all of these unexcelled premium offers are for JUST ONE NEW SUBSCRIPTION, which it would not take you ten minutes to earn. Full descriptive list mailed on application.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK.

Successful

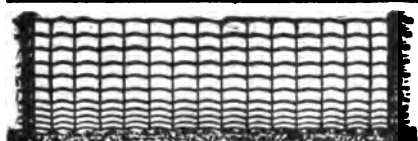
growers of fruits, berries, and all kinds of vegetables, know that the largest yields and best quality are produced by the liberal use of fertilizers containing at least 10% of

Actual Potash.

Without the liberal use of Potash on sandy soils, it is impossible to grow fruits, berries and vegetables of a quality that will command the best prices.

All about Potash—the results of its use by actual experiment on the best farms in the United States—is told in a little book which we publish and will gladly mail free to any farmer in America who will write for it.

GERMAN KALI WORKS,
93 Nassau St., New York.



The Whirligig of Time.

Ten years ago the Page Company was proclaiming the advantages of elastic fences, while other manufacturers insisted that they must be rigid. Later they claimed those "rigid fences" were full of elasticity. Some of them are now trying to "appropriate" the Page principle and want you to believe that Adam used the same device. Until settled by the Courts, it is safest to buy of the owners.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

...THE COMPLETE...

BOOK CATALOGUE.

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers
The Fruit Grower
The Nurseryman
The Private Gardener
The Market Gardener
The Seedsman
The Farmer
The Poultry Keeper
The Student of Botany, Entomology and Ornithology
and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE PRG. AND PUB. CO. LTD.

P. O. Box 1697, New York.



SOLD BY
THE SEED
DEALERS OF
AMERICA.

For pamphlets
address,
B. HAMMOND,
Fishkill-on-
Hudson, N. Y.

Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the
Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

CELERY PLANTS

We grow Celery Plants by the acre on land specially adopted to them. Sown thin, each plant is strong, stocky and well rooted. White Plume and Golden Self Blanching, etc. we ship safely to all parts of the United States. Price, 500, 75c., 1000, \$1.25; 5000, \$5.00.

WILSON BROS., Tecumseh, Mich.

Mention American Gardening when you write.

THREE NEW CANNAS.

40 NEW IRIS.

SIEBRECHT & SON, 409 5th Ave., New York.

Mention American Gardening when you write.

"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for
Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND
DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and . . . THE AMERICAN JADOO CO.
Testimonials, Address

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

Offer No. 35.

SENT postpaid, for ONE \$1.00
NEW subscription at

....BEAUTIFUL....

Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2½ inch pots. This is our most popular collection

and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Maman Cochet

Cornelia Cook
Maurice Rouvier
Catherine Flernot

Prince Hohenzollern

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, all finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 128.
COMBINED SERIES VOL. LI.

NEW YORK, JUNE 3, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Berry, A Big.....	407	Fern Window, A.....	416	Orchid Notes.....	418	Strawberry Runner Cut- ter.....	409	Vine Louse, The.....	408
Berry Crop, Picking.....	409	Fruit Garden.....	408	Orchids, Native.....	416	Strawberries at Christ- mas.....	407	Watering During Sun- shine.....	411
Berries, Prices of Hot- house.....	408	Fruits of Experience.....	409	Owners, Rights of.....	410	Strawberries, Forcing.....	410	Window Garden.....	416
Caster Bean Analyses.....	418	Gypsy Moth, The.....	410	Petunia Defender.....	416	Strawberries Under Glass.....	405	Illustrations.....	
Catalogues Received.....	415	Heme Plot, The.....	416	Poultry Notes.....	416	Squash.....	408	Runner Cutter.....	409
Celery Bolting.....	408	Insects, Some Vine.....	408	Private Gardeners.....	412	Trowel, Home-Made.....	415	Sharpless Berry, A Big.....	407
Chrysanthemums.....	413	Market Reports: N. Y., Boston, Phila.....	417	Questions Answered.....	413	Vegetable Garden.....	408	Strawberries Forced.....	405
Crimson Clover.....	413	Obituary: Owen R., Wilson S.....	418	Readers' Notes.....	411			Trowel, Home-Made.....	415
Cucumbers, Borers in.....	413			Rhododendrons.....	414				
				Seeds, Hard.....	416				

Strawberries Under Glass.

How Some Successful Growers Proceed.

In view of the great attention now being given to the various phases of raising crops under glass, AMERICAN GARDENING has obtained from some of the most successful growers of Strawberries under these conditions, details of their pro-

all in readiness. These should be plunged in the ground between the Strawberry rows, and just as soon as the infant plant shows at the tip of the runner it should be firmly pegged down upon the soil in the pot. Some growers, instead of pots, use a small piece of sod about three inches square and peg the runner on to that after letting it in level with the surface of the ground. Either plan is practicable and has its special ad-



FIG. 117.—GROUP OF STRAWBERRIES GROWN UNDER GLASS. (See page 408.)

cedures which are now given forth in these persons own words:

First and last success in forcing Strawberries hinges upon a proper beginning.

Preparation of the Plants.

For forcing, young strong plants are needed and now is the time to get them, or just as soon as the runners are ready. Fill some two-and-a-half inch pots with soil and have them

herents, whilst yet a third plan is to layer the plants directly into the pots in which they are to fruit. While there is a large element of risk in the latter plan, it obviates the necessity of second potting, but it makes up the balance of labor in other ways, owing to the extra work involved in plunging these big pots and carrying them to and from the Strawberry bed. Should the weather be dry after the runners

are put down it will assist rapid rooting to occasionally water the little pots.

In from four to six weeks the runners will have made sufficient roots to bear severing from the parent plant, and this done the pots should be taken up and stood close together, handy to water and to the potting shed. As soon as the small pots are well filled with roots they will be ready for the final potting into the fruiting pots.

The Fruiting Pots.

These should be six inches in diameter. For compost use good, turfy loam, such as you would put on the rose benches. If it is inclined to be poor a sprinkling of bone meal should be added and some ashes from the heap of burned garden refuse will do good mechanically as well as furnishing good food. This final potting cannot be too carefully performed. Have the pots well drained and have at hand a short, thick stick for ramming the soil. Soil should be first rammed into the pot, filling it sufficiently so that when the young plant is set in its crown will be about one-half an inch below the rim of the pot. Then fill up around it and ram firmly and thoroughly, so that when the potting is finished there is a good one-half inch space for water, and the soil should be so firm that its surface should show no indentation if hard pressed by the thumb.

After potting stand the plants in the open in a sunny spot upon a bed of coal ashes, these latter preventing ingress of worms through the drainage hole. At first the pots may stand thickly together, the pots touching each other. They must be kept watered as needed, but using a large amount of discretion, as the soil will often only be surface dry, and excessive watering tends to sour the soil before the roots have taken possession of it.

The Main Object.

From now onward the object should be to produce a strong plant with a single plump crown or centre, that will build up within itself the nucleus of future fruitfulness. Manipulating the water pot judiciously and picking off any runners that start from the plants is the sum total of attention in this stage, while towards fall, if the plants have grown as they should do, they will then want thinning by standing the pots farther apart, thus admitting more light and air and favoring the ripening of the crowns.

With the advent of winter the plants come to the resting stage, which must be more or less complete. In other words, previous to forcing there must be a period of absolute cessation from growth, which in this latitude is best brought about by exposure to frost. The plants being in pots must have some protection from the greater severities of winter, but the early frosts may freeze them with impunity and to after advantage.

When they must be put under cover the best place possibly is a cold frame, into which they may be stood closely and the sides of the frame may be well protected with leaves or straw to break the hardest frost; also it is advisable to have a light coat of dry leaves covering the plants themselves in the frame just to ward off the sun's winter rays, when the plants are frozen solid.

The First Forcing.

This may be commenced at one's own desire if the fruit is wanted for a special date or period. Commence from ten to twelve weeks in advance of that date and begin gradually. There must be no sudden transposition of the plants from freezing cold to forcing heat. Start them in a temperature of 45 degrees at night, allowing a rise of 5 or 10 degrees by day, with sun heat.

When signs of renewed activity appear young leaves push up and the flower stem is visible in the expanding crown, there may be an increase of 5 to 10 degrees both by night and day and from now onwards keep a sharp lookout for insect pests, green fly and red spider, both being troublesome if

there be any neglect. For green fly give the house a good fumigating in two successive nights just before the flowers open, while the best antidote of spider is good, clear water.

Never let the plants suffer for want of water at the roots, and spray overhead freely at all stages except when in full flower.

Setting the Flowers.

If they have been brought on healthily and steadily and have thrust up their flower trusses well above the leaves no difficulty will be found in setting the flowers, and there is no need to resort to such pretexts as putting a hive of bees in the house. As the flowers expand maintain a buoyant, airy atmosphere, dispense with spraying overhead and about midday pollen will be abundant and potent. If one has a few plants and abundant time the flowers may be set by going over them with a camel's hair brush, but a large crop was set this season by just fanning them overhead with a feather duster, and this filled the air with the fine, dusty pollen and fertilized the flowers.

Hard Forcing.

When the crop is set and the berries are swelling away real forcing may begin. They may be kept at 65 degrees at night and a rise of 20 degrees or more from sun heat will do no harm, always provided that high temperatures are humid with abundant moisture. The swelling berries will now bear, and, in fact, want, assistance in the shape of good feeding with manure water. Cow or sheep manure will answer admirably, and it is better to give it weak and often than err in the opposite direction and give it over-strong. Continue this treatment till the berries show color and from thence onward to the finish withhold manure water and give more air, or if other batches are coming on in the same house remove the pots of ripening fruit to another house, where they may be stood on a shelf or anywhere that they will get better light and fresh air in a drier atmosphere; these conditions being most essential to getting that perfect finish alike in color and flavor.

Varieties.

As to the best varieties for forcing, I cannot say much, having tried so few. Our mainstay is one I found under the name of Jersey Queen, but being doubtful of the authenticity of this name, I have from recent inquiries come to the conclusion that it is not Jersey Queen, the true Queen being a pistillate variety, while ours is not. I have not yet finished investigations, but believe our so-called Jersey Queen will turn out to be a selected Sharpless.

The true Sharpless, too, forces first rate and carries a fine, bright color.

Marshall I have tried with but moderate results. I do not think it likes hard forcing, but would be a grand berry to bring in ahead of the out-door kinds, with slight forcing only. Its dark, dull-red color, however, militates against its appearance, and appearances count for much.

Brandywine, forced as I saw it in a friend's greenhouse, did not impress me favorably, and taking all things together, I say get a good kind like Sharpless and stick to it, as one does not want doubtful returns for all the care and attention that must be given from start to finish. Experiment by all means, but with small numbers, and anchor your hopes on the tried and true.

A. HERRINGTON, Madison, N. J.

Another Grower's Method.

For this purpose, as for any other, the first consideration is good, healthy plants to secure runners from. Layering should be done as early as possible and must not be left later than July 15. Use three-inch pots, filled with soil, and partially plunged by the side of the plants, from which the runners are to be taken. The runners may be held on the pots by laying a small stone on them, but I use bits of No. 16 galvan-

ized wire, bent like a hairpin. After layering the plants must be kept well watered as often as necessary; where several thousand are grown this will entail considerable labor, but is necessary to success.

As soon as nicely rooted I remove the pots from the rows and stand them together in groups, where they will be more convenient to water. When the plants have filled the pots with roots, and before they suffer from being pot-bound, they should be potted into their fruiting pots. For this six to seven-inch is the best size. They should be well drained by careful crocking. I have also used narrow boxes for fruiting them in, but do not recommend their general use.

The Soil.

The soil, which I believe to be the best, is a good, firm (not stiff) clay loam; if it can be sod, cut about six weeks previous to the time that it is needed, so much the better. If the fertility of the soil taken be up to the average, I would add one part of good animal manure to seven or eight parts of loam, and would add also about ten pounds of ground bone to every cubic yard of soil. Should the soil be below the average in fertility I would add more of each of the fertilizers named.

A complete commercial fertilizer may be used as a substitute for the above if more convenient, but if this latter be used I would advise having it mixed with the soil some weeks before it will be needed. A commercial fertilizer containing seven to eight per cent of available phosphoric acid, four to six per cent of available potash and two to three per cent of nitrogen could be used at the rate of fifteen to twenty pounds to one cubic yard of soil, if mixed as advised.

The Pots.

As already stated, the pots should be well drained, the plants potted firmly and may then be put in any place open to sun and air and convenient to water. I generally have a bed of coal ashes to start my plants upon.

After potting watering is all the care that they will need for some two or three weeks, until weeds begin to start and the plants to make runners, both of which, of course, must be removed as they appear. After the pots have become fairly well filled with roots an occasional watering with liquid manure may be given; sheep or hen manure is preferable if used in moderation. Of course, the plants should be stood far enough apart to receive abundance of light and air.

As severe freezing weather comes on I fill the spaces between the pots with leaves or litter of some kind and cover the whole with sufficient material to exclude hard frost.

The Forcing.

Reference to my memoranda for the past four years I find that the time of taking the first batch of plants into the house has been from November 25 to December 12. They are first taken to a house where the temperature ranges from 45 degrees at night to 60 degrees during the day, with sun heat. After remaining in this for three weeks or a month they are given a rise of five degrees at night and ten during the day, with sun heat. They are kept in this until the fruit is nearly ready for ripening, when another rise of ten degrees at night and ten to fifteen during the day, with sun heat, is given.

Setting.

As the flowers begin to open the house must be kept dry during a portion of the day, keeping the pipes warm and the ventilators open as much as is convenient, with the required temperature, and the flowers must be gone over every day with a camel's hair brush to pollinize them. Syringing must be resorted to on all favorable occasions, or red spider will soon make its appearance, and once it gains a foothold will be difficult to get rid of. A top dressing over the surface of the soil, of a mixture of one-half soil, one-

quarter cow manure and one-quarter wood ashes will benefit the plants after the berries are set. Liquid manure may also be given once a week.

Support for Berries.

Some kind of support should be placed under the berries to keep them from lying in the wet soil or against the sides of the pots. I use lumps of charcoal for those with short footstalks and pieces of galvanized wire bent to form a rest for those with long footstalks.

Varieties.

I use Beder Wood, Sharpless and Parker Earle. All things considered, Sharpless is the best variety that I have tried, with Parker Earle a close second.

Beder Wood I use for early forcing; a batch of this being taken into the houses during the last week of November will give ripe fruit about the third week of February, and this is as early

but have not as yet tried any that have given as good satisfaction as the three already mentioned.

Fruits at Christmas.

This is a matter that has been tried by me, but so far I have met with either entire or partial failure. Mr. Robert Williamson, the gentleman already referred to, has had good success by the method described by him in earlier issues of American Gardening. The nearest that I have come to success in this line has been by the following method: I selected the finest and earliest rooted plants from the plants layered for forcing in three or three-and-one-half-inch pots, plunged them in coal ashes to the top of the pots, kept them well watered, and gave them liquid manure water nearly every day after they were well rooted.

I lifted the pots from the ashes and broke off all roots that had escaped from the pots, about the third week in August, and then gave no manure wa-

is of great importance to get good, strong crowns well ripened and rooted. There will be no trouble to get the plants to start into growth whether they have been frozen or not.

Our own practice is to stand the plants in a cold frame and pack in between the pots with leaves, and bank up round the frame with leaves or litter, covering the sash with heavy straw mats and shutters at night, and if the weather be very cold we put some litter on the top of the mats, under shutters to keep it from blowing away. We strip the plants every day when the weather will allow us to do so. If the weather is wet we tilt up the sash so as to give the plants plenty of air.

Our plants were not frozen at any time last winter and we have never had better results. Last winter being a mild winter for this locality, the frost did not get through the covering. We have had them frozen other winters with exactly the same treatment and the results were not so good, consequently I do not consider freezing a necessary preliminary to strawberry forcing.—JAMES BLAIR, Staatsburgh, N. Y.

Strawberries at Christmas.

In the foregoing communications reference has been made to a previous article in American Gardening, by Mr. Robert Williamson. We herewith reproduce the salient points of his remarks:

It is all but impossible to have early strawberries that will give any satisfaction, by adopting the usual method of taking young plants from runners of the preceding summer, for the simple reason that it will be well through the month of July before the plants are in a fit condition to be potted. They then have not sufficient time to make strong crowns, and obtain the necessary period of rest to insure their future welfare. Consequently, the alternative of using plants kept over from the previous fall has to be taken advantage of. With this object in view a line or two extra of plants should be put in each summer, so that the flowers can be picked off them, thus concentrating, as it were, all the strength into the plants, and causing them to throw out runners earlier than if they were allowed to bear fruit. Plants two or more years old will not answer so well for this purpose, as they are later in making runners. Good, vigorous plants can thus be obtained by the end of June.

Select Strong Plants.

About the end of September strong, vigorous plants should be selected, put into four-inch pots, and left outside until there is danger of the pots being broken by frost. Then they should be stored away for the winter in a cold pit or cool cellar and remain there until the following spring.

Spring Treatment.

Some time about the middle of March they should be taken out and shifted into fruiting pots, seven-inch pots being decidedly the best size for this purpose. They should be potted in a good mixture of loam and rotted manure, with a liberal allowance of ground bone and wood ashes, then placed in cold frames, or a cool greenhouse, and they will at once start into growth.

Summer Treatment.

When all danger of heavy frost is over, the pots are taken outside and plunged, where they should remain during the summer. This will give the plants an opportunity of developing by natural processes. When the flowers appear they should be removed and not allowed to develop into fruit.

About the end of July, when the plants have perfected their growth, water can be gradually withheld. By the end of August water may be withheld nearly altogether, and the pots laid on their sides to prevent them getting wet by heavy rains.

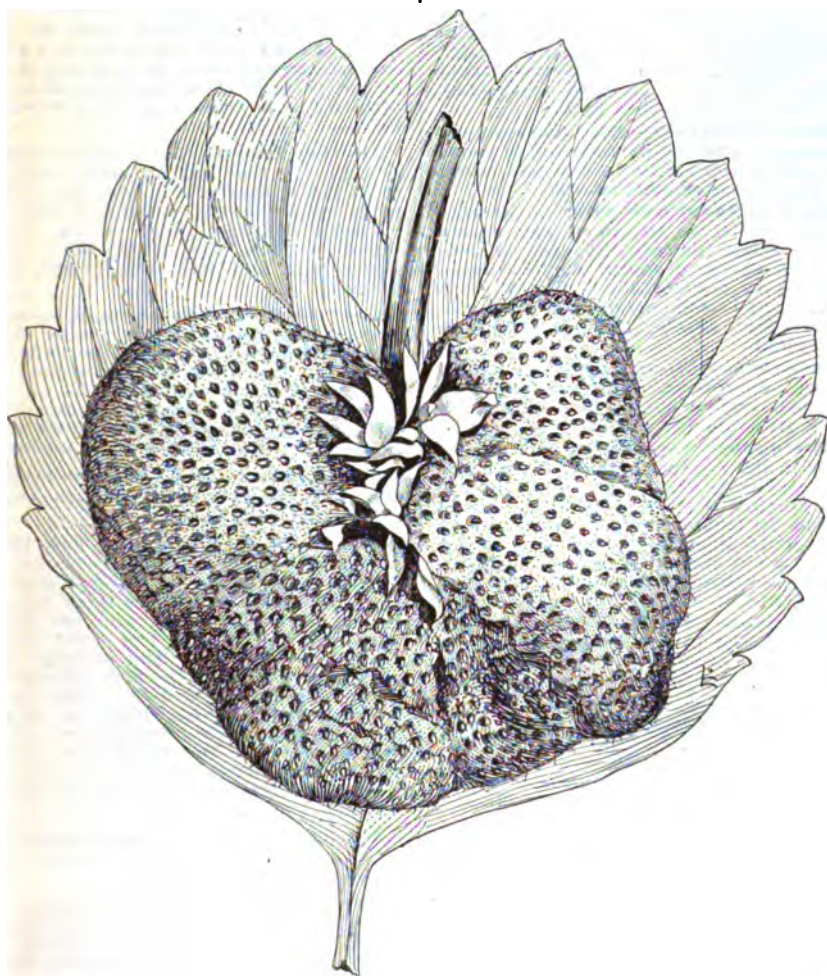


FIG. 118.—A LARGE SHARPLESS BERRY; ACTUAL SIZE.

as I have ever been able to get good berries, although I know of others who have succeeded in getting them much earlier. (Reference will be made to this later). Beder Wood is not a first-class berry, but I have found it useful in my practice.

Parker Earle is a good berry, better in flavor than Sharpless, but does not bring such large berries, and is also weak in pollen early in the season, and as the production of pollen is an important point in the production of perfectly formed fruit, this fact goes against the variety. The production of pollen is one of the strong points in favor of Sharpless as a variety for forcing; it produces in abundance.

Mr. Robert Williamson, of Greenwich, Conn., uses Belmont almost exclusively and with him it gives excellent results. I have been unable to procure stock of it so far and, therefore, cannot speak of it from personal experience.

I have used several other varieties,

ter after that time. The last week in September they were potted into six-inch pots and taken into the greenhouse, where they were treated as I have already described. Beder Wood and Sharpless gave a fair crop of fruit, ripe the first week in January.

I. L. Powell, Millbrook, N. Y.

A Big Berry.

I am sending you a fruit of Sharpless strawberry weighing 2½ ounces, grown in a six-inch pot, from plants that have never been frozen. We have been picking strawberries since the first week in March and have had berries six, eight and ten of which made a pound, and the plants carried six to eight berries, four plants in a six-inch pot.

[The berry sent is represented herewith full sized.—Ep.]

I do not consider frost a necessary preliminary to forcing strawberries. It

Fall Treatment.

The pots can remain in the position just indicated until they are placed in the greenhouse, any time after October 1. After this a liberal supply of water can be given to the plants, and they will immediately start into growth. As the soil will have become exhausted, watering with manure water will have to be resorted to and continued without intermission until the fruit commences to ripen. The manure water can then be withheld. It will be highly desirable to have to recourse to artificial fertilization. The best method will be to go over the plants every bright day, about the middle of the day, with a camel's hair brush.

Varieties.

With regard to the best varieties I have found none to answer so well for heavy cropping, solid fruit, color and flavor, as the Belmont. The Jessie is fairly good; it is, however, inferior to the former in both color and flavor. The Sharpless is forced by some, but I do not like it as it is too coarse and has proved very uncertain with me. The Marshall is of the first order for size, color and flavor, and is about a week earlier in ripening than those mentioned above, but it bears rather few berries to make it profitable.

Our Illustration (Page 405).

The group of magnificent plants represented in our illustration is reproduced from a photograph taken specially by American Gardening. The grower who produced these excellent results tells very simply how it was done:

Instead of layering plants in pots as we had formerly done, I carefully lifted with a trowel the strongest young plants I could find, retaining a ball of soil with every plant. They were potted at once into their fruiting pots in the usual compost of loam, rotted manure and bone dust. The pots were placed in rows on a bed of ashes and were kept well watered, free from weeds and the runners kept picked off.

When the pots were filled with roots liquid manure was given twice a week. After the plants had received a few sharp frosts they were placed in a cold frame and brought into the greenhouses in batches as we required them. When the plants were brought into the greenhouse a top dressing of loam and manure was given and the pots washed. They were started in a temperature of about 45 degrees at night and ten degrees higher during the day. This temperature was maintained until they flowered, when they were gradually raised to 55 degrees at night and 70 in the daytime.

The plants were thoroughly syringed every bright morning until they came into flower; then the house was kept as dry as possible until the berries were set.

Liquid manure was applied when they came in flower. The flowers were gone over every bright day with a camel's hair brush. Tobacco stems were put on the pipes and under the staging to keep down aphids. Water was used carefully after the berries began to color. Pieces of bent wire were used to hold the leaves away from the blooms so that the light and air could reach them and help them to set better. Wire was also used to keep the berries up to the light and away from the sides of the pots.

Sharpless and Marshall were the only varieties forced here. The latter variety was better in flavor and color than Sharpless. Out of all the plants treated in the manner described only three plants failed us. Berries had been picked from every plant shown in the illustration before being photographed. I have heard that the Belmont is the best variety to force, but am unable to find where it can be procured.

PETER DUFF, Orange, N. J.

The Vegetable Garden.

Endive.—Any early endive that may not be needed for use, if allowed to remain, or removed to a border, will soon flower. It is then quite pretty and attractive.

Celery blight is liable to make its unwelcome appearance during a spell of hot, dry weather, especially on light, sandy soils not retentive of moisture. As soon as it can be detected, spray thoroughly with the copper carbonate solution.

Celery Bolting.—If celery plants ever get very dry at the roots they will receive sufficient check to their growth to induce them to bolt to seed just as soon as they commence to grow again after rain. As they become useless at this stage efforts should be constantly made to keep the crop growing. To do this treat as directed in last issue. Early-sown celery is more subject to this tendency than later sowings. To avoid the trouble as much as possible plants should be encouraged to grow steadily by watering and transplanting them in good season before they become too dry or too large, and set out the plants where they are to remain when they are four or five inches high.

Melon Fertiliser.—Two parts superphosphate and one part nitrate of soda; a handful applied to the hill and raked in will give excellent results.

Lack of flavor and color in the vegetable fruits, as tomatoes, egg plants and melons, indicate the need of potash. A liberal dressing of wood ashes applied to the surface and hoed into the ground will correct this and will insure fine, glossy color, especially to egg plant.

Squashes.—If sown during this month many troublesome insects will be avoided and good crops realized, as they grow quickly now.

The squash root-borer deposits its eggs in the root stalks near the ground and works its way in the stalk, and if not killed will kill the plant. It can be found by looking for its excretions at the spots it keeps open, and when found a cut should be made lengthwise half-way through the stem and the worm killed.

The Melon Cut-Worm.—As soon as a plant is seen to wilt without apparent cause it is probable the cut-worm is at work. Dig for it with the fingers and kill or he will cut every plant near.

All seeds that were sown early should all be showing up now; look out for any failures from any cause and re-sow immediately if found necessary.

W. M. EDWARDS, N. Y.

The High Prices of Hothouse Berries.

Why is there so great a difference in the prices realized for strawberries raised in the open air and those from hothouses?—J. M. FIELD, N. C.

Basing our knowledge on experience gained in the New York market, the answer is that the fruits grown under glass are larger, more highly colored and of better flavor. They also undergo special preparation for market. The fruit is allowed to remain on the plant till ripe, then carefully gathered with a stem and packed in a "cup," which is a specially-made, round basket holding one-third of a quart; these baskets, having been first lined with white paper. When filled they are packed three in a box—a neat, stiff cardboard box being used. Furthermore, they are not entrusted to express companies, but are delivered by hand to the wholesaler, the result of which is that retail dealers with a high-class trade are able to put into the hands of caterers or chefs perfect berries graded to one size; hence the difference in value.

Chrysanthemum premium No. 51 received in first-class condition and I thank you sincerely for them. They are, in fact, much better than some that I received from one of the so-called best seed firms. Am very pleased with American Gardening. It is a great help to gardeners, both professional and otherwise.—FRED C. ROSE, L. I., N. Y.

The Fruit Garden.

Grapes.—When the berries are set spray with Bordeaux for black-rot and downy mildew.

The Vine Louse.—(Phylloxera vastatrix)—The first visible signs of this on the vines is generally the number of galls or warts on the leaves. These galls bulge out on the under side of the leaves, forming a cavity from above, the mouth of which appears to be drawn together with fine hairs. In this a very minute female insect lays the eggs (50 to 200) which soon hatch, and the young, moving to the young leaves, start by a puncture to suck the juices and thus cause the galls. This sucking, laying and hatching is repeated several times in the season, unless every leaf on which galls are formed is promptly picked off and destroyed by burning. In the fall the louse returns to the roots. There is a difference of opinion as to there being two distinct types—root and gall—or whether the leaf-gall maker becomes the dreaded root type, which feeds on the juices of the roots, forming hard, warty excrescences on them, so that the roots do not perform their functions and the vine in two or three years dies of starvation.

Another Insect.—There comes shortly after the rose bug an insect similar to it, but is shorter and broader. This feeds on the leaves, making a number of holes and sometimes eating away broad portions. The bug works on the under side and will drop when disturbed.

Lady birds will be on hand soon if there is any aphid on the vines. The men working among the vines should be taught that these are to be encouraged, for a whole family of the larvae when seen has no beauty to recommend its preservation, being so entirely different from the dainty mature insect.

Blackberries and Raspberries.—Watch for plants affected with rust; dig up and burn them.

Bud Moth.—My attention has been called this week to damage done to young peach trees by caterpillars of the bud moth. These are dark brown three-eighths inch long and eat their way into the side of the wood buds, reaching the centre and killing the young growth when the first leaves are about one-quarter grown. This could be prevented in the beginning by spraying with one of the insecticides, but in the latter part the holes are closed behind the caterpillars by a gummy exudation. Then cutting out the parts affected should be done.

The Case Bearer.—This curious larva was plentiful on the cherry tree leaves this year.

Cherry or Plum Tree.—Fight the aphid at the beginning with kerosene emulsion, 1 part to 15 parts water. If bad cut off the tips of the shoots, for if the aphid gets a good start the leaves curl so that the emulsion cannot reach the insects.

Strawberries.—Pick the bad berries from the plants and pull the weeds.

Pear or Cherry Slug.—This will be on hand about the middle of the month. It feeds on the upper surface of the leaves, giving the foliage the appearance, at a distance, of being scorched by fire. A second brood comes in September. Dose with 3 ounces London Purple and 6 ounces of lime to 50 gallons of water.

JAMES HOLLOWAY, L. I.

Watermelon Combine.—According to recent advices from Florida a union of watermelon growers has been formed. The meeting was held at Wildwood and the title of the new association is "The Melon Growers' Union of Florida," with offices at Ocala. Growers representing 1,000 acres of watermelons signed the constitution.

Picking the Berry Crop.

(Continued from page 392.)

Have a definite system in everything you do, especially in berry picking. No matter how careful you are in growing the fruit, its grade may be greatly lowered in getting into the boxes.

We organize and drill our pickers on a military basis. They must learn to take the berry from the stem by the fewest possible motions and without injuring the fruit or breaking a leaf or green berry; they must do it exactly as they are taught and as every other picker does it.

Too often pickers enter the field as a rabble; each one grabs some boxes and makes a dash, and under the demoralizing influence of talking, laughing, joking, looking here and running there, always thinking of something other than what they are doing, the work proceeds in a haphazard way and the grower must content himself with loss of profits and reputation, no matter how much pains he may have taken in growing his fruit.

To begin, place in every patch, at the end of each row, a stake with a number on it. The overseer, having provided himself with a small book, places the number of row opposite the name of the picker, so that he can tell who had that row if he finds it strewn with green berries or the foliage injured. Good work will always be done if the picker is sure he will be caught in doing poor work. The pickers assemble at the packing house, where each receives a ticket and tray containing six boxes. The ticket, printed similarly to that advertised by American Gardening, is attached to the picker's hat or a button, by means of string, so that the overseer can reach it without trouble; time is then given for all the necessary talking to be done. At the command, "Silence!" the pickers are marched to the field in single file and take their places at the end of the rows, and on a given signal proceed with their work, not a word being spoken except to the overseer. It is not difficult to maintain silence if you begin right.

Discipline is best maintained by adopting a system of small fines, never more than one or two cents, and that rigidly and impartially enforced. It will soon be seen that much better work can be done and more money earned by having attention centred on the picking than is the case when losing time by gossiping. Not much over half the number of pickers will be required and the quicker you weed out the unruly the more rapidly the work will go on.

When the stands are filled the overseer passes along with others filled with empty boxes, punches the number of quarts and examines berries, and his assistant carries them to the packing shed. If he is suspicious that berries are badly picked he attaches to the stand a small ticket giving the name of the picker; thus bad pickers are soon disciplined and weeded out. Under no circumstances are pickers allowed to carry their berries to the shed. They cannot be prevented from running and threshing the vines, stepping on the berries and attracting the attention of other pickers.

It is a good plan to have the names of pickers on a blackboard at the packing shed and a "standing" marked, using a scale of from one to ten. You will be gratified to see how they will work to keep the figure ten opposite their name.

The overseer must be something of a genius. He must be pleasant, but never "familiar" in the berry field. He will not speak except to be obeyed, and then always in a low voice, setting the example of earnest, silent work. If he calls aloud every picker stops to listen and it will be some minutes before active work is resumed. As a rule the overseer has too many things to look after. He should have such assistance as is necessary to direct the work and visit each picker frequently,

so that he may see the boxes as they are being filled.

As to methods of keeping tally, we have tried tickets, books and pretty much everything else; but the conductor's punch system is the most satisfactory. There is never any bickering, as the "count" is made under the eye of the picker, and as the owner's name is on each ticket it cannot be presented for payment by any one else.

Always close the season with a picnic dinner at some nearby lake or resort. It engenders much good feeling and pays richly for the time and trouble. Manage to get the pickers attached to the farm and you will not be troubled in getting the number required.

R. M. KELLOGG, Three Rivers, Mich.

Cutting Strawberry Runners.

This subject, while not a new one, is of great importance to the up-to-date strawberry grower. We find in our Western markets an increasing demand for a large berry and this cannot be successfully raised in the thick and wide matted row.

Our best customers call for large berries and are willing to pay a difference of five cents per quart or more to get them. We frequently get an order like this: "Send us a case of those



FIG. 119.—THE HAWKEYE RUNNER CUTTER.

large berries. We want them for a select party or festival and are willing to pay your price for them." Very large berries are the product of the hill, or narrow-row system of culture. We believe the hill system in the near future will be the method adopted by the great majority of growers of small plantations, say from one to five acres. In order to achieve success in either hill or narrow-row culture it is of the utmost importance that the runners are cut off as soon as they appear; for this purpose we use the Hawkeye Runner Cutter; it is the most effectual tool of its kind we have yet seen; it is very light, durable and cheap. The blade is made of the best steel and should it become dulled a file will put it in shape again. There is nothing to get out of order; it can be adjusted so as to cut the runner close up to the plant without injury to the foliage. We used one of these cutters all last season and our gardener (Mr. Jones) says it is a success. He also says that if taken care of it will last a lifetime.

The secret of success in hill culture is this: All runners are treated as weeds should be, i. e.: Cut off as soon as they appear. Crowns are formed in large numbers, each of these throws out several fruit stems, which cannot fall to produce fine large berries, where good soil and plenty of plant food have been given them.

ALLEN D. MANWELL, Vinton, Ia.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Green grass sod is death to trees.

Latania borbonica is a beautiful palm.

When setting out roses firm the soil around the roots.

The fragrance of the carolina spice shrub can be distinguished at a distance of ten rods or more.

Over-production? No! Not if you grow a fancy grade of fruit.

Have you not noticed the great difference in the returns of the commission man for the fancy berries, as against those for the common grade?

Have just been looking over our bedded-out roses and find Marshall P. Wilder among the most vigorous growers.

The market beggar: The man who tries to sell "poor" berries this season.

I suppose you have sprayed those apple trees.

Judging from the growth and bloom of Layton's Early strawberry at this time (May 16) it is promising.

How a little painstaking in the arrangement of the home flower garden pays in the pleasure derived!

Let us make American Gardening lively with our reports of experiences with new varieties of fruits by bringing out both their good and bad qualities.

Don't let the leaves go to waste; they are so valuable in the village garden to put around the bush fruits.

Are you going to leave that insect resort (rough bark which has not been scraped off for a number of years) on those old fruit trees another year? It doesn't pay.

The cut-leaved weeping Birch.—It is best not to prune any of the lower branches, but allow it to grow according to nature's plan, as its appearance will then be more graceful. I would always recommend setting out small or medium-sized birches, as they then have all the fibrous roots, and there is no need of cutting and branches from the body.

Wild ferns from the woods were procured by a lady who has a costly residence. They were set along the north wall of the house, where a strip of sod about eighteen inches wide was taken away, and a bed thus formed. The plants are growing nicely and produce a fine effect.

In pruning study your varieties. The same kind of pruning will not, as a general rule, do for every variety of the same species.

We go over our strawberry beds to see if there be any plants that are not true to name; if found they are torn out at once. Blossoming affords a good opportunity for this.

On a neat wire trellis about four feet high and the length of the row are *Lucretia* dewberries. The vines are tied in a neat manner and on looking at it one is lead to exclaim even a dewberry row can be so managed as to produce an ornamental appearance.

On May 18 I was examining the blossoms of the genuine old Wilson strawberry and find that their ability to produce a heavy pollen appears to be as good as ever.

We have been filling in a few hills of the black-cap raspberry plantations wherever any died out. I find that the black raspberry let to get four to six inches high in May and then set over with a spade of soil on the roots will grow as easily as a tomato plant.

These big strawberries which are to be exhibited to your friends will grow still larger if a good quantity of liquid manure be applied every three or four days around the plant at eventide. Leave a little cut straw mulch over the surface of ground after each application to keep soil from baking.

CHARLES NASH.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1896.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Caution.

DANIEL W. CRANE, formerly of Soldiers' Home, Los Angeles County, Cal., has no connection whatever with the office of this publication, and the publishers will not hold themselves responsible for money paid into his hands in settlement of subscriptions or advertising.

Forcing Strawberries. THE casual reader, glancing through these pages, may probably think, with the outdoor strawberry crop approaching maturity, any notes pertaining to the forcing of strawberries and the production of them out of season, are not well timed in their appearance, but as a matter of fact the present moment is singularly opportune for dealing with this subject, for now almost immediately must be started the preliminary work that culminates in after success. Very much more can be done now than in the early months of next

year—in fact, no after skill will avail unless the initial details be rightly carried out; hence the relatively large amount of space devoted to the subject of "Strawberries Under Glass" in this issue.

Since when, a couple of years ago AMERICAN GARDENING secured an article from Mr. Robert Williamson in which he detailed his method of obtaining ripe berries at Christmastide, many have been the essays of others towards the obtaining of the first fruits under glass at that date, but so far it would seem that full success elsewhere has not followed the efforts made. It is also noteworthy that the different growers have not reported uniformly as to varieties. Yet there is a sufficient amount of evidence on the side of Sharpless to justify its being called the favorite berry for forcing. The Marshall, however, has been successfully put on the market during the season just closed. One of the chief reasons for this position of Sharpless is the freedom with which it produces pollen, and added to this the fact that it gives a large-sized berry, as evidence our illustration on another page. Has any reader knowledge of a larger fruit?

As a market crop, there is undoubtedly a good future for strawberries raised under glass, but, and just here is the all important point which must be considered, the grower to be really successful must be able to keep up an unbroken supply of uniformly good berries from Christmas to Easter, at least.

This has, indeed, been accomplished by a certain grower in New Jersey during the past winter; indeed, to be exact as to dates, the first consignment was on the New York market four days before Christmas, the last lot arriving about two weeks ago; by thus maintaining a regular supply, not at any time too heavy, the market for the produce was ready made, indeed the arrivals were looked for, and the fruit was sold before it reached the commission man. This even and sure supply, no doubt, had much to do with the high prices realized, \$9 per quart in the early part of the season; dropping to \$4.50 about the middle of January, which price ruled steady for some time. The next drop was to \$3.50, and later the figure varied to as low as \$1.50 for No. 1 stock. There is yet another point to be impressed on any would-be grower; these prices were for berries strictly graded right through the season.

So much then for the commercial aspect of our subject; our correspondents have shown the possibilities for larger private establishments. There yet remains the small amateur who does not possess a greenhouse. True he is debarred from having his own berries at Christmas, but he can certainly have them three weeks—perhaps a month—ahead of the outdoor crop. This is simply done by lifting the plants in the fall, planting them in cold frames and

then giving them no special attention till early spring. The New Jersey grower, above referred to follows a system of cultivation not touched upon by any of our correspondents. He grows his plants, not in pots, but planted out in benches, in houses specially devoted to this crop.

Rights of Property Owners.

A case of considerable interest to contiguous property owners has just been decided in the Brooklyn Police Court by Magistrate Teale. The roots of an allantus tree growing in a Brooklyn back yard, had spread until they crossed the boundary line of the tree owner's lot and entered that of his immediate neighbor. From these roots a sprout had sprung up which, it was alleged, proved a detriment to the neighbor's flower garden, and he proceeded to sever the roots to the point where they first entered his property. The tree owner accused his neighbor of having poured vitriol on the remaining portion of the roots beyond his fence, and that the original tree was dying in consequence; but this was denied. After hearing the evidence the magistrate decided that the adjacent property owner had a right to cut off the portion of the root that had come into his yard.

The Gypsy Moth.

Endeavors to exterminate this pest have, since 1890, cost the Massachusetts State Board of Agriculture \$700,000.

Professor C. H. Fernald, of the board, in an interview, is reported to have said that the territory covered by the gypsy moth is about two hundred square miles. They are in about twenty towns in Eastern Massachusetts and this territory has been attacked from the outside till about half the area has been cleared. The cost of extermination, as estimated by Professor Fernald, would be \$200,000 each year, for five years; \$100,000 yearly for another five years, and about \$15,000 yearly for the third five years. The moth eats everything that grows, except tobacco leaves. Professor Howard is to investigate the matter farther this summer for the Secretary of Agriculture, Washington, and if his report is satisfactory the burden of the work may be taken up by the national government. If pursued carefully, Professor Fernald says, the war against the moth may be completed within the first decade of the twentieth century, so that nothing but future importation need be feared.

A Ten Acre Celery Plant Bed.

Perhaps the largest celery plant bed in the United States, if not in the world, is that of Messrs. D. E. Smeltzer & Co., of Santa Ana, Cal. The beds are under the personal supervision of Mr. Abner Wilson, of the firm of Wilson Bros., celery growers, of Tecumseh, Mich. They are laid out in sections eight feet wide, with ditches between them for irrigating, as it does not rain there at this time of the year. The beds have to be kept quite wet, while the plants are small, as the hot sun and alkali in the soil would otherwise kill the young plants. Forty pounds of seed were sowed. The firm expects this season to plant six million plants.

The premium Canna Italia is received in the best of condition and is a credit to the firm sending it out for you.—G. N. CARRUTHERS, President Lorain County Horticultural Society, Ohio.

Premium No. 31 received in good order. The plants were A No. 1.—J. J. T. Oshkosh, Wis.

WATERING PLANTS DURING SUNSHINE.

ARE THEY INJURED BY IT?

(Continued from page 395.)

Waters in Sunshine.

Most certainly plants should be watered in sunshine; and with us, unless watered at that time, they would not be watered at all! According to the calendar, the sun on this date (May 22) rises at 4:16 A. M. and sets at 7:06 P. M., and, as garden workmen here don't start work until 7 P. M. and quit at 5 P. M., all watering, both indoors and outside, has to be done between those hours.

The watering of plants is one of the most important garden operations and requires much care. The condition of the plants themselves and the state of the weather have to be carefully studied at all times. I have never seen any damage done to plants by being watered during bright sunshine. I, however, have seen plants scalded by being sprinkled overhead (not watered) in or under a hot sun.

Let us take for example a bed of geraniums in full bloom. It can be watered by irrigation in the hottest part of the day without suffering the least harm, whereas to water it overhead would be to ruin the bloom. The same remarks would apply to many other plants.

Again, let us take a batch of plants fresh from the greenhouse and consequently a little tender; it would be foolishness to stand them in the broiling sun and water them overhead at noontime. Successful watering is in knowing and complying with the proper conditions all the way through. —ALEXANDER MACLELLAN, Newport, R. I.

Not Necessarily Injurious.

The question is a broad one. Sunshine I would infer means the extreme heat of a strong sun. If such be the sense of the question I would not, as a rule, adopt the method inquired about, except a plant be very dry and liable to injury from such cause; then I say of the greater of two evils choose the less—water! My method is water at any time. I think it safe to use the syringe. —JOHN SHORE, Harrison, N. Y.

Prefers Shade.

From a scientific as well as from a practical point of view, I would rather answer in the negative to the question "Should Plants Be Watered During Sunshine?" But we know that the evaporation is greater during the day or when the sun is shining than it is during the night, and this alone tells us that watering during the latter time is the more beneficial to vegetation.

In small gardens where watering is limited to a few beds I consider the best time to water is in the evening, the plants being more benefited by the lesser evaporation during the cool night, whereas water given in the morning, followed by a hot day, soon disappears through rapid evaporation from the heated surface. During night the surface becomes cool and watering has a cooling effect, and especially upon such plants as obtain their water and nourishment from the topsoil, to which class generally our bedders belong. But such is not the case when water is given during sunshine; then the watered surface is of a temperature that cannot be beneficial to plant life.

In some instances and especially with regard to trees and shrubs, watering has to be done during daytime; and if such are properly mulched I do not anticipate any harm.

Water is not plentiful everywhere; even in cities supplied with water works, and where water rates are high, or where water is scarce, the question of economy must be considered, and here the evening or night watering is undoubtedly to be most favored.

Then there are the lawn sprinklers; our laws prohibit their use in daytime during the hot season, but outside of that we not only sprinkle the lawn but also the flower beds with them. But I should not recommend this kind of watering plants for the following reasons: Certain plants get their foliage blistered through it; then it is not reliable; some plants are apt to get too much water and others none at all, and thirdly, the fine spray of the lawn sprinkler has a tendency to injure the flowers of our more delicate budders, in some instances knocking them off all together. —JAS. JENSEN, Humboldt Park, Chicago, Ill.

Depends on Conditions.

I would say that the question as it stands is not definite enough to say yes or no to, there being so many standpoints from which to look at it. For instance, it doesn't convey any definite idea as to whether it is the earth in the pots or tubs, as the case may be, that is meant, or whether it is watering overhead in the shape of syringing, or both. Furthermore, there is no particular season mentioned. I believe that in order to answer any way intelligently all those phases of the question ought to be considered.

In the first place, then, personally I deem it preferable to water plants overhead and otherwise when the sun shines, from the first of November or earlier to the first of April. On the other hand, I deem it bad practice to water plants overhead or otherwise, especially the former, in the fierce noontide sun of June, July, August and maybe September.

Under the latter circumstances not a few plants will be positively injured from such practice, among the more sensitive kinds being Begonias, Caladiums, Pelargoniums, Camellias, Fuchsias and a number of others. —K. FINLAYSON, Brookline, Mass.

A Big Field Meeting.

The Connecticut Pomological Society will hold the first of a series of field meetings at the fruit farm of the president, J. H. Hale, at South Glastonbury, during the strawberry season. Acres of irrigated field strawberries and a large trial bed of many varieties will be objects of special interest, not to mention the big peach orchards and fields of small fruits comprised in this famous fruit farm. The fruit societies of all the New England States, the Eastern New York Horticultural and the New Jersey societies have been invited to make this a union meeting, and it will surely be the largest field meeting of fruit growers ever held in this country.

The date has not yet been fixed, but it will probably be about June 15, in the height of the strawberry season. Programmes and other information may be obtained of the secretary, H. C. C. MILES, Milford, Conn.

Crown Gall of Plants.—Blackberries and raspberries very frequently have enlargements of knots upon the stems and roots. This disease appears to be a specific one and seems to be increasing. The enlargements are known as root or crown galls and are attributed to minute organisms which attack the affected parts. Not only is the trouble communicable among these plants, but there is possible danger of its passing to orchard trees, including pears, peaches and apples. The practice of planting raspberries among young fruit trees may, therefore, prove unsafe, says the Ohio Station. No plants or trees that have root galls should be planted. Such should be promptly burned, and the same remedy applied to those in the orchard or gardens that are discovered to be affected.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Figures Wanted.—Will you, or some of the readers of American Gardening, please give me some information about the comparative profits of gooseberries and currants? I have about two acres on the north side of a hill, moist, clay loam, and I wish to know whether to try currants or gooseberries for dollars. —L. R. DWIGHT, N. Y.

[Perhaps some experienced grower will oblige by answering.—Ed.]

The Best Varieties Wanted.—What is the best currant, gooseberry and strawberry, quality alone considered? Is Campbell's Early as early as Moore's Early, and is it really a better grape? —GREEN FARMER, Ark.

Strawberry Patch and Frost.—A number of years ago I saved my strawberry patch from the spring frost by taking the straw mulch from between the rows and scattering it lightly about an inch thick over the leaves and blossoms. This was done with extra help the fore part of the night when it became evident that the frost was liable to appear. The result was I received a high price for a full crop of berries. The mulch should be removed each morning not before nine A. M. to keep the mulch from pressing down the vines too much. —C. C. NASH, Mich.

A Little Potato Talk.—The so-called Irish potato, while a native of Chili, by cultivation belongs to almost every country. It has a wonderful power of sporting into almost endless varieties. This "root" is not really a root but an underground stem. Every bud or eye is an undeveloped plant, only waiting the proper opportunity to become separate and self-existent; that is why we may cut each tuber into one bud or one eye, cutting with the assurance that every such eye will make a plant. Every eye is imbedded in a mass of highly-organized plant food, only waiting for those chemical changes that shall make it at once available. And that is why I learned early in youth that a potato set planted very early while the weather was cold, used up during its growth all the plant food of the set and left only the skin, while the sets planted later, when the weather was warmer, left much plant food unused. And I learned further that a potato set planted very early while the ground was cold did better by being planted on the top of some warm stable manure in the hill or row; but after the weather got warm did better by being planted on the cool, moist ground under the manure. I also noticed that if potatoes were planted on land heavily manured by the stables and droppings of cows they were nearly always scabby, while the same seed planted on the same ground in the same manner and time, but in straw horse manure, were clean and a better crop. The sprouts which a tuber makes in spring can be taken and grown into plants and from them potatoes produced. You can also take cuttings from these or any potato plant the same as from a geranium, or you can graft into them a tomato and have tomatoes at the top and potatoes at the bottom, and so on. —WM. LOMAS, Texas.

The old country still leads in size of glass houses. A horticulturist at Isleworth, near London, says the Gardening World, has built ten huge glass houses, each of them 600 feet in length by 40 feet in width. Ploughs and horses are to be used for the preparation of the soil inside for tomatoes.

Now! is the Time to Sow

W. & D.'s Bennett's White Spine Cucumber
W. & D.'s Improved White Bush Squash
W. & D.'s Selected "Snowball" Turnip
W. & D.'s Musk and Water Melons (all kinds)
W. & D.'s Sweet Corn for late crop
W. & D.'s "American Beauty" Pea

Illustrated Catalogue Free to applicants.

WEEBER & DON, Seed Merchants and Growers.
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, June 8, 11 A. M.

Palms and Decorative Plants and all kinds of summer bedding stock, including the new Cannas, Austria and Italia.

This firm will sell on the premises of James Dean, Bay Ridge, all the plant of that well known establishment, June 9-10

CATALOGUES FREE.

Mention American Gardening when you write

GLEARY & CO., 60 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on Tuesday, June 8, at 11 A. M., Roses, Dahlias, Canna Roots, Decorative Plants and a complete line of Summer Bedding Stock.

Catalogues free.

Sales every Tuesday and Friday.

Mention American Gardening when you write

R. M. GARDNER & CO., 199 Fulton Street, NEW YORK.

Palms, Decorative Plants, and all kinds of Bedding Stock. Every Tuesday and Friday.

Catalogue on application.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

Every Lady is Interested in the AMERICAN KITCHEN MAGAZINE

The title tells the story, and although the Magazine is One Dollar a year, we will send it, in club with AMERICAN GARDENING, for only \$1.50. Or will send it free one year for two new subscriptions to A. G. at One Dollar each.

AMERICAN GARDENING, P. O. Box 1697, New York.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

David Norris has gone to Huntington, L. I.

H. McLaughlin, recently at Tuxedo Park, is now with J. M. Craft, Esq., Ridgefield, Conn.

R. Allan has just engaged with Mrs. L. V. Harkness, Greenwich, Conn.

M. Magher is now with R. Johnson, Esq., Oyster Bay, L. I.

Peter McDonald has resigned his position with the Slegel-Cooper Co., New York City, and is now seeking an appointment as gardener or superintendent.

A. Reinisch, formerly gardener to the Excelsior Springs Company, of Missouri, whose extensive grounds he laid out during 1890 to 1893, is now engaged by the State of Kansas as special landscape gardener to survey and lay out the grounds of the several State institutions.

Meetings.

Monday, June 7.—New Jersey Floricultural Society at Orange.

Tuesday, June 8.—American Institute Farmers' Club and Horticultural section at New York City.

Wednesday, June 9.—Morris Co. (N. J.) Horticultural Society at Madison, Newport (R. I.) Horticultural Society.

Saturday, June 12.—Mass. Hort. Society Prize exhibition.

Auction Sales.

Tuesday, June 8.—All kinds of summer Bedding Stock and Decorative plants at Elliott's Rooms, New York.

Palma, Bedding and Decorative plants from Philadelphia growers, at Cleary's Rooms New York.

Pot Roses, Palms, and all kinds of Bedding plants at Gardner's Rooms, New York.

Wednesday and Thursday, June 9-10.—Great clearing sale of greenhouse stock at the establishment of James Dean, Bay Ridge, N.Y.

Friday, June 11.—Sales as indicated for Tuesday.

New York.

The Farmers' Club and Horticultural Section of the American Institute will hold their regular combined monthly meeting and exhibition on Tuesday, June 8, in the afternoon at 2 P. M. and evening at 7 P. M. There will be a general exhibition of iris and other hardy flowers, also forced fruits and vegetables. A leading feature will be a grand display of strawberries, one exhibitor alone having entered twenty-eight varieties. Several other large growers have intimated their intention of exhibiting. The noted strawberry specialist, T. J. Dwyer will speak and the well-known rose specialist, J. N. May, will talk on hardy roses and will be on hand to answer any questions.

Boston.

At the special meeting of the Massachusetts Horticultural Society, on Saturday last, it unanimously voted to ratify the action of the Finance Committee in compromising the Hayes will with the contestants. By the terms the boy Harold will receive one-third of the residue, provided such portion shall not exceed one hundred and twenty thousand dollars, and the society the balance.

A very good exhibition was presented at Horticultural Hall on Saturday, May 22. Prizes were offered for herbaceous plants and tree pæonias. There was only one entry in each class. T. C. Thurlow made a good showing of tree pæonias and J. W. Manning one of herbaceous plants, each receiving first prize in their respective classes. Mr. Thurlow also showed a collection of flowering shrubs, one of which, *Cornus florida rubra*, was especially noticeable. The bracts of this variety are pink and

it is new to this locality. Other interesting exhibits were some magnificent lily of the valley from the Meiller Horticultural Co., of Springfield, who were awarded a first-class certificate of merit for superior culture; Japanese lily of the valley, convallaria prolifera, from Carl Jurgens, of Newport, R. I., who received a silver medal; gloxinias from Charles H. Souther, cut flowers from James Comley, and Mrs. E. M. Gill and several collections of native flowers.

Orchid Notes.

Messrs. Hurrell and Lager, Summit, N. J., have just received an importation of 108 cases of *Cattleya Trianae* in excellent condition. Mr. John Lager, the collector for this consignment, is expected to arrive home soon.

Adolph Sachse, Newtown, L. I., has just received a consignment of *Cattleya labiata* in splendid condition. Owing to a tropical fever, as malignant as yellow fever, which almost decimated the population of the district where *C. labiata* is obtained, collecting was very much hindered.

Cattleya Mossiae, *C. Gaskelliana* and *Laelia purpurata* form the bulk of the marketable flowers at the present time in New York City, the first named *Cattleya* being the most abundant. Prices vary at wholesale from \$25 to \$40 per 100 blooms. *Cypripedium Lawrenceanum* sells at \$10 to \$15 per 100 blooms.

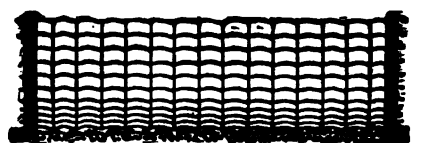
Facts.

A newspaper without enemies is scarcely deserving of friends. The vicious and lawless never like a bold, fearless newspaper, and every self-respecting publisher should be proud of their enemy. There are other newspaper foes, however, who are far more troublesome, and, consequently, more to be feared. First and foremost is the man who owes a newspaper an honest debt and will not pay it. Then there is the ambitious mortal who wants an office and complains because the newspaper cannot consistently champion his cause; he is pretty likely to become an enemy. The man who wants to shape the policy of a paper and is not allowed to do so, is a sure enemy. But the meanest man of all is the man whom a newspaper has befriended, and who deliberately condemns the sheet after securing from it all the assistance he possibly can. The newspaper can to some extent respect an open and avowed enemy, but an ingrate, under any circumstances, is beneath contempt.—Press and Printer.

An Eloquent Testimonial.

The business of collecting subscriptions is frequently enlivened by the spontaneous expressions of good will from our constituents. Here, for example, is one: "Please find check for \$5 for five years' subscription." One does not usually pay so far ahead for a publication and when such a thing is done it can be taken as evidence of full satisfaction with what is being served up.

I have intended for some time to write you that I received the premium chrysanthemums in splendid condition, and they are now growing nicely. Many thanks for them.—MISS C. S. B. Mobile, Ala.



16 TO 1 AGAIN.

An Illinois farmer writes for an agency for our fence. Has had some in use several years and his next neighbor has a regular object lesson, having no less than sixteen different styles of wire fence on his farm. After testing and comparing for years, he declares the Page leads them all.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write

Questions Answered.

This is a Bureau of Information, to which subscribers can apply freely for advice on any and all subjects in the field of horticulture.

In order to lessen labor, and that the Editor and his friends may understand each other, the following rules must be observed:

Rules for Correspondents.

Questions must be concise, plainly written on one side of the paper only, and addressed INQUIRY DEPARTMENT, AMERICAN GARDENING, P. O. Box 1697, New York City.

Letters appertaining to subscriptions, or other business matters, should be directed separately; otherwise delay may follow.

The name and address of the sender is required, in addition to a nom de plume. Use a separate sheet of paper, not a scrap, for each question. Questions will be attended to without delay. If by mistake a query fails to be answered, it should be repeated.

Specimens of plants for identification must be ample; mere scraps will not do, and no notice can be taken of such.

Questions relating to insects or diseased plants should always be accompanied by specimens, packed in a tin box, and forwarded at letter postage. Always send a liberal sample.

Conditions and soils vary so infinitely that we would be pleased to have our correspondents describe theirs.

Correspondents referring to articles which have appeared in AMERICAN GARDENING should mention page and date of issue.

We cannot promise to comply with requests to answer by mail.

•• We cannot undertake to reply by mail.

Asparagus Tenuissimus.

Is there any firm from which I can obtain *Asparagus tenuissimus*? What species of asparagus is propagated by cuttings?—A. B. C., S. C.

Decorative asparagus of any kind can be obtained from many of the dealers in plants who advertise in our pages. It would be invidious to mention names here. *Asparagus tenuissimus*, A. Sprengerii and several others can be propagated by cuttings, but with the first-named kind as also A. plumosus, the quickest and best method is to raise young stock from seed or by division of the roots.

The Size of Asparagus Bunch.

How many stalks of asparagus to the bunch?—J. M. FIELD, N. C.

A bundle of asparagus in this market is expected to weigh three pounds; no regard is paid to the number of stalks. No. 1, high-grade stock, may have only twenty stalks, while No. 2 and culls may have forty or fifty to the bundle, yet in size and weight they will be uniformly from 2½ to 3 pounds.

Raising Geraniums and Pansies.

Will you please tell me in your next issue how to grow, in pots in house, geraniums from seed, and also how to propagate from slips, and the same about growing pansies from seed? What time would you plant pansy seed to set plants out early in spring; also seed of geraniums to set out plants about May 1?—CHAS. H. STRINGER, Pa.

To raise geraniums from seed use a light soil made up largely of leaf mold; barely cover the seed with soil. At this season of the year cuttings may be rooted anywhere out of doors, in frames, or in windows. Sow pansy seed in August or September in cold frames and protect slightly during the winter to get good results in early spring.

Moving a Clematis.

Can old vines of *Clematis paniculata* be safely moved about the first of June?—J. H. C., N. J.

To move an old-established plant of *Clematis paniculata* is risky, unless it can be very carefully and quickly done without much disturbance of the roots, and after that carefully watered until established again, that is, assuming that the plant is already in active growth. Should it not have broken yet, of course it would be all right to move it.

Crimson Clover as Forage

I have about six acres of crimson clover, which seed I put in last September. I was driven to sowing then owing to all other crops having been eaten up by grasshoppers and caterpillars. All the crimson clover grew and wintered well,

(Continued on next page.)

Chrysanthemums.

Cuttings.—Those for six-inch pots may now be rooted, using such varieties as experience teaches will be most useful for the purpose you intend them; the weaker growers are better off in a bench. Olympus, as a type, with its long, thin stem, is comparatively useless for pot work. What are needed for pot plants are kinds that will stand up alone, strong and robust; Minerva, for example. If growing for exhibiting in a special class, of course use exhibition varieties, and the list of such given in this paper last fall could not be much improved on. Just as soon as they are rooted pot up into 2½-inch pots and from that to the six-inch, with as little check as possible. The least neglect means loss of foliage.

Insects are waking up to a sense of their importance, and that little yellowish-white moth is thus early getting in its fine work by depositing its larvae on the under side of the leaves. Be watchful and clean them out before they clean you out, for their appetite is tremendous.

Mildew.—There is little excuse for mildew on plants. The only variety I ever saw troubled with it was Golden Wedding, which was growing in the shade, and a little sulphur soon relieved the trouble.

Don't let plants run up long and spindly. How often, in going around, does one run across a batch of plants jammed in close together and calling to mind the poet's words, "Linked sweetness long-drawn out." Not so sweet perhaps, but drawn out long enough in all conscience!

Give Room.—Give your plants lots of room and a decent show. They will pay for it in the fall.

Eternal vigilance is the price of a good chrysanthemum. Good flowers were never yet obtained from plants that had been neglected half the summer.

Against Free Seeds.—Secretary Hastings, of the Florida State Horticultural Society, has forwarded us a copy of a resolution passed by that society condemning the free distribution of seeds by the government, as now conducted, and recommending that Congressmen use their efforts to have the appropriation now made for this purpose applied to the scientific work of the Department of Agriculture in investigating diseases and insect enemies of plants grown for commercial purposes throughout the United States.

We heartily recommend the action of the Florida State Horticultural Society to other State societies and trust they may see it to their advantage to go and do likewise. In no better way could the voice and sentiment of the prominent horticulturists of the country be presented to the consideration of Congressmen and the utter uselessness and undesirability of the free-seed scheme, so far as it relates to cultivators, be laid before our law makers.

STATE OF OHIO, CITY OF TOLEDO, ss.
LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of Dec., A.D. 1886.

{ SEAL }

A. W. GLEASON,

Notary Public.

Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, 75c.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER. Position wanted by a thoroughly practical man of life experience in all branches, character open to closest investigation, married, English, 12 years around New York and Boston. No objection to go South or elsewhere. Address, Palmer, 28 Gardiner Park, Rochester, N. Y.

WANTED. a private situation for my thoroughly experienced all round gardener; especially good rose grower, also good with palms, ferns, orchids, and vegetables under glass; very highly recommended, temperate, moderate wages, 20 years' experience, 12 years around New York and Boston; married, English, one baby. Address G. H. Perkins, East Avenue, Rochester, N. Y.

WANTED, a situation, by a gardener of large practical experience in grapes and peach growing under glass; palms, greenhouse roses, chrysanthemums, cut flowers, bedding plants; lawns, roads, and pleasure grounds; vegetable and fruit gardens; building and heating of greenhouses; steam and hot water heating; the grading and making of roads, and thorough drainage. Credentials and references first-class, six years in last place, married, no family. Address W. C. Hood, care Vaughan's Seed Store, 84 Randolph St., Chicago, Ill.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

CELERY PLANTS. See our ad. in this issue. Kirkwood Celery Co., Kirkwood, Ohio.

TRANSPLANTED PANSY plants, mixed colors, \$1.00 per 100; \$3.00 per 500. F. D. Rogers, Monson, Mass.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York

CALIFORNIA PRIVET makes the finest ornamental hedge and are perfectly hardy. Strong plants one to three dollars per hundred. Atlantic Coast Nursery, James H. Cornell, Proprietor, 606 4th Ave., Asbury Park, N. J. Reference 1st National Bank of Asbury Park.

HAWKEYE—I have secured from the inventor the right to manufacture and sell the Hawkeye Strawberry Runner Cutter. I believe it to be the best tool made for this purpose. It is light, strong, durable and cheap. By express, prepaid, \$1.80. Address Allen D. Maxwell, Box 686, Vinton, Iowa.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Venture-by-the-Sea, - California.

Mention American Gardening when you write.

Fresh imported, well leaved and fresh looking plants of

CATTLEYA LABIATA

at \$18.00 per doz.: or \$125 per 100.

Orders booked for **Cattleya Mossiae**.

ADOLF A. SACHSE, Orchid Importer and Grower. (Estate Forsterman) Newtown, L. I., N. Y.

Mention American Gardening when you write.

METAL WHEELS

In all sizes and varieties, to fit any axle. They last forever. Either direct or stagger spoke. Can't break down; can't dry out; no resetting of tires. Good in dry weather as in wet weather. Send for catalog & prices. **ELECTRIC WHEEL CO., QUINCY - ILLINOIS.**

Mention American Gardening when you write.

INCUBATORS. Self-regulating. Catalogue free
G. S. SINGER, Cardington, O.
Mention American Gardening when you write.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 668, ALBANY, N. Y.

Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 30 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America.

A printed list sent on application. Sales made at reasonable prices.

E. CORNING.

Mention American Gardening when you write.

PLANTS WORTH HAVING.

	Per doz.
Abutilon Souvenir de Bonn.....	\$1 50
Aralia papyrifera.....	2 50
Chenostoma hispida.....	1 00
Cyclamen giganteum, 2½ in. pots.....	2 00
Grevillea robusta.....	4 00
Maranta bi-color.....	3 00
Musa Ensete, 5, 6, 8 and 12 inch pots from 75c.	1 00
to \$5.00 each.	
Strobilanthes dyerianus.....	1 30

Catalogues free on application.

SEAWANHAKA GREENHOUSES,

P. O. Box 34. Oyster Bay, N. Y.

James C. Clark, Supt. Wm. L. Swan, Prop.

Mention American Gardening when you write.

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE

CHRYSANTHEMUMS

NEWEST, EARLIEST, BEST.

In Splendid Assortment of Varieties,



Forms, Substance and Color.

Mrs. Higginbotham. Best of all Ostrich Plumes.
Gloriana. The pretty twisted petalled yellow.
Marie Louise. A grand white.
Pitcher and Manda. A variety of two colors.
Kate Brown. Earliest and best for the garden.
Pres. Smith. A robust pink.
Silver Cloud. Pale salmon.
G. W. Childs. Finest of the reds.
Major Bonaparte. The best yellow.
Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

(Concluded from page 413.)

with the result that I have now a fine head growth of about twenty inches, and it is all in full flower. The thing that bothers me now is when I ought to cut the crop for feed purposes. Can you help me?—PENNSYLVANIA.

Crimson clover needs to be cut for feed purposes while the flowering head is in a half-ripened condition, or to be more plain, cut while half the scarlet color is still on and the lower half just faded. Cure under hay caps. Cutting was general last week.

Plants Named.

(To E. L. PARKER)—Phlox divaricata.
(To G. M. STRATTON)—Send specimen when in flower; one sent was in bud.

(To ANDREW C. TODD)—Ipomaea sp.; probably I. Michauxii; will sow the seed and report later.

Borers in Ash Trees.

The ash trees in this vicinity are being destroyed by a worm that bores into the trunk near the ground and sometimes higher up on the trunk. Can you advise me what will kill them, and what will prevent their working in the future.—F. B. GRIMSHAW.

It is impossible from the above description for us to tell what the insect is that is responsible for the injury to the ash tree. There are many borers that work in the ash and as their life histories vary and the remedies differ for various individuals, it will be necessary for us to have specimens of the larvae or worm, and if possible, a sample of their work. If our correspondent will forward the material it will give us pleasure to make further investigation and report through these columns.—W. G. J.

Rhododendrons.

(To J. L. E.) After the blooms have faded it is well to pick off the seed pods as suggested, and then apply water copiously to the roots, so as to make good growth on which to flower next year.

Protecting Fig Wood

Is there any way that I can protect my fig bushes so as to keep the old wood from dying down in winter?—GREEN FARMER.

Wood can be saved by bringing down and burying under the soil. But a better plan is to cover with a good, thick straw thatch.

Borers in Cucumbers.

Is there any remedy for the borer that attacks cucumbers, early squashes and musk melons?—H. V. B., Ormond, Fla.

The insect responsible for the injury to our correspondent's cucumbers is what is commonly known as the squash borer (*Melittia soto*). The adult or parent insect is a moth with opaque greenish forewings with the hind legs tufted with black and orange, giving the insect a characteristic appearance different from any other common species. It lays its eggs usually on the vine just at the surface of the ground, but on light soils, very often below the surface. It may lay them, however, at any place on the leaf stalk or often on the leaf itself. The larvae hatching from these eggs bore into the vine and cause the damage. They do the greater amount of injury, however, not by eating but by sucking the juices, retarding the growth of the plant and ultimately destroying it completely. When full grown in midsummer the larvae go a short distance under ground and form cocoons in which they rest until the following spring. In the South, especially Florida, it is quite likely that there are two broods of this insect, one appearing about midsummer.

There is no known satisfactory remedy for the suppression of this pest early in the spring. It has been suggested that where squashes are raised on a large scale they may be entrapped by an early summer variety, preferably the crooked necks. These grow rapidly and the moths deposit their eggs upon them. The plants as a rule continue to do well even after the young are at work and maturing an early crop of fruit. The latter varieties may then be planted after the summer or early varieties are well under way, and by the time they are large enough to attract the moths nearly all of the eggs will have been laid, and they will be practically free from injuries from this pest. As soon as the late varieties need the ground the summer varieties should be removed carefully, roots and all, and destroyed. In other words, the summer squashes are to be used as a trap crop to protect the Hubbard, marrowfat or other late varieties. A vigorous warfare on the first brood by means of the trap crops will prevent serious injury to the later crops by the second brood.—W. G. JOHNSON.

Always
on
hand

producing a constant sense of security, ready for all emergency cases of sudden illness, particularly in the country home far away from the physician and the drug store should be kept a bottle of that favorite remedy

Safe Cure

As a general system renovator it has no equal, as it acts directly upon the Liver and Kidneys. It is an unfailing remedy for

**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

It is a purely vegetable compound and may be taken into the weakest stomach without any harmful results. Beware of substitutes. There is nothing "just as good" as Warner's Safe Cure.

...THE COMPLETE...

BOOK CATALOGUE

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers

The Fruit Grower

The Nurseryman

The Private Gardener

The Market Gardener

The Seedsman

The Farmer

The Poultry Keeper

The Student of Botany, Entomology and Ornithology

and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE PTO. AND PUB. CO. Ltd.

P. O. Box 1697, New York.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

C. CAMERER, Madison, Ind.—Vineless Sweet Potatoes.

R. H. JAMES, St. George's, Bermuda.—Price List of bulbs, etc.

WOOD BROS., Fishkill, N. Y.—Trade List of Miscellaneous Plants.

MAX DEEGEN, Kostritz, Germany.—Catalogue of Roses, Gladioli, etc.

D. B. LONG, Buffalo.—Price List of Rooted Cuttings, Planting Stock, etc.

FRED A. DIMOND, East Corner, Mass.—Price List of Seeds, Strawberry Plants, etc.

HENRY F. MICHELL, Philadelphia.—Price List of Bulbs and Florists' Requisites.

D. HILL Dundee, Ill.—Catalogue of Evergreens, Ornamentals, Fruit Trees, etc.

THE SCABCURA DIP CO., Chicago, Ill.—Circular regarding "Nikoteen" and its use.

R. C. HARGADINE, Felton, Del.—Spring Price List of Vegetable and other Plants.

JOS. BANCROFT & SON, Cedar Falls, Ia.—Illustrated Catalogue of Seeds and Plants.

JOHN G. HEINL, Terre Haute, Ind.—Catalogue of Plants, Cut Flowers, Designs, etc.

H. CANNELL & SONS, Swanley, Kent.—Illustrated and Complete Floral Guide of Plants.

J. BLAAUW & CO., Boskoop, Holland.—General Wholesale Catalogue of Nursery Stock.

WM. J. HESSER, Plattsmouth, Neb.—Wholesale Price List of Palms and other Decorative Stock.

THE MICHIGAN WILD FLOWER CO., Rochester, Mich.—Wholesale Price List of Wild Flowers.

W. ATLEE BURPEE & CO., Philadelphia.—Manual of Thoroughbred Live Stock and Fancy Poultry.

P. J. BERCKMANS, Augusta, Ga.—Circular in regard to Everbearing Peach, and other fruit and nursery trees.

VAN PRUISSEN-KERSBERGEN, Boskoop (Represented by Louis Van Koert, Boston).—Trade List of Dutch Plants.

THOMAS S. WARE, Tottenham, London.—Catalogue of New and Other Dahlias and Begonias, etc. Illustrated.

W. ATLEE BURPEE & CO., Philadelphia.—Catalogue of Collies, with very useful information as to training, treatment, etc.

SOUTHERN CALIFORNIA ACCLIMATIZING ASSOCIATION, Santa Barbara, Cal.—General Catalogue and Garden Guide for the South; contains descriptions, degree of hardiness, and hints on cultivation of some 1,500 plants; divided into sections, with special tables of plants suited for dry countries, the coast, and other useful information, rendering the catalogue very valuable as a reference book. An especial feature is the correctness of the nomenclature.

A Home-Made Weeder and Garden Trowel.

The illustration shows a handy implement that can be made at a cost of but a few cents. Get a tinsmith to cut the triangular blade from a stout piece of



FIG. 120.—HOME MADE TROWEL.

galvanized sheet iron. He can cut out the coarse saw teeth with his heavy shears. Take an old hardwood handle broken from some other implement, fit it and rivet it to the flat blade. One can work it around plants with the long point, and with a slashing cut of the saw teeth side destroy hundreds of weeds at a stroke—if the weeds are unfortunately so thick!

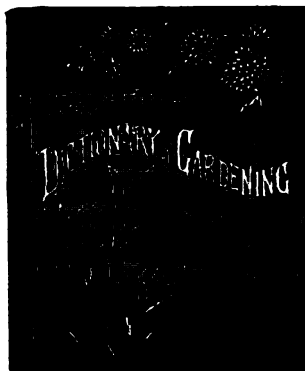
Canna Italia.

Herewith I send photographs of Canna Italia. These plants were purchased of Blanc & Co. last fall and have been kept in the cool houses during the winter. As the photographs show, it makes a fine greenhouse specimen; it is very majestic and approaches the dwarf Bananas in the size and coloring of its leaves. The plant measures full five feet high; the four largest leaves are two feet long and ten inches wide. The flowers are delicate and orchid-like and very large, the best measuring four inches across. As a greenhouse plant it is certainly a success. It would seem as if the delicacy of the plants would make them liable to injury in out-door culture, especially in exposed places. The petals of cannas wither very soon after opening and the delicate texture of them in this already famous variety may be a disadvantage unworthy serious consideration.—W. W. ROWLEE, Cornell University.

The photographs referred to by Dr. Rowlee showed a strong, large-sized plant with five fully-expanded flowers on the spike. As mentioned by our correspondent, the lack of texture in the bloom is fully compensated for by the other excellent qualities of the flower and plant.

Lima Beans in California.—There are 3,000 acres less land devoted to lima beans in Ventura, the principal bean-growing county of California, than last year. Farmers say that sugar beets pay better than beans and are growing the former on land heretofore used for beans. It is claimed the three counties of Santa Barbara, Ventura and San Luis Obispo can supply all the beans and mustard demanded in the United States.

HOW'S THIS FOR A PREMIUM?



DICTIONARY OF GARDENING

A Practical Encyclopædia of Horticulture.

FARMERS AND GARDENERS have long experienced the want of a full and reliable book of reference to which they could turn with confidence for an accurate description of any plant of horticultural value, and practical instruction in its cultivation. The Dictionary of Gardening is the most complete work of the kind ever published, as it gives full information about all Flowering and Foliage Plants for the Open Garden, Ferns, Palms, Orchids, Cacti and other Succulent, Greenhouse and Stove subjects, Bulbs, Trees, Shrubs, Fruit, Herbs and Vegetables, as well as particulars of the various Garden Structures and Implements.

This unique and exhaustive work has had neither labor nor money spared upon its production, and having had the enormous advantage of being edited by such a thoroughly competent—practical as well as scientific—authority as Mr. GEORGE NICHOLSON, Curator of the Royal Botanic Gardens, Kew, England, assisted by the most eminent Botanists and Cultivators, its accuracy, both Scientific and Cultural, can be relied on—a point of the utmost importance in a work of this kind. That this is the fact will at once be recognised when it is stated that such world-renowned men as Sir JOSEPH HOOKER, Professor W. H. TRAIL, Professor OLIVER, Dr. M. T. MASTERS, Rev. PERCY W. MYLES, J. G. BAKER, WILLIAM BOTTING HEMSLEY, JOHN GARRETT, WILLIAM WATSON, JAMES VEITCH, PETER BARR, &c., have contributed to perfect the work.

The Practical Information and Botanical Classification have been brought down to the present date, and in all respects the Dictionary of Gardening has been made the Standard Work on Horticulture in all its branches, from the growing of the hardiest Plants to the cultivation of the most delicate Exotics.

A most important part of the work is that relating to Insect Pests and Fungoid Diseases; both these subjects are treated very fully, and more reliable information concerning their cause and cure will be found here than in any other book.

For convenience of reference, the Dictionary of Gardening is arranged alphabetically, the Species and Varieties of the plants described being placed alphabetically under their Genera. Under the name of the Genus will be found the Derivation of its name, the English name, Synonyms, Order, General Description and Cultural Directions, including Methods of Propagation. Then follow, in alphabetical order, the Species and Varieties of garden value, description of their Flowers and Leaves, Time of Flowering, Height and particulars of any Special Treatment required; and the best and most distinct of the sorts described are specially pointed out.

The number and beauty of the Illustrations in the Dictionary of Gardening are without a parallel in any book on Floriculture, and are of themselves sufficient to secure for the work the highest place in the Literature of the Garden. More than 2370 First-Class Engravings are given in the complete work, and the Colored Plates are magnificent examples of Chromo-Lithography, and are remarkable as much for their correctness as for the beauty and delicacy of their finish.

To make the work complete in every respect, a Supplement has been added, which, among other features of value, contains a Pronouncing Dictionary of the Scientific Names of every Plant; a list of Genera and their Authors; Indices to Flowering Periods, Heights and Colors of Plants and their Blossoms; Plants for Special Purposes and Positions; and Indices to Ferns, to Cacti, to Palms, to Orchids, &c., and other matter of real utility.

This splendid work, complete in 4 volumes, with Colored Plates, will be forwarded, carriage free, to any part of the United States, on receipt of \$20.00.

Circular and commendation will be mailed on application.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK.

TO OBTAIN THIS DICTIONARY ...FREE...

The above described set of Four Magnificent Volumes will be given, free, as a premium, for 30 subscriptions to American Gardening at \$1.00 each. To those who desire to obtain this Work without delay, we offer this equitable arrangement: If you will faithfully carry out, to the best of your endeavors, the following agreement, we will at once forward you the four volumes, express paid, on receipt of \$14 in cash, giving you three months in which to send us sixteen subscriptions, at \$1.00 each, to complete the payment. A receipt in full will then be sent you, but naturally you will want to earn back your first payment to us of \$14.00, and this you can accomplish by continuing to solicit subscriptions until you have taken fourteen more at \$1.00 each, the names as received to be sent to us to be placed on our mailing list, and the money (\$14.00) to be retained by you, as collected, to make good the first \$14.00 paid us. We give you three months more in which to do this. In this way you send us in all 30.00, and 30 subscriptions, and obtain, absolutely free, this perfect series of four unparalleled volumes, embracing all that is necessary to know in the literature of Horticulture. Address all orders and correspondence to

ALL ABOUT THE HOME PLOT

**POPULAR NOTES FOR THE SUCCESSFUL
APATEUR.**

Double Petunia Defender.

The double white petunia, it is said, is always more or less scarce. Last year, as early as April, the fringed sort known as Defender was entirely out of stock and unprocurable. Its originators say of it that it is unequaled by any one of the more than a million other seedling petunias which they have grown in past years. The small plant which we now have in bloom, apparently a delicate subject, shows a blossom about the size of the originator's cut, which is supposed to be one-third the actual size of the full-

A Fern Window.

Those who are so favored as to have facilities for turning the general collection of plants outside cannot provide themselves and their visitors a greater, a more restful, or a more instructive pleasure than by filling the window left vacant with a varied collection of native ferns. They are very easy to obtain; often a few feet of woodland will furnish half a dozen different sorts, while others may be obtained at the expense of a bit of forest ranging. If they are not too far distant the best way is to take the pots and transfer the plants directly to them, filling them always with leaf mold. A few sorts do not transplant well, but they are well worth care and effort.

Native Orchids for the Window.

Those who cannot afford the hothouse beauties may at least get an equal amount of experience and very possibly an equal amount of delight in the effort to grow our own woodland beauties. Among the scores of orchids native to this country are some surpassingly beautiful. The variation in conditions between the native woodland and the window is scarcely greater than that between the ordinary hothouse and the window. The chances for success will, therefore, seem to be as good with native plants as with those foreigners brought from the hothouses. Our native *Cypripedium acaule* is as handsome as any grown; this is in bloom now. Later there are the crested and fringed orchids, the purple *Calopogon* (known specifically as *The Beautiful*) and the *Goodyera*. This last is a handsome plant as to foliage and takes very kindly to window culture.

Filling Seeds.

As between the two methods of treating horny seeds—scalding and filing—the latter may prove both the safer and the surer. Many large seeds, like those of the canna, the new *Crotalaria retusa*, the new morning glories may be filed until the white inner seed shows, the only precaution necessary consisting in avoidance of the germ. They will then germinate in a very short time, as moisture is thus enabled to act upon them.

Lice-free Sitters.

If there be one place more than another where lice do congregate it is on and about the sitters. If these have a thoroughly good dust box and are made to leave the nest and use this bath every day they will not suffer unduly; still it is far safer always to make sure the hen is comfortable, by giving her a fresh nest and by dusting her freely. Fresh insect powder is good; tobacco dust is good and much cheaper. The other day we examined a hen which had been sitting for seven consecutive weeks, she having been well dusted about three times during this period. Not a louse was found. But it must be noted that the premises are always kept free from lice by regular care.

"The Best" Buff Breeds.

Which do you consider the best buff breed; the Rocks, the Leghorns or the Wyandottes? one asks. This is a question which it is rather dangerous to answer, as whichever breed is selected those who vouch for the other two will arise with immediate protest. For the general inquirer, however, a fair answer is this: Leave out the word buff entirely until you have decided whether Rock, Wyandotte or Leghorn, without the buff, best meets your needs. Then to the breed chosen prefix the varietal word buff and your hard problem is solved.

Seedling Water Lilies.

Very interesting are these tiny seedlings, pushing up their half-inch leaves. These leaves are of different shape from the native sort most com-



**“Pretty
Pill”
says
Pretty
Poll**

She's just "poll parroting." There's no prettiness in pills, except on the theory of "pretty is that pretty does." In that case she's right.

Ayer's Pills

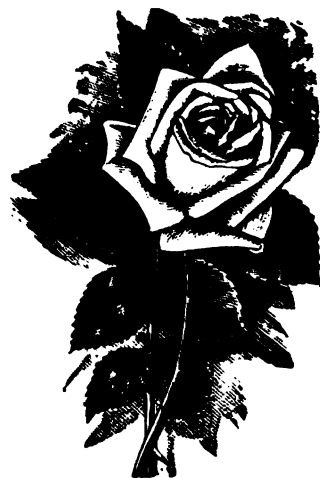
do cure biliousness, constipation,
and all liver troubles.

mon, being about twice as long as wide. The species is known as the Zanzibar Lily, and, as it is said to bloom in four months from sowing, under favorable conditions, it is not yet too late to sow seed in the hope of getting blooms this season. Two recommended methods have been tried during the present spring. The plan of sowing the seeds in moss and keeping the moss very wet proved a failure, possibly because sufficient heat was unavailable so early in the season. The seeds sown later in sand, kept well covered with water, and placed in a sunny window in good heat, have germinated well and are coming on nicely. As both sowings were from the same packet this different measure of success was plainly not caused by the seeds.

MYRA V. NORRIS.

Offer No. 45.

COLLECTION OF ROSES.



From Maryland. Strong 2-inch pot grown

plants. Delivery on and after April 1, postpaid.

One Crimson Rambler

One Perle	One Meteor
One Safrano	One Papa Gontier
One Mme. Camille	One Hermosa
One Marie Guillot	One La France
One iphetos	One Bride
One Nridesmaid	

Surely the good things of this earth are open to everyone who exhibits a little energy. Realize you can obtain the above set of Twelve Magnificent Roses as a premium for one new subscription to AMERICAN GARDENING, and that it will not take you more than a few minutes' work to accomplish this, then send and get your reward.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

[illegible]

We furnish these tags (manilla stock), to exact size shown herewith, with your name and address printed thereon, express prepaid, as follows, cash with order:

500	\$1.00
1000	1.50

And \$1.25 for each additional thousand after first thousand.

Punches furnished at 50c. to 75c. each.

The form of Tally Card here submitted has proved much superior to the old method, and it cannot be counterfeited.

stand holds say four quarts. When a picker is started to work, one of these cards, with the name written on it, is tied to the handle of the basket. The sign that the picker must deliver the berries to the packer. When the picker has filled his four quarts, he must pass by the boss in charge of the work in the field, who inspects the berries, and if all right, tallies the four quarts on his card, by punching out one 4 qt. section, using a conductor's punch for this purpose, after which the picker delivers the berries at the packing house. At noon all picking baskets are delivered to the boss, who has charge of them until work commences after dinner. When starting them to work, the boss calls off the name on the cards, each one receiving his own basket. At quitting time the field boss takes charge of all tickets until next day. As soon as a ticket has been tallied out it is given to the owner, who keeps it until pay day; the boss giving credit for one card to the owner in Field Account Book.

A. T. DE LA MARE PTG. & PUB. CO. Ltd.
ROSE AND DUANE STS., NEW YORK.

WHOLESALE MARKETS.

New York.

Consignments of fruits and vegetables during the past week were very heavy, but withal the market cleaned up fairly well Saturday, largely, of course, owing to the holiday following, proved to be one of the best days the market has seen for a long time, and stock of all kinds cleaned out splendidly. There was no special advance in prices, merchants being more content to see stock clearing, except with asparagus. Prices on this stiffened considerably. Tuesday following the holiday found trade very slow and everything in poor demand except asparagus; this continued to do well.

Hothouse grapes, if very fine, realize \$1.50 per pound, but lower grades are very irregular in prices.

Hothouse strawberries are all over. Outdoor berries are abundant and cheap. Much of the New Jersey stock is almost unsalable, owing to the fruit being covered with sand and grit; figures vary from 3c. to 8c. per quart, except a few bright, clean shipments; these make 10c. per quart.

Hothouse peaches, \$4.00 per dozen. Southern peaches are becoming more plentiful and are affecting the market for the first named. Florida makes \$2.50 per carrier; Georgia, \$2.00.

Mushrooms, if in good condition, are worth 50c. per pound.

Cauliflowers, \$1.75 per dozen.

Hothouse cucumbers, if very choice, 50c. per dozen.

Asparagus—Extra large, fancy, per dozen, \$2.50; New Jersey, good to prime, \$1.50; Long Island, good to prime, per dozen, \$1.50; Maryland and Delaware, good to prime, \$1.25; poor to fair, \$1.00.

Beets—Charleston, per 100 bunches, \$1.50.

Cabbage—Norfolk, per barrel, 65¢; Norfolk, per barrel crate, 80¢; North Carolina, per crate, 75¢.

Cucumbers—Charleston, per basket, \$1.50; Savannah, per basket, \$1.50; Florida, choice, per crate, \$1.00; Florida, choice, per basket, \$1.50.

Egg plant—Southern, per one-half barrel box, \$1.50.

Lettuce—Long Island, per barrel, 75¢; New Jersey, per barrel, \$1.50.

Onions—New Orleans, per barrel, \$3.50; New Orleans, per sack, \$1.30; Bermuda, per crate, \$1.75; Egyptian, per bag, \$2.

Peas—New Jersey, per one-half-barrel basket, 90¢; Norfolk, per one-half barrel basket, 65¢; Maryland and Eastern Shore, per one-half-barrel basket, 55¢; Baltimore, per one-third-barrel basket, 50¢.

Peppers—Florida, per crate, \$1.50.

Rhubarb, per 100 bunches, 75¢.

String beans—North Carolina, green, per basket, \$1.50; Savannah, per one-third-barrel basket, \$1.25.

Turnips—Russia, Canada, per barrel, 70¢.

Tomatoes—Florida, fancy, per carrier, \$1.25; Florida, poor to good, per carrier, 75¢.

Potatoes—Receipts for week, 23,180 barrels; receipts last week, 44,039 barrels.

State, fair to prime, in bulk, 180 pounds, 90¢.

Florida, new, No. 1, per barrel, \$3.50; new, No. 1, per barrel crate, \$3.50.

New, No. 2, per barrel, \$2.50.

Savannah, new, No. 1, per barrel, \$3.50; new, No. 2, per barrel, \$2.50.

Charleston, new, No. 1, per barrel, \$3.50; new, No. 2, per barrel, \$2.50.

Bermuda, new, No. 1, per barrel, \$4.00; new, No. 2, per barrel, \$3.50.

Onions—White Star line steamer brought 5,635 bags Egyptian onions.

Apples—Receipts of apples for week, 3,770 barrels; receipts last week, 5,106 barrels.

Baldwins, W. N. Y. good to fancy, per barrel, \$2.50; W. N. Y. average prime, \$1.75.

Ben Davis, cold storage, fancy, \$2.50; Northern Spy, usual holdings, fancy, \$2.50.

Red fruit, cold storage, fair to prime, \$2.50; Russet, State, Roxbury, per barrel, \$2.50.

State, Golden, per barrel, \$1.75; inferior, per barrel, \$1.50.

Cherries—North Carolina, blacks, per pound, 12c.; Virginia, early blacks, per pound, 10c.

Strawberries—Maryland, Delaware and Eastern Shore, choice, per quart, 80¢.

Delaware and Eastern Shore, prime to good, 60¢; New Jersey, prime to fancy, per quart, 80¢.

poor to good, per quart, 60¢; Baltimore, prime to fancy, per quart, 80¢.

poor to good, per quart, 60¢.

Miscellaneous berries—Huckleberries,

(Continued on next page.)

ARMSTRONG & McKELVY Pittsburgh.
BEYMER-BAUMANN Pittsburgh.
DAVIS-CHAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ATCHER Cincinnati.
ECKSTEIN }
ATLANTIC }
BRADLEY } New York.
BROOKLYN }
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MISSOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROS CO Philadelphia.
MORLEY Cleveland.
SALEM Salem, Mass.
CORNELL Buffalo.
KENTUCKY Louisville.

DON'T be penny wise and pound foolish by buying the "just-as-good mixtures," "so called White Lead," or other substitutes for Pure White Lead.

In painting, the cost of labor so far exceeds the cost of material that the best only should be used. The *best* is Pure White Lead (see list of brands which are genuine) and Pure Linseed Oil.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

2 1/2 cents per square foot for a good corrugated **STEEL ROOFING**, for farmers' houses and barns. Circulars explain all about it. **THE BERLIN IRON BRIDGE CO.** EAST BERLIN, Connecticut.

Mention American Gardening when you write.

THREE NEW CANNAS.
40 NEW IRIS.

SIEBRECHT & SON, 409 5th Ave., New York.

Mention American Gardening when you write.



The **TWIN COMET** (Stationary) \$5.00
The **LITTLE GIANT** (Traveler) 15.00

LAWN SPRINKLERS.

Best Sprinklers made for Florists and Nurserymen's use. Will save labor of one man, for they sprinkle 4 times greater area than any other sprinkler.

E. STEBBINS MFG. CO.

Made for J. B. FELLOWS & CO., SPRINGFIELD, MASS.
50 Warren St., N. Y. City. Will send on 5 days' trial.
Agents Wanted. Can make big money.

Mention American Gardening when you write.

Offer No. 35.

SENT postpaid, for **ONE** NEW subscription at **\$1.00**

...**BEAUTIFUL**...

Twelve Everblooming Roses

Grower's selection from leading varieties.



Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2 1/2 inch pots. This is our most popular collection and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Flaman Cochet
Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Mermot

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK.

North Carolina, per quart, 14¢@15¢; gooseberries, North Carolina, per quart, 6¢@8¢. Peaches—Florida, per carrier, \$2.50@3; Georgia, per carrier, \$2@2.25. Pineapples—Indian River, per crate, 24s, \$3.50; River, per crate, 30s, \$3@3.25; River, per crate, 36s, \$2.50@2.75; River, Queens, per crate, \$2.50@3.50; River, Porto Rico's, each, 50¢@75¢; Southern Florida and Key West, per 100, \$5@3. Melons—Watermelons, Florida, medium, per 100, \$25.

Boston.

Apples are quite steady at advance. The trade take them easily and the more fancy the stock the higher the prices. Baldwins, \$2@3; Russets, \$2.25@3.50; Gilt Edge still in demand, \$4@5; not many here.

Cucumbers, hothouse, easier, 3¢@4c. each; Florida, \$1.25@1.50 per crate and of good quality.

Lettuce in large supply, with continued large demand.

Squash, 4c. per pound. Cold storage carrots, \$1 per bushel; not any more left than will be wanted.

Asparagus in lighter supply, owing to cold weather; immense consumption; \$1.25 per dozen.

Virginia cabbage, 75c.@\$1 per crate; 75¢@7c. if in barrels.

Beets and turnips, \$1@1.50 per barrel. Hothouse grapes arrive just fast enough to bring \$1.50 per pound, while there are plenty of persons willing to pay \$4@4.50 per dozen for such peaches as get ripe.

Maryland and Virginia peas, \$1@1.25 per half-barrel basket.

Wax beans, North Carolina stock, crates, \$2@2.25; half-barrel baskets, \$2.50@2.75; green crates, \$1.50; baskets, \$2@2.25.

Southern cauliflower, \$1.50@2 per half-barrel basket.

Egg plant, \$2.25 per box.

New beets, \$1 dozen bunches; new carrots, 75c. dozen bunches.

Celery, \$1 dozen stalks.

New onions, 30c. dozen bunches; Egyptian, \$2.50 per bag; Bermuda, \$2.15 per crate.

Potatoes—Hebron, 45¢@50c.; Rose, 35¢@42c.; white, 30¢@35c.; New Savannah, \$3.50.

Rhubarb large consumption; 1c. per pound.

Florida tomatoes, \$1.50@2.25 per carrier; under glass stock, 5¢@10c. per pound.

Radishes, 20c. per dozen bunches.

Mushrooms, 50¢@75c. per pound.

Pineapples, 10¢@15c.

Strawberries, 6¢@10c.

Philadelphia.

From present indications the strawberry season will be a short one this year. The market is now well stocked, but after this week the supply is expected to fall off. There have been very few Southern berries in this market during the past week. Jersey stock now holds the monopoly. Prices are: For Jersey, No. 1, 6¢@8c. per quart; Jersey, No. 2, 3¢@5c.; Delaware and Maryland, per quart, 4¢@6c.

Hothouse tomatoes—The market is overstocked; prices down to 5¢@6c. per pound.

Asparagus—Jersey, average, \$1.20@1.50 per dozen stalks; Pennsylvania, choice, \$2@2.50 per dozen stalks.

Beets—Charleston, per 100 bunches, \$2.50@3.25; Norfolk, \$2@3.

Cabbages—Charleston and Savannah, per barrel crate, 75c.@\$1.

Cucumbers—Florida, per crate, \$1@1.25; Florida, per basket, \$1.25@1.50; Charleston, \$1.40@1.75.

Celery—Florida, per dozen stalks, 25¢@40c.

Egg plant—Florida, per one-half barrel box, \$1.50@1.75.

Lettuce—Local grown, per barrel, \$1.25@1.75.

Onions—Bermuda, per crate, \$2@2.25; Egyptian, per sack, \$2.25; New Orleans, per bag, \$1.50@1.75.

Peas—Maryland, per one-half-barrel basket, No. 1, \$1.25@1.50; No. 2, 50¢@75c.; Norfolk, one-half-barrel box, 75c.@\$1.

String beans—Charleston green, one-third barrel basket, \$1.50@1.75; Charleston wax, 75c.@\$1 (stock very poor this week); Norfolk, green, \$1.25@1.50; Norfolk wax, 65¢@75c.

Potatoes—Florida, choice, per carrier, \$1.20@1.50; fair to good, \$1@1.25.

Potatoes—South Carolina, choice Rose, per barrel, \$3.50@4; seconds, \$2.75@3; stock very good and prices holding firm.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

Analysis of Castor Bean Plant.

I had occasion some time since to make a number of analyses of different parts of the castor bean plant, which is grown here as a farm crop, and quite frequently, in many places, for decorative purposes. These analyses may be of interest to your readers as a contribution to our knowledge of the food requirements of decorative plants. The following table represents the average of the analyses made of each part of the plant, together with the analyses of the leaves, and of the stalks (which were about equal in weight.)

CASTOR BEAN PLANT.	In .00 Lbs. Fresh Substance.		
	Nitrogen....	Potash.....	Phosphoric Acid.....
Leaves and small branches.....	0.71	0.68	0.17
Stalks and roots.....	0.18	0.50	0.07
Average.....	0.45	0.59	0.12
Ripe Beans.....	3.45	0.66	1.87
Seed pods.....	2.38	5.97	0.10

Since, for decorative purposes, foliage is most desired, the average for leaves and stalks will approximate the amount of plant food required by this plant. A vigorous, well-developed plant weighs about five pounds; hence, in applying fertilizers,

a quantity containing plant food equal to the amounts in the average for the foliage parts will be sufficient for twenty plants. The relatively high proportion of nitrogen and potash would suggest that wood ashes and stable manure should be an effective fertilizer for use in this connection. Stillwater, Oklahoma. JOHN FIELD.

Obituary.

Robert Owen, Maidenhead, England, died while at work in his greenhouse on Saturday, May 8. He was fifty-seven years of age and had been suffering from heart disease.

The deceased was well known as a chrysanthemum grower. He introduced into England many American varieties and succeeded in raising quite a number of first-class exhibition sorts of the incurved Japanese type, among them Robert Owen, Viscountess Hambleden and Rose Wynne. His nursery at Castle Hill, England, was almost wholly devoted to the raising and proving of new varieties.

Death of Samuel Wilson.—Samuel Wilson, Mechanicsville, Pa., died on Sunday, May 23, aged 73 years. Mr. Wilson had been in the seed business for a number of years, having, prior to embarking in same, been purchasing agent for the Grange. His ancestors came from Yorkshire, England, in 1683, and settled in Bucks County, Pa. Of late years his business had not been very successful.

SHATTERED.

The Precarious Condition of Prof. A. H. Nyo.

A Prominent Iowa Educator's Painful Experience as Related by Him to a Newspaper Man.

From the Gazette, Cedar Falls, Mich.

The la grippe, that dread disease that had such a run throughout this country three and four years since, left many who were previously in robust health with shattered constitutions and seemingly confirmed invalids.

Prof. A. H. Nye, living at No. 2500 Olive Street, Cedar Falls, Iowa, was among the number left by the disease in a precarious condition, his nervous system shattered, and with a general debility of his entire system; no strength, feet and limbs badly swollen, in fact, he was almost helpless. Prof. Nye is a native of New York State, having come west in 1886—a healthy, robust man. He is a school teacher by profession, having served as county superintendent of schools of this (Black Hawk) county, several terms, and he has the respect of all with whom he comes in contact. His helpless condition called forth the sympathy of the entire community. He tried the best medical skill procurable, and spent most of his ready means in the vain endeavor to recover his health, and had about given up completely discouraged. He had stopped taking treatment, being fully convinced in his own mind that there was no help for him, and that he would have to spend the balance of his days as an invalid, a burden to family and friends. Some one who had heard of Dr. Williams' Pink Pills, spoke to him about them, and urged his giving them a trial. His poor success with eminent physicians made him skeptical and he had no faith in what was called proprietary medicine, and would not listen to this advice for some days. The friend being persistent, however, and having faith in the Pink Pills, would not let up, until he had

finally prevailed upon the sufferer to send for a box, which he reluctantly did, and after receiving them decided to give them a fair trial. The first box relieved him in a surprising manner; yet he was not convinced that it was the medicine that helped him, but the weather which had turned pleasant, and did not send for a further supply until he was again about as bad as before taking the pills. Then he concluded he would make another trial, and took three boxes, and to-day is nearly if not quite as well as before the attack of la grippe. It is needless to state he cannot say too much for Dr. Williams' Pink Pills for Pale People, for people who have been left in poor health from la grippe or any other cause. Any one wishing to test the validity of this letter can write Mr. Nye, No. 2500 Olive Street, Cedar Falls, Iowa, and he will cheerfully recommend the medicine, and state his condition before and after using.

Dr. Williams' Pink Pills contain, in a condensed form, all the elements necessary to give new life and richness to the blood, and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effect of la grippe, palpitation of the heart, pale and sallow complexions, all forms of weakness either in male or female. Pink Pills are sold by all dealers, or will be sent post paid on receipt of price, 50 cents a box, or six boxes for \$2.50 (they are never sold in bulk, or by the 100), by addressing Dr. Williams' Medicine Company, Schenectady, N.Y.

OUR LEADING PREMIUM OFFERS

AND

THE CHOICEST INTRODUCTIONS FOR 1897

The Three Best Known Cannas are

OFFER

No. 66.

Austria, Italia and

Mrs. Fairman Rogers

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed Madam Crozy type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of Mme. Crozy, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{3}{4} \times 1\frac{1}{2}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.



ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. Austria is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. Italia as flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the *Gladiolus*, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of Austria with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 33 growths, and attained a height of 42 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and Italia were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.

One Plant for One new subscription; the set of Three Plants for Two new subscriptions.

Plants can be bedded out to advantage until well into June.

AMONGST OTHER PREMIUMS WHICH MAY STILL BE OBTAINED, WE MENTION:

The justly celebrated "YELLOW RAMBLER," the Rose Sensation of 1897.

Lord Penzance's NEW HYBRID SWEET BRIAR ROSES; should be in every garden.

TWO DISTINCT ROSE COLLECTIONS; twelve good plants in each; offers good until July.

Collections of CHOICE DAHLIAS; their cultivation is meeting with revived interest.

CHRYSANTHEMUMS—We are still offering Two Choice Collections of the Queen of Autumn.

GLADIOLUS—Choice Bulbs. May be planted until quite late for Fall flowering.

Nearly all of these unexcelled premium offers are for JUST ONE NEW SUBSCRIPTION, which it would not take you ten minutes to earn. Full descriptive list mailed on application.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK.

Offer No. 80.
FOR ONE NEW SUBSCRIPTION
200 CELERY PLANTS



AS FOLLOWS:

50 Plants
White Plume.50 Plants
New Rose.50 Plants
Golden Self-
Blanching.50 Plants
Giant Pascal.

This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to AMERICAN GARDENING. Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P. O. Box 1697, N. Y.

VEGETABLE PLANTS.—All kinds. Price list free. E. C. HARGADINE, Felton, Del. Mention American Gardening when you write.

CELERY PLANTS. Best varieties. Lowest prices. H. N. HAMMOND, Decatur, Mich. Mention American Gardening when you write.

CELERY PLANTS

We are growing celery plants by the million on ground specially adapted. The roots are long and heavy. White Plume, Golden Self-Bl., Giant Pascal, and all popular sorts. Evenly sorted and safely packed at \$1.25 per 1000; 5,000, \$5.00.

KIRKWOOD CELERY CO., Kirkwood, Ohio. Mention American Gardening when you write.

CELERY PLANTS

We grow Celery Plants by the acre on land specially adapted to them. Sown thin, each plant is strong, stocky and well rooted. White Plume and Golden Self Blanching, etc., we ship safely to all parts of the United States. Price, 500, 75c.; 1000, \$1.25; 5000, \$5.00.

WILSON BROS., Tecumseh, Mich. Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

IOWA TREES.

First-class and prices reasonable at the
Southern Iowa Nursery.

All kinds of Hardy Trees and Plants. Send your name and address for Catalogue and Prices to

A. TROTH, Cantril, Iowa.

Mention American Gardening when you write.

FLOWER QUERIES.

A book written in Questions and Answers, discussing 809 topics on flower culture, in ten chapters as follows: Chap. I.—Soil and general cultivation. Chap. II.—Bulbous Plants. Chap. III.—Lilies, Culture and Management. Chap. IV.—Roses. Chap. V.—Vines or Climbers. Chap. VI.—Shrubs. Chap. VII.—Ferns and Palms. Chap. VIII.—Insects and Diseases. Chap. IX.—Miscellaneous Queries. Chap. X.—Floral Hints. Every one who loves and cultivates flowers needs it. PRICE 25 CENTS.

THE COURIER, Chatham, N. Y. Mention American Gardening when you write.

“JADOO” FIBRE.

A New Potting Material
A Perfect Substitute for
Earth.

Concentrated “Jadoo” Liquid.

BOTH MEAT AND
DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address **THE AMERICAN JADOO CO.**

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

ASK YOUR SEED DEALER FOR

SLUG-SHOT

TO DESTROY

Current and Cabbage Worms, Potato Bugs, Cucumber Fleas, Rose Lice and Slugs, Lice on Cattle, Fowls, Etc.

SLUG-SHOT stands to-day the most successful general insecticide in the world for use on VEGETABLES, FRUITS OR FLOWERS. It is put up in various sized packages to suit all wants. We prepare all sorts of INSECTICIDES and FUNGICIDES for spraying or in powder. GRAPE DUST—Powder for destroying Mildew on Roses and Gooseberries. If you have trouble with Insects or Blights, write and we will try to help you. Send a postal for pamphlet to B. HAMMOND, Fishkill-on-Hudson, New York.

Mention American Gardening when you write.



TRADE MARK.

GRAPE DUST—Powder for destroy-

Park and Cemetery.

An illustrated monthly for the advancement of Art out of doors. Practical articles of permanent value by competent authorities on subjects of special interest to Commissioners, Trustees and Superintendents of Parks and Cemeteries, and those interested in Tree Planting and Town and Village Improvements. Plans of Parks or Cemeteries, and their architectural and landscape features, illustrated every month. Subscription \$1.00 a year. R. J. HAIGHT, Publisher, 334 Dearborn Street, Chicago.

Mention American Gardening when you write.

Offer No. 81.

FOR TWO SUBSCRIPTIONS

We will send, postpaid, this wonderful Combination Tool needed in every garden and by every Gardener and Fruit Grower.

**A PRUNING SHEARS, FLOWER GATHERER and GRAPE PICKER ALL THREE IN ONE.**

AS A FLOWER GATHERER.—In picking flowers or removing dead leaves they are held firmly by the shears until released by the operator.

AS A GRAPE PICKER.—In picking Grapes the bunch out off is firmly held by the shears and placed in the basket without touching them with the hands, preserves the bloom on the grapes; leaves left hand-free to hold up the vines or basket.

IN ADDITION.—The holders do not extend to the point of the shears, thereby facilitating the trimming off of small branches, leaves and defective grapes.

Every one who gathers flowers or fruit has been annoyed by the difficulty in catching the fruit or bloom after it was severed from the parent stem. With this instrument there is no danger of fruit or flower dropping to ground, or of spoiling trees, vines or plants when clipped from high places.

Every pair of Shears mailed out by us is made from High Grade cutlery steel and fully warranted, and should one be found defective, when used for the purposes advertised, purchaser's money will be refunded. Patented March 16, 1897. When not wanted as a premium these shears can be obtained from the publishers of AMERICAN GARDENING, postpaid, for \$1.00.

AMERICAN GARDENING, P. O. Box, 1697, NEW YORK.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 129.
COMBINED SERIES VOL. LI.

NEW YORK, JUNE 12, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Begonias, Tuberous..... 431	Flowering Shrubs, Some 423	Landscape Art Association..... 427	Questions Answered ... 430	Watering During Sunshine..... 427
Berry Notes, Some..... 425	Fruit Garden..... 423	Market Reports: N. Y., and Phila..... 423	Readers' Notes..... 425	Window Garden..... 432
Bulletins, Popular 426	Gooseberries, Seedling. 431	Melon Louse..... 433	Roses Under Glass..... 424	
Cabbage..... 423	Grapes..... 423	Money in the Market Garden..... 424	Shoddy Refuse, Manurial Value of..... 431	
Cauliflower..... 423	Home Plot, The..... 432	Obituary: Douglas, R..... 434	Societies, Reports..... 428	
Crops for Profit..... 430	Hydrangeas, Propagating..... 430	Orchid Notes..... 429	Strawberries, Alpina..... 425	
Earthworms..... 425	Intensive Vegetable Culture..... 424	Planting for Profit..... 425	Trees, Big, of California 431	
Egg Plant..... 423	Jadoo fibre..... 421	Private Gardeners..... 428	Trees and Shrubs, Desirable..... 422	
Ether Vapor and Plants 426	Leaf Mold..... 425		Vegetable Garden..... 423	
Evergreens, Time to Prune..... 430				

Illustrations.	
Cercis canadensis.....	425
Gymnogramma Grown in Jadoo.....	421
Kerria japonica.....	425
Spiraea prunifolia fl. pl..	425
Staphylea colchica.....	423

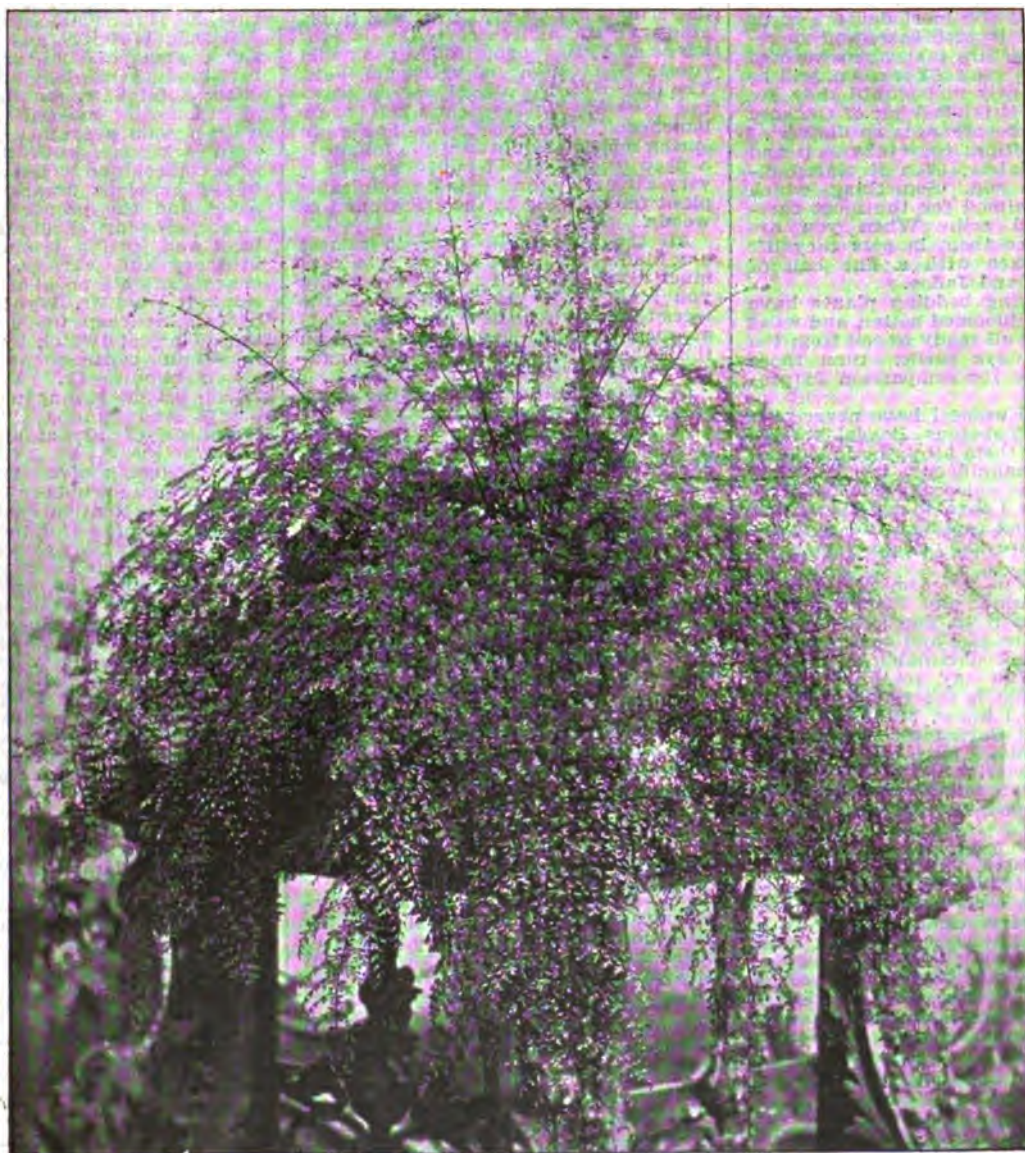


FIG. 121.—SPECIMEN GYMNOGRAMMA SCHIZOPHYLLA, GROWN IN A SEVEN INCH POT WITH JADOO FIBRE. Measures $4\frac{1}{2}$ feet across.

Jadoo Fibre and Jadoo Liquid.

AMERICAN GARDENING has the reputation of being ever ready to give publicity to that which is new and progressive in the field of horticulture for the benefit of both the amateur

and professional, therefore I pen these remarks following.

During the past year, there has been placed upon the market a new soil and a new liquid manure, namely "Jadoo Fibre and Jadoo Liquid," and my experience in the use of them has

convinced me of their genuine merit. For some years I have had charge of an extensive commercial establishment in the city of Philadelphia, and to meet the sharp competition of to-day I have been continually on the alert for that something that will produce plants as near perfection as possible, with the least trouble and expense. I have found it in "Jadoo."

In one year, instead of using it by the pound, we are now using the fibre by the ton, and the liquid, instead of by the pint, by the hogshead. All our decorative palms and also those for the market, are potted in Jadoo, the root and top growth is 100 per cent. better than we ever had them in ordinary soil; they keep moist for days at a time, are light and cleanly to handle, and that means much when you have an extensive decorating trade.

In the past we lost many plants from the drying out process they received in hot, dry rooms; now they come back moist and fresh as the day they are sent out, which means a saving of hundreds of dollars annually, both in plants and pots, as the pots used are much smaller when Jadoo is employed.

During the present season I have used it for germinating all my seeds, such as *Petunias*, *Lobelias*, *Aralias*, *Ardisia*, *Grevilleas*, *Thunbergias*, *Phlox*, *Asters*, *Begonias*, *Gloxinias*, *Verbenas* and so on, and I find it admirably adapted for the purpose. It is so fine and light that the most delicate seeds push through it with ease, and so retentive of moisture that when watered upon the date the seed is sown, will be found sufficiently moist until they are well up; and if pricked out of the seed boxes into Jadoo there is no danger of the plants wilting; they take to it and grow immediately, even if placed directly in the sun. Something which cannot be claimed for the most carefully-prepared soil. When you are ready to place them in pots they lift from the boxes with a fine ball of fibrous roots and Jadoo.

All our spring bedding plants have grown better, bloomed better, and what is more, were all ready to sell from ten to fourteen days earlier than those which I grew for comparison in prepared loam.

Outside of Europe I have never seen really good Tuberous *Begonias*; this year I potted them all up in Jadoo and they are magnificent to-day—large flowers of fine color and immense foliage—just as I love to see them, and they are selling rapidly. Our only regret is that we did not grow more of them.

The *Gloxinias* are coming along in the same manner and *Fuchsias* grow and bloom in it in fine style. *Ficus elastica* has the size and dark green to the foliage not obtainable with ordinary soil. You say roses require a heavy soil; that is the general opinion and practice, I know, but I can show you President Carnot rose growing in Jadoo, and foliage, stem and flower attest its superiority over heavy soil. *Crotons* flourish and color immediately they are removed from the cutting bench.

Last Easter week saw our *Hydrangeas* unsurpassed, if equalled, in Philadelphia. I attribute it to Jadoo liquid applied once a week—one part liquid to forty-eight parts clear water. It is without doubt the cheapest and most efficient, and what is more, safest, liquid fertilizer on the market to-day. All the species of *asparagus* make a rich growth in Jadoo, and for hanging baskets it is unsurpassed.

To the amateur I would say grow all your plants in Jadoo. It is cleanly to handle and you don't have to stand over it with a watering pot. You can go away for a day and come back and find them moist and fresh—not dried out and dead or permanently injured, as has been too often your experience with soil, and during the winter months in rooms heated with hot, dry air you will find that Jadoo Fibre and Jadoo Liquid is all I have found it to me.—JAMES S. REID, Philadelphia, Pa.

Desirable Trees and Shrubs.*

The number of trees and shrubs suitable for this climate is large, but in order to make a selection a knowledge is necessary of the use that is intended to be made of them, as it may be said that nearly all trees and shrubs are more or less desirable and have their uses in their proper places.

The desirability of any tree or shrub depends upon its usefulness or adaptability for the situation in which you intend to plant it; hence the selection of trees and shrubs should be governed according to what use is intended to be made of them, rather than by the merit or novelty of any particular plant, no matter how beautiful or rare in itself it may be.

In order to illustrate the point more clearly, we will assume that advice is asked in regard to planting a foreground or fringe to a wood or grove of native trees.

For a selection suitable for such a purpose it is necessary to choose from among your category of natives, rather than from among those of foreign lands. Our native trees and shrubs are rich with abundant variety, both as to beauty of flower and foliage or form of growth, and it is among them that we must look for material appropriate for use in such a situation as I have mentioned.

What can be more beautiful than our flowering dogwoods, the viburnum, *amelanchiers*, *andromedas*, *Cercis canadensis*, *Pyrus arbutifolia*, the wild roses, *Vaccinium corymbosum*, etc. The last named is a huckleberry growing four to five feet high; it bears bunches of very pretty white flowers in spring and in the autumn the foliage is a deep scarlet. Its form of growth is very attractive, and it is an admirable plant for massing in the foreground of woods.

All the above will grow in almost any kind of soil. The list could be very much extended, but I am merely giving you hints as to the character of the trees that would be desirable. The catalogues of the leading nurserymen throughout the country supply abundant material from which to choose.

In damp situations or near the edges of ponds in woods or places which are of a more or less shady nature, suitable plants from which to make a selection would be such as *Clethra alnifolia*, *Laurus benzoïn*, *Magnolia glauca*, *Calycanthus floridus*, *Prinos verticillatus*, *Andromeda Catesbaei*, etc. This *andromeda* is a most useful plant; it is an evergreen and has long, arching branches with thick, shiny leaves, and in the spring is covered with drooping white flowers. It is a plant that I would recommend for very general use. It thrives well either in a sunny or shaded situation, but on the edges of ponds it is very effective.

The foregoing remarks treat more on what would be desirable to use in the execution of natural planting, rather than in that of ornamental. My reason for speaking first about the former kind of planting is because I am convinced that errors of judgment more often occur in the selection of what is desirable for such a purpose than in the selection for ornamental use.

For ornamental planting the evergreens and exotic trees and shrubs play an important part. With the variety of these at our disposal the most elegant and artistic arrangement is possible, either for the embellishment of the circumscribed area of the city or small suburban lot, or for the more pretentious place. So much depends upon the circumstances attending each case, such as the taste or caprice of the owner, the character of the ground and style of house, that I will not attempt to offer you any selection, but it should comprise all the choicest sorts, for which proper room and a suitable situation can be found. A good principle to bear in mind is that the more highly

polished the grounds the richer can be the character of the trees used, and vice versa.

The arrangement of trees and shrubs is really of as much, if not more, importance than their selection. An arrangement which appears simple and graceful in its composition, and which has utility and fitness in its parts, is always to be recommended in preference to novel and extravagant displays without any regard to their fitness to the surroundings.

There are always some peculiarities about every place, which should determine the character of the planting, and the disposition of its parts. Every situation presents difficulties and facilities, and it is in a close study of these that the key to both what is desirable and how to arrange them is to be found.

There are, however, some principles which govern nearly all planting arrangements, such as repose, which never can be found where trees are indiscriminately planted all over a lawn; an irregular or broken sky line in thick plantations and shrubby borders, so as to get the effect of light and shade, which is altogether wanting in a planting of the same general height. To obtain good effects in a shrubby border, it is a good plan to mass together in irregular form a quantity of the same variety. This is particularly true of the smaller growing kinds of shrubs, such as *Hypericum calycinum*, *Spiraea Anthony Waterer*, and such like. A single plant of such as these, dotted here and there, does not produce the effect obtainable, as when a quantity of them is massed together. Of course, such a system can be carried to an extreme, with the result that your composition would appear patchy; but a judicious arrangement of the parts and the proper placing of the larger growing shrubs so as to form bays and jutting prominences, create intricacy and variety, which is the charm of all shrubby borders. I think it was Mr. Wyedale Price who defined intricacy to be "that disposition of objects which by a partial and uncertain concealment excites and nourishes curiosity." Kemp puts it as "that artful arrangement of single plants and groups which produces freshness of aspect and newness of vista."

In producing diversity in height or sky line in a shrubby border or plantation due attention should be paid to the use of plants of different characteristics of growth, as well as different heights; such as those of irregular or spreading form, of which the *Cercis canadensis* is a sample, and the upright form such as *Cercidiphyllum japonica*. Never arrange the plants in a shrubby border by beginning at the back with the tallest plants and gradually grading them in height to the front. It is a wrong system; it is without variety or grace, and is altogether monotonous, especially when, as is often seen, they are assiduously trimmed into broom-shaped specimens.

The disposition of trees upon the lawn, as well as the shrubby border, is also a matter which calls for very careful consideration. We not unfrequently see trees dotted promiscuously all over a lawn without any regard to order or composition. Plant trees so as to create or maintain something.

There is no place, however small or uninteresting, which does not have some feature about it to lend character to the planting, and it is from this feature or features that your ideas must be conceived, whether it be a wall of leafy garniture here or a spreading tree there; let it at any rate have some meaning.

The man who continues to send poorly-packed stock in old soft wood barrels and expects to get account sales enough to more than pay the commission to his broker, is likely to be more or less out in his reckoning.—New England Farmer.

*Paper read before Philadelphia Florists' Club June 1, by Edward Campbell.

Home Flowering Trees and Shrubs.

In the present issue we commence the presentation of a series of portraits of popular and desirable flowering trees and shrubs. It is unnecessary for us to enlarge on their claims for notice, the illustrations speak for themselves.

Staphylea colchica is very noticeable in early spring by reason of its teeming clusters of pure white flowers. It is not particular as to soil, is perfectly hardy, and does well in a partially-shaded place.

Spiraea prunifolia, fl. pl., better known as Bridal Wreath, is a common garden favorite and in its flowering season is unsurpassed for profusion of bloom. Literally, one may cut its shoots of dazzling white flowers by the yard.

Cercis canadensis, one of the Judas

The Fruit Garden.

Insect Pests.—These are cropping up on every side and a constant warfare must be maintained against them. The cucullo, however, seems rather quiet as yet, possibly due to the prevailing cold rains and low night temperatures which have prevailed of late.

Plums.—In this locality they have not borne out the first promises of a heavy crop, 80 to 90 per cent. having failed to swell.

Blackberries.—If these are making very strong growth stop them at three to three and one-half feet; but this must not be done later than the end of June or the laterals will not ripen.

Grafts.—These will require attention in the way of removing any shoots that may have started below the graft.

Grapes.—Tie in the wood for next

The Vegetable Garden.

Sow early peas for late use.

Early carrots and beets should now be large enough for use; pull out the largest, leaving the smallest ones to grow on.

Cauliflowers and cabbages are now coming on and forming heads. The seeds that were sown alternately between the plants when they were first set out will now require attention by hoeing and thinning out. Whenever cauliflowers are heading up more quickly than it is desired to have them, or faster than they can be used to advantage, it is often convenient to defer the heading up of at least a part of the crop, so that heads may be coming on later. This can easily be done by thoroughly watering the plants before they show any heads, with water in which is dissolved one ounce of nitrate of soda or sulphate of ammonia per gallon of water. This will start them into vigorous growth again and the heads will be found eventually to be larger in size.

Melons sown now will, with ordinary warm fall weather, often mature nice, late melons. If large-sized melons are desired from the general crop pinch off the tips of the vines two joints beyond the fruit after it is well set, then bend the shoot towards the root and peg it down.

The Melon Louse.—Whenever a few vines become badly infested with the melon louse pull up the plants and destroy or burn them; kerosene emulsion will, of course, kill all the lice it reaches, but, as the insect confines itself to the underside of the leaves, it is for that reason difficult to reach. In any case do not allow the pest to gain a foothold, for that will mean the end of the crop. As soon as the louse is noticed, and if a good spray pump is not at hand, try dusting thoroughly on the underside of the leaves, as far as possible, with pure hard-wood ashes and fresh air-slaked lime, two parts of the former to one of the latter, well mixed together; dust on in the morning while the dew is present on the leaves. This is also an excellent remedy for many soft insects, as the cabbage and cauliflower worms and others.

Egg Plant.—Look over the plants every morning and pick off all the potato bugs that can be found, also any eggs that may be hatching, or the intruders will soon ruin the haulms. In case necessity compels the use of arsenites; Paris green, in conjunction with the Bordeaux mixture, can safely be sprayed on the plants.

Tomatoes.—In order to prevent too much shade, pinch back laterals and keep the vines off the ground; this will permit the free access of air all around the plants.

Corn and Beans.—Keep up a constant succession by frequent plantings.

The potato bugs will now be paying their annual visit to the potato patch; be ready for their entertainment. The best way to protect the potatoes is by spraying with the Bordeaux mixture, to which has been added Paris green or London Purple and thoroughly mixed. Spray on in a fine mist.

W. M. EDWARDS.

Erie, Pa.—Reports from the higher elevations of this corner of Pennsylvania are to the effect that frost has killed currants and other small fruits. Although leaves on the peach trees are curled, that is always the case in a cool spring, and the peaches along the lake shore have not been affected, while the grape vines indicate an immense crop.

South Haven, Mich., has been having some exceedingly cold and disagreeable weather, and it is said that considerable damage has been done by the cold winds to the peaches on the clay land close to the lake front, but the condition of the peach crop on the sandy lands is still regarded as favorable for a fair crop, and in some cases a full crop. All other fruits are reported in prime condition.



FIG. 122.—STAPHYLEA COLCHICA.

tree, is a noteworthy tree, having flowers of rich magenta rose, which appear just before the leaves. When the tree has attained a little size it flowers with such lavish profusion as to quite hide the branches. It will grow anywhere.

Kerria Japonica.—In its double form this is found in many gardens, which are enlivened throughout nearly the entire year by its brilliant double yellow flowers. Given a fairly good loamy soil this plant will flourish in almost any situation.

Council Bluffs, Ia.—County Treasurer Arnd reports that the prospect for small fruits in this locality was never better. The vines, bushes and small trees are just literally covered with fruit, and if storms or dry weather do not interfere the harvest will be immense. Of grapes there will be no end.

year; decide how much of a crop your vine can carry and finish at one time; remove all surplus wood and bunches, bag the remaining bunches as soon as they are well set. Watch for mildew and spray with Bordeaux and an insecticide every two weeks until the berries begin to color, if bagging is not practiced thoroughly.

Peaches and Nectarines have set an abundance of fruit; give the trees a spraying with Bordeaux, one-fourth strength, making sure of an excess of lime. Do not rush the thinning of the fruit.

JAS HOLLOWAY, L. I.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

Roses Under Glass.

Having made provision, during the propagating season, for the requisite number of each kind we intend to grow this year, the house or part of it best suited to the different varieties should have our careful judgment.

Gontier does well with me in a place that does not have strong sunlight during midwinter. Niphetos is a very dwarf-growing kind when raised from young stock, so a bench up to the light, without much headroom, is just right for it. Perle and Sunset should be planted where they can have the strongest light possible, as it is very essential that the wood be thoroughly ripened to produce good flowers; otherwise you may be sadly troubled with bullheads during the dull, short days. Mrs. Pierpont Morgan is a dwarf rose, but should have a light bench—the north bench in a long span to the south house suiting it admirably.

Where enough of one variety is grown to fill a house, and the benches are suitable, I like to keep them together. It often happens that we get an order on short notice for a number of blooms of one kind, and to know where they all are, instead of having to go into four or five houses, saves considerable time. Then there are periods when a certain variety may need a little different treatment from the others for a few days. Hoste, for instance, is very susceptible to mildew, and when alone this trouble can be more easily combated and the risk of contagion obviated.

In planting out the young plants a great diversity of opinion exists as to how far apart they should be set. I find fifteen inches between the rows is none too much space for them to give the best returns, with the exception of Kaiserin and Niphetos, which are set about twelve inches apart. By those who intend growing the former variety for the first time it should be borne in mind that it is a very tall grower and does not make so much brush as the others; hence the advisability of planting a little closer, with plenty of head room.

See that all the plants are in a moist state before planting; if any are planted dry it will take a long time for the ball to get thoroughly moistened and consequently the vigor of the plants will be greatly impaired. The little extra trouble of sorting out the plants in sizes preparatory to planting, putting the tallest at the back row, will make you come out with a uniform lot of plants in the very near future.

Make a deep hole for planting, but don't get the plant too deep. When firmly pressed around with the hand the top of the ball should be just lightly covered. If plants are a little pot-bound carefully open out the roots a little at the bottom. When planted in this way it will be noticed the firming around the plant has made a cup about eight inches in diameter; this, I consider, of great value, as every time spraying is done the foliage catches the best part of the water, concentrating it to the proper place, and the plants are likewise more easily watered. The larger bulk of the soil is not needed at present, and if kept on the dry side will be in a nice, sweet condition when the roots get to it; otherwise it is very liable to get sour if the whole of it is watered from the beginning.

Young plants that have been given their last shift lately will be growing very fast now. On no account let them become crowded, or they will surely be greatly weakened. The pots should be set at a distance sufficient to allow the light and air to circulate freely through the plants.

A little experience I had with Meteor may be of value to some. When getting a house ready to replant with young stock, instead of throwing all the old ones away, the number of plants required is taken out with as much soil as possible adhering to the roots, and trenched in, close together, outdoors. They are left there the remaining part

of the summer and all winter. As soon as the frost is out of the ground in spring, they are dug up, shaken out, cut back to within two or three eyes, planted out in the field, and treated the same as hybrid perpetuals. They grow very strong and produce fine flowers during summer. Meteor is an extremely hardy rose, standing the severest weather without any protection whatever. Late next fall I intend taking up quite a number to pot them and bring in bloom for Easter.

I would advise those who have some Beauty wood left in July, and have some manetti stocks planted outdoors, to double-bud a few; that is, put two buds on each stock, and in the fall pot one or two stocks together in a six-inch pot. If placed in a cellar or cold house until they are needed to be started into growth and given the proper treatment, such as is extended to pot hybrids, each bud will develop a stem about eighteen inches in length, with a grand flower, making an ideal pot plant.—H. H.

Money Methods in the Market Garden.—No. V.

Intensive Culture in the Vegetable Garden.

What to plant and how to plant it will depend on your soil and market. I realize that if I describe methods of culture which are a success under certain conditions, others may try them and fail to supply those conditions and, therefore, not get good results. All my successes in the garden are the result of years of experimental work, in which I have met with many failures. The inexperienced amateur should be satisfied to go slowly and not to engage in market gardening on a large scale until he has gained experience by cultivating small plots.

With good garden soil, liberal use of fertilizers, water to supplement the rainfall and a good market, nearly all things are possible to the skillful and enterprising gardener. In market gardening as in other vocations it is the trained worker and who is a "hustler" that "gets there." The conditions under which I myself am working are somewhat different from those which the gardeners near the cities have to meet, as my produce is sold in villages where there is less competition, and in or near these villages are summer resorts, where a good price is paid for a good article.

In growing such crops as peas, beans and sweet corn, I have been able to do the most of the planting and cultivating by horse power, and to obtain two or more crops on the same ground in one year. Formerly I grew large quantities of peas and sweet corn for market, and in this vicinity they must be placed on the market early to get good prices. I plough the ground for early peas in the fall, so as to be able to work it earlier in the spring. In the winter I apply a liberal dressing of stable manure, and in the spring, when the frost comes out of the ground, and it commences to dry on the surface, I begin to harrow it. The ground will soon dry sufficiently to drill in the peas, which is done with a one-horse corn planter, with a fertilizer attachment. I drill in some good commercial fertilizer with the peas. With some corn planters it may be necessary to go twice in a row in order to drill in enough seed.

For the earliest peas I plant the earliest smooth varieties, such as Ferry's Extra Early or Henderson's First of All, which are very much alike. The peas are planted so rapidly that an acre is planted in a few hours. I drill in the peas in rows from 2 to 2½ feet apart and cultivate frequently with a horse hoe until early in May, when with the corn planter I drill in Cory sweet corn between each alternate row of peas. This leaves each alternate row

vacant from which to pick the peas. This row is still cultivated with the horse hoe and the one in which corn is planted with the hand wheel hoe.

The peas are about all marketed by July 1, when the vines are removed, and the corn will have made quite a large growth, if the soil be rich enough. The rows between the corn may be cultivated and set to celery, cabbage, turnips or potted strawberry plants. The rows of corn will stand four or five feet apart, and they will ear well if the corn is drilled in such wide rows, and nearly as much corn will be grown on an acre as if it were planted in hills with the rows three feet apart.

This early corn can be marketed in August, or early in September, and the remainder of the season the use of the ground is given to the late crops of celery, cabbages, etc. If the fall is favorable for their growth there is time for them to mature.

By this plan a variety of vegetables can be grown on the same ground in one year, which has its advantages in small gardens, where a variety is needed to meet the demands of a local market. Other combinations may be made with peas, beans, corn, celery, cabbages, cauliflowers, kale, spinach, etc., by which two or more crops can be grown in one year.

In the systems of intensive culture it is often necessary to supply extra fertilizers and water; but I have found them profitable on high-priced land. I like to supply the soil with all it needs to make plants grow and then keep it to work the whole season through.

By growing early onions from sets, to be bunched when small, and sold for early green onions, and the crop followed by a late one of celery, cabbages, cauliflowers, etc., one of the most profitable methods of intensive culture may be practised. I have, often thought when I have been in cities and large villages and noticed vacant lots near the city water works that if I were living there and wanted employment and had a little capital I would purchase or rent a plot of ground and grow early onions and celery. In growing a crop of each of these on the same ground in one year, the conditions of success are: a soil that can be easily worked; free from everything which interferes with the use of the wheel hoe and other garden tools, and which does not make it in condition to be finely pulverized; also plenty of fertilizers near at hand, and water for irrigation.

As the onions are to be sold when small they may be planted more closely than when they are allowed to mature; and the celery can be grown by the method known as the "new celery culture." Perhaps one-fourth of an acre will be all that one man can work and then he will need some help in bunching onions, etc.

In this article I cannot describe their culture in detail without taking too much space. I will only say that large quantities of manure should be plowed or spaded in and the surface of the ground finely raked, then rolled, marked and the sets planted very early in the spring. After the first year one may grow his own sets. My experience in transplanting onions from the hotbed is that I did not get them as early as from sets. If the onions are frequently cultivated and irrigated they can be marketed in time to grow a crop of celery. As soon as a row of onions is taken up fill in the row with celery plants or cabbages, cauliflower or whatever the market demands.

I hesitate to give any figures, but if the crops are well grown and marketed—as can often be done at retail prices—the returns will be very large, for the outlay of capital and labor. In many villages there is a demand for the garden luxuries which are a little difficult to grow, and require higher culture than is given to ordinary coarse vegetables. In supplying this demand there is an opportunity for the right man in the right place.

W. H. JENKINS, Delaware Co., N. Y.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

A Deodoriser Wanted.—I use a solution of sheep manure and water on some plants in the yard and a foul odor arises from it. Is there anything I can put in the solution to deodorize it and not destroy its fertilizing properties?—W. G. W., Brooklyn.

More About Earthworms.—I can add a little to the deservedly important study of the benefits of earthworms (See American Gardening, page 390). Early this spring—February—after our first spring rain, the whole country on all descriptions of soil—black, waxy, loamy and sandy, not pure sand—the worm casts would average thirty to the

York Station, used it for two years and said it was as good as any he had ever used. He called my attention to the notice and said I might use his name.—CHAUNCEY SHEFFIELD, Geneva, N. Y.

Some Berry Notes.—As I see some of our brother readers and strawberry growers are giving their experiences, I thought that I would give mine for the last season in this part of the country. Our soil is a peaty clay. The spring of 1896 I set about 7,000 plants, and as the weather was very dry at the time of setting and then very wet after that I lost nearly all of my plants, so that when fall came I didn't have enough to fill the rows as they were first set in the spring. The varieties were: Louise, the main one, a staminate and very prolific in both plant and berry, and a strong, deep-rooter. The rest were Buebach, Lovet, Bissel, Greenville and Lady Thompson. This variety makes its runners too spindly and makes its plants too far apart to suit me, but as this was its first year with me I will not say too much against it. The Bee-

J. FLETCHER, 214 West Street, Worcester, Mass.

How to Plant for Profit.—On page 396 "Subscriber" asks for help in the planting of his place. An ideal garden will hardly fill the bill in securing a livelihood, so much depends on marketing conditions. The amount of fruit that could be disposed of to advantage in one place might prove a glut and waste in another; also tastes differ in regard to varieties, as well as kinds. If "Subscriber" does not want to make a mistake which he will regret in after years, he had better test the adaptability of that "best" land of his to produce an ideal crop of the fruits mentioned; opinions differ as to "best" land for fruit growing or gardening. It will, of course, take time to do this, but it will be time well spent in avoiding costly mistakes. That the business will prove profitable, if conducted according to the demand of a nearby market, and the market is large enough to consume all that can be produced, goes without saying.—HENRY SNYDER, Md.



FIG. 123.—THREE POPULAR FLOWERING PLANTS.

Kerria japonica.

Cercis canadensis.

Spiraea prunifolia, fl. pl.

foot square. I very carefully weighed ten casts of average size, after they were somewhat dried; these weighed two ounces good, giving eight tons 335 pounds to each acre, at this first contract. So far there have been four of these contracts filled, so that these useful workers have moved and composted at least thirty-two tons to each acre already since last February. There are more than 53,000 worms to the acre here, as I have dug up an average of large and small, four to the foot square. This would give 174,240 to the acre, besides such as were below the depth of the spade; and many of them from 6 to 10 inches long, and as large as a small-sized lead pencil. There may be more here on our rich land than in other parts of the world. However extraordinary their work, when I calculate their number, their size and their tireless labor, I am not surprised at the amount of work they accomplish. I need not draw the moral of their usefulness.—WM. LOMAS, Texas.

Leaf Mold.—In American Gardening of May 29 I find an inquiry for leaf mold. I can furnish it in any quantity. Mr. William Thompson, a practical gardener, who was here at the New

der Wood is a complete failure here. I set 500 plants last season and lost every one, and a neighbor has the Beeder Wood that did not get bigger than a pea. As for the Mary and Marshall, I can't say very much for them, as they were good, big plants when I set them out, and are good, big plants still, and that is all. Mary never formed a new plant and the Marshall but mighty few; but as they are in the patch I will let them go while the patch lasts and then they will be done for, so far as I am concerned. Brandywine did splendidly, set the same time as the rest, and promises to be a good berry. Now let us hear from the rest of the berry growers in the country and the kind of soil, and about where they are; for myself I am in about the central part of the State.—CHANCEY W. STUART, Ind.

Alpine Strawberries.—On page 394 is a request for Alpine strawberries. A. J. Goldsborough, Wesley Heights, Washington, D. C., has them.—H. SNYDER, Md.

—On page 394 of your issue of May 29 a reader inquires for plants of the Alpine strawberry. I have a few.—E.

Rose Crimson Rambler.

At Detroit, Mich., recently, I saw two plants of this rose which had been planted out for three years in a lean-to greenhouse, owned by G. H. Berry, Esq. The display of bloom was strikingly beautiful. Upwards of 500 huge clusters of brilliant crimson blossoms had covered the plant for three weeks prior to my visit. The usefulness of this beautiful introduction is being realized most perceptibly every year, and as a pot plant the time is not far off when it will be grown by the thousand for market purposes. A. D.

Are You Renewing.

To those of our readers whose subscription has expired, or is to expire with the close of this month, and who will send us a prompt renewal (adding fifteen cents to pay for packing and delivery), we will at once forward one canna, well established, their choice of either Austria or Italia, the two great novelties of the season. This is an offer without parallel, but which, if desired, must be applied for at once.

Our publishers will supply any book wanted. Send your orders.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1896.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issues. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Ether as a Plant Developer. THERE has been going the rounds of the press, an article dealing with the use of ether and chloroform vapors as forcing agents. Many of the newspapers have allowed their enthusiasm for something new to run away with that strict regard for the truth that should be the basis of their published words. We have been told that a certain Danish professor in an agricultural school has obtained some wonderful results in the way of "forcing," and the report sent in by the U. S. Consul, at Copenhagen, has caused such a flutter of excitement in certain quarters as to call for notice by us. It is well to know just what this treatment really is.

The consul reported in part the following translation of the lecture: "on the results obtained by the etherizing method of developing plants earlier than is their nature, by exposing them to the influence of ether fumes. By ex-

posing sleeping plants to the influence of ether and chloroform the result is obtained that each plant, after the treatment with ether, begins to shoot. They have thus probably been awakened from their previous condition of sleep or inactivity. Lilacs grew splendidly when placed in an air-tight compartment and exposed forty-eight hours to the effect of 500 or 600 cubic centimetres of ether, and then put in a hothouse. Just before Christmas the plants had developed splendidly. The etherizing of the plants will cost 1 to 1½ cents each. The main point is to get the plants to shoot at any time before Christmas, even in September and October. It can be said that some progress has undoubtedly been made, but no one can tell to what astonishing results this discovery may lead. Tulips, Lilacs, etc., can be developed much earlier and have a pretty color and great durability, as the ether frees the plant of decomposable matter. To etherize the plants they are placed in an air-tight receptacle and exposed from twenty-four hours to ninety-six hours (generally forty-eight hours), to the influence of ether. Cylindrical glasses are used for small plants, and for large plants an oil-painted box, the interior of which is lined with tin foil, 4 feet high and long, and 2½ feet broad. On the lid a small hole is made, which is closed with a cork, and the ether is conducted through this hole. As ether is very inflammable, great care must be taken not to bring candles or matches near it. The ether is dissolved at from 15 degrees to 20 degrees centigrade."

The following explanation from Prof. B. T. Galloway, Chief of the Division of Vegetable Physiology and Pathology, United States Department of Agriculture, is pertinent, and will serve to place the foregoing statements in a better light: "It has been shown by a number of investigators that the vapor of chloroform or ether has a marked effect upon the respiration of a plant, increasing it in some cases to a marked degree. Increasing the respiration, simply means that the plant is being made to do more work than normal. It must be remembered, however, that in doing this the plant is living beyond its means, and sooner or later there must be a reckoning, which may prove disastrous. The plant responds to the ether treatment just as it would to any other irritating influence, and the effect in the end must be the same as when an extra stimulus is present, namely: increased energy for the time followed by collapse and death, if the matter is carried far enough. In cases of bulbs and woody plants, where there is more or less stored energy in the form of food material, etherizing might work to advantage in starting growth. This seems to have been the line of work carried on by the Danish investigator. From the report of Consul Kirk, however, the conclusions have not been very definite."

Popular Bulletins. I T has often been the lament of experiment station officers, that the work put into the bulletins issued from the stations, does not appear to bear an amount of fruit in proportion to the labor involved in the conducting of the necessary experiment, investigation, and compilation of the results for publication.

Is it not a fact that far too many of these bulletins are too technical? That while to the scientifically trained worker they are mines of information, yet to the mass of cultivators (for whose benefit they are put forth) they are not gotten up in that "popular" style, so that he who runs may read?

True, it is a difficult problem, that thus presents itself before the station officers; they desire to put on record all their labors for the benefit of future investigators and workers, and it is not always easy to satisfy both the demands at one and the same time. At present a very, very large number of these bulletins are so much waste labor and paper for all the good the tiller of the soil extracts from them, and the fault usually lies with the latter in that he will not study closely. Perhaps he has not the time—perhaps.

Some time ago the Director of the New York Station, at Geneva, announced that he would in future issue a popular edition of the regular bulletins. The first batch of these is now before us, and it appears to us that they should go a long way towards the solution of the question. Mr. F. H. Hall, who is responsible for the "boiling down" process, has handled his work with great skill, and sets an example that other stations would do well to follow.

The idea of giving the people at large a popularly written story, embracing the salient features of the full bulletin, is an advance in the educational missionary work of the experiment stations, and is also a saving of expense in printing. The popular summary is scattered freely, and should the recipient desire the fuller information, he has merely to make a request for the complete bulletin.

Flowering Trees and Shrubs. THE enthusiasm with which one is filled on seeing the magnificent effects obtained in the early spring from a judicious use of flowering trees and shrubs, added to which is the permanency of the planting, is our excuse for once again calling the attention of our readers to this class of plants. Nothing can give better satisfaction—few things so great, indeed. On another page of this issue is given a report of a recently delivered lecture, in which will be found some hints as to use and arrangement, which should prove of immense service to the owner of any sized garden, be it large or small, and as an accompaniment thereto we give a few illustrations of a haphazard selection of some of these gems. A few only are given now, but it is our intention to follow up the present series by other portraits of equally valuable trees and shrubs, all reproduced from photographs specially taken by AMERICAN GARDENING.

WATERING PLANTS DURING SUNSHINE.

ARE THEY INJURED BY IT?

(Continued from page 411.)

Prefers Temperate Water.

As for my position in the discussion going on in your columns about watering plants during sunshine, my experience corresponds closely with Mr. Gomersall's (page 395). What one is taught during five years of early life will probably take ten to forget. Most old-country gardeners are opposed to watering plants during sunshine; and until I took charge of a department in a large nursery in the midlands of England I had never thought of overhead watering, except mornings and evenings. True, I would not let a plant suffer for want of water at any time during the middle of the day, but if watering must be done we did it with the spout, picking out, separately, the few dry plants.

As usual, on entering my duties in a new position, I let things go on as they had been, taking time, if I wished to change methods, to do so gradually. Well, watering went on indiscriminately and I carefully noted results. No injury (i. e., apparent injury) came. I refer in this case to frame stock, for the most part bedding plants.

Lessons of experience sometimes come from laziness and ignorance. Both of these have shown how unfounded and unsequential old notions may be. Still, I forbid watering directly with cold water, as it comes from the hose, until the temperature shall be over fifty; but on a pinch I have broken rules made by myself. Really little injury may be directly traceable to watering during sunshine, and when this may be suspected it might have been through using water at too low a temperature. If we remember how often pressing duties compel many florists, and successful ones, too, to use water at all times through, and with the hose, we would almost hesitate to give an opinion either way. I should make exception myself to woolly-leaved plants, such as Gloxineas and many shrubby Begonias, and to syringing plants when in bloom. To sum up, I would say water always when necessary with water near about the temperature of the air and in the case of plants in bottom heat at root temperature.—T. D. HATFIELD, Wellesley, Mass.

Opposes the Idea.

Watering in the sunshine is not a safe practice if the rays of sunlight are direct, as each drop of water acts as a sun glass, bringing the rays to a focus and burning the leaf; thus watering in early morning or late evening is not apt to do any harm. If the foliage is not wetted, mid-day is just as good as any other at which to give water, should the plants need it. I use water direct from a well in the greenhouse into a tank and slide a "flat" full of pots or "cans" into it, just covering the surface of the soil, and seldom spraying or give overhead water unless the foliage gets dusty. The temperature of this well water is 45 degrees. But I run the house at 40 to 80 degrees; average, 60.—HENRY SNYDER, Oxford, Md.

Waters at Any Time.

In answer to the question now under discussion I would say, my opinion is, that whereas evening is undoubtedly the best time of the day for watering during the summer time (transpiration being then much less rapid), yet we have frequently watered our ordinary greenhouse plants and frames during the hottest part of the day, and I have yet to discover any ill effects. If ill effects are seen it is more likely to be due to faulty glass. Our herbaceous garden here has no shade whatever and during dry weather we keep the sprinklers at work through the hottest days, and I have never

found any ill effects. Palms and other fine foliaged plants we keep in well-shaded houses; these are sprayed on all fine days between 8 and 9 in the morning and again about 3 in the afternoon.—EDWARD J. CANNING, Botanic Garden of Smith College, Northampton, Mass.

Watering is a Science.

Watering or handling the hose is a science and anybody who wants to become a successful plant grower has to learn it.

Watering under glass is an operation which requires good judgment and care of the operator. Plants may be injured by insufficient or by too much water. Quick-growing plants require more water than slow-growing ones, but there are exceptions. I know some gardeners who sprinkle their carnations twice a week and they are good carnation growers; yet I, for instance, never wet the foliage on my carnations at all, and I can say that I have very good success.

"Don't water while the sun shines" is a doctrine believed only by the majority of amateurs. A learned gardener ought to be able to water his plants at any time should they need it. Plants that may be injured, such as Gloxinias, ferns, Rex Begonias and others, are generally shaded.

As to watering under glass, a whole book could be written about it, but it seems to me the question is about outdoor watering. If there is a small place to be watered I would prefer watering in the evening; but if it is a large place water any time the plants need it. I have five or six sprinklers running in dry weather from early morning until night and have never known an instance where injury was done. The main thing is, if you have to water do it thoroughly, or not at all.—N. BUTTERBACH, Oceanic, N. J.

The Manhattan (Kan.) Horticultural Society met at the home of Professor E. A. Popenoe, on May 27, and listened to three interesting papers. Professor Popenoe talked of "Hardy Garden Flowers," and especially of hardy biennials and perennials, inviting especial attention to some of the newer roses, the Oriental Poppies, Lemnolines, hybrid Delphiniums, etc. Mrs. Georgeson read a paper on "Japanese Floriculture," and having spent several years in Japan, she pictured Japanese life and the flowers they cultivate in a very pleasant manner. Mrs. Kedgle's paper on "Vegetables for Food" was both practical and entertaining. The standing committee on entomology reported insects, as canker worms, tent caterpillars, etc., unusually plentiful. Mr. W. Marlatt reported serious damage to peach trees by spraying.

The Secretary and Vivisection.

Secretary of Agriculture Wilson recently sent to the Senate Committee on Agriculture and Forestry a communication in which he declares his opposition to the Senate bill regulating vivisections. He says the passage of such a law would have a most injurious effect upon the scientific investigations of the department and on the various agricultural experiment stations.

Are You Renewing.

To those of our readers whose subscription has expired, or is to expire with the close of this month, and who will send us a prompt renewal (adding fifteen cents to pay for packing and delivery), we will at once forward one canna, well established, their choice of either Austria or Italia, the two great novelties of the season. This is an offer without parallel, but which, if desired, must be applied for at once.

A New Association.

A meeting of gentlemen interested in park management was recently held at Louisville, Ky. "The Park and Outdoor Art Association" was formed. The committee on organization presented the following report, which was adopted:

Your committee reports that an organization be formed on the lines suggested by Mr. Charles Elliot shortly before his death, to wit: A general association to be made up of all who desire the advancement of "art out of doors," including amateurs, land owners, writers, park commissioners and officers, village improvement societies, foresters, gardeners and others interested. An organization corresponding somewhat to the American Association for the Advancement of Art.

The following gentlemen were elected as officers and on committees:

President, J. B. Castleman, of Kentucky; vice-president, L. E. Holden, of Ohio; secretary and treasurer, Warren H. Manning, of Massachusetts. Executive Committee—R. H. Warner, Ohio; T. L. Ridgeley, Missouri; W. H. Manning, Massachusetts; W. S. Edgerton, New York; L. E. Holden, Ohio; Lewis Johnson, Louisiana; Harry W. Jones, Minnesota; Andrew Cowan, of Kentucky; P. Thomas, Kentucky; Robert Kinkead, Kentucky.

Committee to print proceedings: Cowan and Thomas, of Kentucky; Manning, of Massachusetts.

Committee to prepare constitution and by-laws (to report at next meeting): C. S. Sargent, Massachusetts; E. N. Haskell, Massachusetts; John C. Olmsted, Massachusetts; W. H. Manning, Massachusetts; W. S. Edgerton, New York; L. H. Bailey, New York; Mrs. M. G. Van Rensselaer, New York; William Falconer, Pennsylvania; Colonel Bingham, Washington, D. C.; Charles W. Garfield, Michigan; Charles H. Shinn, California; F. L. Ridgeley, Missouri; Professor Trelease, Missouri; A. R. Mayer, Missouri; Andrew Cowan, Kentucky; L. Johnson, Louisiana; C. Peck, New York; W. W. Folwell, Minnesota; C. M. Loving, Illinois; O. C. Simonds, Illinois; J. F. Foster, Illinois; Sol Claypool, Indiana; J. M. Waddick, Ohio; W. M. Canby, Delaware.

The following resolution was read and adopted:

Resolved, That it is the sense of this convention that the successful development of parks throughout this country depends very largely upon the entire elimination of politics from their control and management, and we urge upon the citizens the necessity for the appointment as park commissioners and other officials of such persons only as have sympathy, taste and ability in the preservation and culture of nature and art.

The next annual meeting of the new association will be held at Minneapolis June 22, 1898.

Their One Consolation.

I can scarcely imagine any industry which has done as much for mankind in the whole country at large, and produced so few millionaires. Most nurserymen die comfortably poor in the sense that the masses look upon wealth, but rich in the satisfaction of knowing that as business men from a national standpoint they have done much to benefit mankind, and made this country more desirable for home builders.—Seattle Post.

San Francisco.

Henry Melde sued John Reynolds, proprietor of the California Chemical Works, because acids from the chemical works destroyed the plants in the nursery close by. He demanded \$5,000 damages. The case was called for trial April 23, but the defendant made no appearance and Judge Hunt awarded the full amount of damages on the showing made by the plaintiff.

Now! is the Time to Sow

W. & D.'s Bennett's White Spine Cucumber
W. & D.'s Improved White Bush Squash
W. & D.'s Selected "Snowball" Turnip
W. & D.'s Musk and Water Melons (all kinds)
W. & D.'s Sweet Corn for late crop
W. & D.'s "American Beauty" Pea

Illustrated Catalogue Free to applicants.

WEEB & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

AUCTION SALES.

William Elliott & Sons

Will sell at their rooms, 52-54 Dey Street, New York City, as follows:

Tuesday, June 15, 11 A. M.

Palms and Decorative Plants and all kinds of summer bedding stock, including the new Cannas, Austria and Italia.

CATALOGUES FREE.

Mention American Gardening when you write.

CLEARY & CO., 60 Vesey Street, New York City.

Auctioneers of Plants, Bulbs, etc., will sell at auction on Tuesday, June 15, at 11 A. M., Roses, Dahlias, Canna Roots, Decorative Plants and a complete line of Summer Bedding Stock.

On Wednesday and Thursday, June 16 17 we will hold a two days' clearance sale of ORCHIDS, etc., on the premises at Short Hills, N. J., by order of the Receiver, for the estate of Messrs. Pitcher & Manda.

Catalogues free.

Sales every Tuesday and Friday.

Mention American Gardening when you write.

R. M. GARDNER & CO., 199 Fulton Street, NEW YORK.

Palms, Decorative Plants, and all kinds of Bedding Stock. Every Tuesday and Friday.

Catalogue on application.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

Every Lady is Interested in the AMERICAN KITCHEN MAGAZINE

The title tells the story, and although the Magazine is One Dollar a year, we will send it, in club with AMERICAN GARDENING, for only \$1.50. Or will send it free one year for two new subscriptions to A. G. at One Dollar each.

AMERICAN GARDENING, P.O. Box 1897, New York.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

Meetings.

Wednesday, June 16.—Annandale N. Y. Rose Show (two days). Dutchess Co. Hort. Society meets at Annandale; Lecture by P. O'Mara on Garden Roses.

Friday, June 18.—Monmouth Co. (N. J.) Society at Oceanic.

Pennsylvania Society at Philadelphia.

Saturday, June 19.—Lenox Mass. Society.

N. Y. Gardeners' Society Show at City Hall.

Auction Sales.

Tuesday, June 15.—All kinds of summer Bedding Stock and Decorative plants at Elliott's Rooms, New York.

Bedding stock of all kinds at Cleary's Rooms, New York.

Pot Roses, Palms, and all kinds of Bedding plants at Gardner's Rooms, New York.

Wednesday and Thursday, June 16-17.—Great clearance Orchid sale at Pitcher & Manda's Nursery, Short Hills, N. J.

Friday, June 18.—Sales as for Tuesday.

Boston.

The annual rhododendron show of the Massachusetts Horticultural Society on Thursday and Friday, June 3 and 4, was in all respects an exceptionally fine exhibition, the lower hall being filled to overflowing with choice specimens of rhododendrons, hardy azaleas, peonias, German iris and other hardy flowers, as well as fine collections of more tender productions.

The centre table was entirely filled by James Comley, gardener to the F. B. Hayes estate, with an effectively arranged collection of rhododendrons, azaleas and a large variety of hardy flowering and fancy foliaged shrubs, for which this estate is noted. To the left the next table, also running the entire length of the hall, was completely filled with rhododendrons and azaleas from H. H. Hunnewell (F. L. Harris, gardener). This exhibit embraced many fine specimens and one section of it contained seventy named rhododendrons, which made in themselves a grand exhibition. On the table to the right of the centre was a fine display of orchids. John L. Gardner (William Thatcher, gardener) exhibited a collection of plants in bloom embracing a variety of cattleyas, cypripediums, odontoglossums and miltonias, effectively arranged in combination with ferns in pots. The same exhibitor showed some exceptionally fine specimens of azalea mollis.

W. A. Manda, of South Orange, N. J., showed a series of varieties of Laelia elegans; also Laelia purpurata, var. So. Orangensis, which was awarded a first-class certificate of merit.

A grand exhibit of cut orchids was made by Henry Clinkaberry, gardener to Charles G. Roebbing, Esq., Trenton, N. J., which included many varieties of cypripediums, cattleyas and laelias, and was awarded the distinguished honor of a gold medal. Included in this collection was the New Laelia—purpurata Roebbingiana, a fine specimen.

On this table was a fine display of rhododendrons from Mrs. B. P. Cheney (John Barr, gardener).

Collections of iris were shown by John L. Gardner and W. H. Cowing. Mr. Cowing also exhibited some grand oriental poppies, type and varieties Parkmanni, and twenty-two varieties, types and hybrids, of aquilegia. F. S. Davis showed a fine collection of aquilegia. W. N. Craig made a display of cut flowers, including ten or twelve varieties of good carnations. William Nicholson filled a large vase with a variety of fancy carnations. W. A. Manda showed a vase of Lillium longiflorum foliis albo-marginatus, a striking variety of longiflorum with a white stripe around the edge of the leaf, for which he received a first-class certificate of merit.

T. C. Thurlow made a large and interesting display of hardy shrubs, both flowering and foliage, also a collection of hardy azaleas and Azalea mollis, and another collection of fifty named varieties of azaleas. Mrs. E. M. Gill and Miss Hattie B. Winter arranged vases of flowers and Mrs. E. M. Gill and Mrs. A. D. Wood made displays of cut flowers.

Dr. C. G. Weld (Kenneth Finlayson, gardener) showed some fine specimens of rhododendrons and a collection of aquilegias. John Jeffries showed aquilegias and made an interesting display, and A. W. Blake exhibited some fine rhododendrons, iris and other cut flowers. The Bussey Institution made a display of late tulips and showed a curiosity in the shape of a tomato grafted on a potato with the vine fruiting at both ends.

James Comley was awarded a silver medal on a new hardy rhododendron—"James Comley"—and an honorable mention on one named William Power Wilson.

W. K. W.

Vandals at Glen Head, L. I.

Vandals visited the beautiful gardens of Mrs. S. J. Norton, the well-known artist, who has a residence in this place, between 12 and 2 o'clock, on June 2, and, after robbing the beds, ruined many valuable plants. Mrs. Norton was attending a wedding and had taken her gardener with her. The miscreants evidently watched their chance and made the most of their time, and that they were experts is shown by their selecting the rarest plants and taking them up by the roots. Mrs. Norton's garden is always one of the finest in this section.

Pittsburg, Pa.

The Botanical Society of Western Pennsylvania held its regular monthly meeting at Carnegie Library, Schenley Park, June 3. The attendance was considerably larger than usual. Superintendent William Falconer, of Schenley Park, made an address and exhibited about 100 different plants now blooming. He made a few remarks on each and said that within two years the park would contain all plants known to bloom and thrive in this climate.

Lenox, Mass.

The Horticultural Society held its regular meeting on Saturday, June 5, when there was a fairly good attendance.

There were on exhibition an extra fine specimen of Rhynchospermum jasmintoides, shown by Mr. A. H. Wingett (diploma); also a grand collection of flowering shrubs, shown by Mr. J. F. Huss (first premium); some fine hybrid Aquilegias from Mr. Loveless (special mention), and a brace of Telegraph cucumbers from Mr. C. R. Russell, of Stockbridge (special mention). Mr. Martin Finaghty, of the Overdale Nurseries, Lenox, read an excellent essay on perennials.

A discussion followed on the question of the advisability of watering during sunshine.—E. J.

Programme.

The Lenox society has just issued its programme of exhibitions and lectures for the remainder of the year. The arrangements are as follows:

July 3—Roses, Gloxinias, Vegetables and fruit; essay on "Fruit," by Mr. J. Paul.

August 7—Sweet Peas, Caladium and annuals; essay on "Annuals," by Mr. A. H. Wingett.

September 4—Gloxinias, Begonias, Canna, fruit and vegetables; essay on "Gloxinia and Begonia," by Mr. A. McDonald.

October 2—Ferns, Orchids and miscellaneous plants and flowers; essay on "Ferns," by Mr. W. F. Huss.

October 16—Roses, vegetables, fruit and miscellaneous flowers; essay on "Roses," by Mr. E. Jenkins.

November 6—Chrysanthemums; essay on "Chrysanthemums," by Mr. G. L. Thompson.
November 20—Violets, Mignonette and chrysanthemums; essay on "Violets," by Mr. A. Loveless.
December 4—Roses, Carnations and cyclamen; essay on "Carnations," by Mr. W. Russell.
December 18—Greenhouse and stove overowering and foliage plants and orchids; essays on "Orchids," by Mr. E. Norman.

Making It Easy for the Show Manager.

Mr. Richard Lewis, secretary of the Annandale Rose Show, says of the system of exhibition stationery, which we have brought out for the benefit of show managers, that "Last year the system worked most satisfactorily; the secretary's work was all finished the day before the exhibition, and on the day set for the exhibition all he had to do was to sit down before the entrance door and give the exhibitors their envelopes."
The system above alluded to is the most satisfactory ever devised, and all who have to do with the management of shows should give it their careful attention if they wish to save time and trouble.
Full particulars sent upon application to A. T. De La Mare, Printing and Publishing Co., Limited, P. O. Box 1,697, New York City.

Orange, N. J.

The regular meeting of the Floricultural Society was held on Monday last. The lecturer who had been announced for the evening was detained in Delaware by a business engagement, so the matter was deferred. Dr. Kitchen, on behalf of the Exhibition Committee, made an encouraging report and announced that a guarantee fund of \$90 had been subscribed, and further, that the ladies of the local Improvement Society had evinced interest in the Floricultural Society's projected fall exhibition and had promised their support.

Chrysanthemums.

Planting the Benches.—This should now be proceeded with as soon as practicable. Thoroughly clean out the house before getting in the new soil; for soil use, if possible, good rotted sod and the less manure the better. The private grower is at a disadvantage with bench plants, since he cannot, like the florist, devote a whole bench to one variety; but while in most cases all varieties must go into the same house, it can be done with discretion.

How to Plant.—In planting it should be so arranged that varieties that come in together should be planted together; early, medium or late, as the case may be. If early and late kinds be mixed in together trouble will ensue in feeding with manure water. One kind will be just in the stage when feeding is absolutely necessary and another developed so that feeding will be sure to cause the petals to damp.

Distance Apart.—Plant a foot apart each way, then a good bloom and stout stem is assured. It is better to have twenty high-grade blooms than 100 smaller ones. A big flower always commands attention, while everybody is surfeited with smaller ones.

Planting in Blocks.—All of one variety together is a good plan, but it has its disadvantages because then varieties that are liable to scald do not get the benefit of a little shade from the stronger ones. I think it better to plant in rows with the tallest kinds in the centre of the bench and graded down to the side. Then every plant has its place and does not get smothered.

Specimens should have their last potting now and attention must be paid to their training. Train up a plant in the way it should go and when it is old it will do you credit.

Seedlings.—If you have any a good plan is to put them in boxes easy to handle and let them go ahead. They may not turn out marvels, but are sure to be interesting, nevertheless.
C. TOTTY, N. J.

Orchid Notes.

Cattleya Skinneri Alba.

An importation of the typical C. Skinneri is now rarely seen, and the now much cherished white variety will eventually come to be considered a very valuable treasure. Large consignments were sent to Europe some fifteen or twenty years ago which included specimens of enormous size, requiring the efforts of several men to remove them from the cases; the packing was evidently faultless, for in many instances every bulb had fresh, plump foliage, and a specimen with 400 or 500 bulbs found a ready purchaser.

Notwithstanding that the type has been found in such huge masses, the "albino" has always remained extremely rare, the plants which collectors have sent home have been small and secured from the natives by tempting offers, the latter have cultivated them for many years—in fact the majority of C. Skinneri alba that have been imported were grown by the natives in their gardens, and unfortunately they do not travel so well as those collected from the woods. Such pieces are the source of much anxiety to the cultivator, as he daily watches his treasure endeavoring to recuperate after its long journey.

A small plant was some years ago purchased by the late W. S. Kimball, Esq., of Rochester, N. Y., which has grown with such remarkable freedom that it is now undoubtedly the finest specimen in the country. Each new bulb has produced a spike and has now seven in all, carrying over fifty well-developed pure white blossoms. Mr. George Savage has grown it most successfully in a glazed pan suspended from the roof of the cattleya house, the bulbs, foliage and root action indicating that its surroundings are highly conducive to the welfare of the plants.

Cattleya Gaskelliana Alba.

A grand specimen of this will be in bloom by the time this reaches your readers; it has eleven flower sheaths and at the time of our visit the buds were pushing through, so a few warm days will develop the snow-white flowers. Like all the orchids grown at Rochester, this has a glazed pan and enjoys its position suspended from the roof. The greenhouses are free to visitors and hundreds avail themselves of the kindness of Mrs. Kimball to see the numerous gems the collection contains.
A. DIMMOCK.

STATE OF OHIO, CITY OF TOLEDO, } ss
LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.
Sworn to before me and subscribed in my presence, this 6th day of Dec., A.D. 1896.

{ SEAL } A. W. GLEASON,
Notary Public.

Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free

F. J. CHENEY & CO., Toledo, O.
Sold by Druggists. 75c.

BIRTH.

MACFARLANE—At "Glenroy," Ridgedale Avenue, Madison, New Jersey, on Saturday, June 5th, wife of James Macfarlane, of a daughter.

WANTED.

[Rates, etc., same as in "For Sale" column.]

WANTED, a sober, single man, with good references, to work on private place; wages \$20 per month and board. Address B. Hofmann, Albion Place, Paterson, N. J.

WANTED—A bright respectable young man, used to growing roses and carnations for commercial purposes, wages 15 dollars a month and board. Address Robt. Petfield, Castle Grove Greenhouses, Danville, Pa.

WANTED

A copy of Sayer's book on the Dahlia (Boston 1899). Address,

Editor AMERICAN GARDENING,
P. O. Box 1697, New York.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.
The address will be charged as part of the advt., and each initial or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

CELERY PLANTS. See our ad. in this issue. Kirkwood Celery Co., Kirkwood, Ohio.

ALTERNANTHERA (red and green), good strong plants, \$2.00 per 100. Chas. T. Darling, Stony Brook, Long Island.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 718 Wharton St., Philadelphia. Three shipping points, can save you freight.

HAWKEYE—I have secured from the inventor the right to manufacture and sell the Hawkeye Strawberry Runner Cutter. I believe it to be the best tool made for this purpose. It is light, strong, durable and cheap. By express, prepaid, \$1 80. Address Allen D. Manwell, Box 686, Vinton, Iowa.

LAND DEVELOPMENT, consultations, plans, superintendence, plans, labor, etc., supplied for work as wanted. 600 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City

CELERY PLANTS

We are growing celery plants by the million on ground specially adapted. The roots are long and heavy. White Plume, Golden S. B., Giant Pascal, and all popular sorts. Evenly sorted and safely packed at \$1.25 per 1000; 5,000, \$6.00.

KIRKWOOD CELERY CO., Kirkwood, Ohio.
Mention American Gardening when you write.

Built to Sit On, Not to Straddle.



THE WHEELER BICYCLE SADDLE.

Every rider who has given the WHEELER REFORM a trial prefers it to all other saddles. Endorsed by physicians.

Especially recommended for ladies. Our free catalogue tells all about it. Insist on having it from your dealer, or write

THE WHEELER SADDLE CO.,
189-191 Larned St., West,
DETROIT, MICH.

A special discount for all orders through this medium.
Mention American Gardening when you write.

INCUBATORS. Self-regulating. Catalogue free
G. S. SINGER, Cardington, O.
Mention American Gardening when you write.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 665, ALBANY, N. Y.

Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 20 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America.

A printed list sent on application. Sales made at reasonable prices.

E. CORNING

Mention American Gardening when you write.



A Conscientious Farmer.

He lives in Indiana. After some one had persuaded him to buy another coiled spring fence, he satisfied himself that it infringed on the Page Company's patents. Then he wrote asking us to name a reasonable royalty, on payment of which he might be allowed to use it, and hereafter he will pay of the rightful owners.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write

Offer No. 51.

Sent, Postpaid, for only one NEW Subscription at \$1.

TEN FINE CHRYSANTHEMUMS

NEWEST, EARLIEST, BEST.

In Splendid Assortment of Varieties,



Forms, Substance and Color.

Mrs. Higginbotham. Best of all Ostrich Plumes.
Gloriana. The pretty twisted petalled yellow.
Marie Louise. A grand white.
Pitcher and Manda. A variety of two colors.
Kate Brown. Earliest and best for the garden.
Pres. Smith. A robust pink.
Silver Cloud. Pale salmon.
G. W. Childs. Finest of the reds.
Major Bonaffon. The best yellow.
Mrs. Henry Robinson. The queen of all the whites.

Amongst all the wealth of Flora's bountiful store, and the wonderful offers by the various growers who have contributed to our rich and varied premium list, there will be found none more enticing nor more valuable than the above. Requiring but a minimum of care in warm localities and slight protection to mature in more severe climate, and rewarding the cultivator with a wealth of bloom at a time of the year when the other glories of the garden are fast disappearing, what flower lover would ignore the claim of the Chrysanthemum? And where, we ask, will you find a duplicate of this wonderful offer? This collection comprises several different types, incurved, reflexed, early, late, ostrich plume, variegated, as well as a representation of all colors.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

Questions Answered.

This is a Bureau of Information, to which subscribers can apply freely for advice on any and all subjects in the field of horticulture.

In order to lessen labor, and that the Editor and his friends may understand each other, the following rules must be observed:

Rules for Correspondents.

Questions must be concise, plainly written on one side of the paper only, and addressed INQUIRY DEPARTMENT, AMERICAN GARDENING, P. O. Box 1697, New York City.

Letters appertaining to subscriptions, or other business matters, should be directed separately; otherwise delay may follow.

The name and address of the sender is required, in addition to a nom de plume. Use a separate sheet of paper, not a scrap, for each question. Questions will be attended to without delay. If by mistake a query fails to be answered, it should be repeated.

Specimens of plants for identification must be ample; mere scraps will not do, and no notice can be taken of such.

Questions relating to insects or diseased plants should always be accompanied by specimens, packed in a tin box, and forwarded at letter postage. Always send a liberal sample.

Conditions and soils vary so infinitely that we would be pleased to have our correspondents describe theirs.

Correspondents referring to articles which have appeared in AMERICAN GARDENING should mention page and date of issue.

• We cannot promise to comply with requests to answer by mail.

•• We cannot undertake to reply by mail.

Crops for Profit.

The first part of July I am going to get a farm of about twenty acres; ten acres is pasture and the other half is for vegetables. Please inform me what to plant or to sow on it that will give some satisfaction. Is it too late for oats to get some straw for horse bedding?—A., Mass.

It is now too late to sow oats or any straw-producing crop. There are two crops which can be sown in your locality up to July 10 and which will produce good fodder, viz.: Fodder corn or Hungarian millet; this last-named, if sown by that date, will give excellent results. Among vegetables celery, radishes, lettuce, spinach, early peas, cauliflowers, suggest themselves as possible crops. Another suggestion to make is this, would you not profit by fallowing the land this fall and thus clean it thoroughly? Perhaps in the long run this may pay better than cropping.

Propagating Hydrangeas.

Will you kindly tell us in American Gardening what mode of propagation nurserymen employ when growing Hydrangea paniculata grandiflora?—P. F.

Tips of young shoots can be rooted in sand in a cold frame at this season; cover with a shutter for a few days; keep the sand very moist and continue shading until rooted. In the spring thousands of cuttings are available on the ripe, dormant wood. These, cut in lengths of four or five inches and placed in nursery rows, give a large proportion of plants later.

Time to Prune Evergreens.

I have a long line of white pine trees set about eight feet apart; have been growing four years. I want to have a thick hedge. When is the best time in the year to trim for that purpose; also the best time to trim all kinds of evergreens?—J. N. H.

April or May is the best time in which to trim and prune all evergreens. Somewhere near about the middle of May the majority of them are nearly ready to cast their old leaves and push out the new. If the grower watches closely he can generally manage to lift, prune, etc., just a week or so before this, so that as the tree puts on its new effort it outgrows any check that may be given. The underlying principle in this is that any serious check given to a so-called evergreen previous to the above-mentioned date suspends leaf action, prevents proper ripening, with the consequence that nature is not able to cast off what foliage she otherwise would, with the result that sickness and oftentimes death follows. After evergreens have started once into growth there is danger in cutting severely or mutilating, owing to excessive flow of sap. Bleeding is apt to follow, and if this does not kill it weakens considerably; nevertheless, a judicious use of the knife is beneficial at any period during active growth, providing that the

An Ounce of Prevention

—you know the rest. In this case it consists in taking a few bottles of that thoroughly reliable lifesaver

Warner's Safe Cure

After the long winter of inactivity you may find the spring work and the hot sun more than you are able to bear. You may be debilitated; your liver may not be working well; you may have dyspeptic tendencies. The above remedy will fix you up and make you feel good as new. It is an infallible cure for

**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

It is entirely a vegetable compound. Beware of substitutes. There's nothing so good as Warner's Safe Cure.

...THE COMPLETE... BOOK CATALOGUE

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 66 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers
The Fruit Grower
The Nurseryman
The Private Gardener
The Market Gardener
The Seedsman
The Farmer
The Poultry Keeper
The Student of Botany, Entomology and Ornithology
and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MANE PTG. AND PUB. CO. LTD.
P. O. Box 1697, New York.

balance or general flow of sap be not materially interfered with. This kind of pruning is more to be recommended than the severe, drastic clipping and beheading. The knife is better than the shears.

Manurial Value of Shoddy Refuse.

What is the manurial value of the refuse from shoddy mills and to what market garden crops will it be of benefit? Shoddy refuse is made as follows: Twenty pounds each of salt and sulphuric acid are put in a retort and heat is applied; the gas therefrom is forced into a large revolving iron box containing 400 to 500 pounds of mixed cotton and woolen rags. All the cotton is eaten by the gas and becomes dusty and similar in appearance to short hair. The woolen threads which are left intact go to make the shoddy of commerce. Some claim this cotton refuse is a first-class manure.—GEORGE J. RYERSE.

No published analyses of shoddy waste, produced as described, are available. It would probably be of much the same general nature as cotton waste and cotton dust. The former contains 1.8 per cent. nitrogen, 1.4 per cent. potash and 0.5 per cent. phosphoric acid; the latter 0.8 per cent. nitrogen, 0.5 per cent. potash and 0.8 per cent. phosphoric acid. Unless some of the wool finds its way into the waste it will be of small value as a manure.—JOHN FIELDS.

For Tuberous Begonias.

Will you please, through your paper, tell me what kind of soil tuberous begonias want, and when to let them rest, and what time of year they are at their best?—CHARLES W. MEEKER.

A good compost for tuberous begonias, if grown to flower in pots, is one-half strong, fibrous loam, the balance to be made up with leaf mold, spent, rotted manure and sharp sand. The plants bloom during the summer only and rest as a potato or dahlia during winter.

Fruiting Seedling Gooseberries.

Can you tell me how many years are required to fruit gooseberries from seed? Last spring I planted seeds of industry and the plants grew to eighteen inches in

height. This spring they are making fine growth.—GOOSEBERRY.

If transplanted each season they may show a few fruit the third year. Of course, you may expect to see almost any other kind than industry from the seedlings.

The Logan Berry.

Please state how the Logan berry is propagated?—J., Alabama.

By stolons (running roots) and by division. It does not come true from seed.

Names of Plants

(To A. W. Warner)—*Korra japonica*, fl. pl.

(To E. C. Hargadine)—A variety of *Papaver somniferum*.

Some of California's Big Trees.

In the national parks and forest reserves of California the big trees are by far the most interesting and greatest natural features. There are two species, namely, *Sequoia sempervirens*, ordinarily known as the "redwood," the tree which has furnished most of the redwood lumber of commerce, and *Sequoia gigantea*, from which a comparatively small amount of similar lumber has also been made. The former is the smaller tree, and grows on the foothills along the coast; the latter attains a considerably larger growth, is, more strictly speaking, the "big tree" of California, and is seldom found at a lower altitude than 5,000 feet.

Scattered along the extent of the Sierra Nevada from north to south are many distinct and separate groups or groves of *Sequoia gigantea*. These are generally known by names significant of locality, as, for instance, "Calaveras," "Tuolumne," "Mariposa" and "Fresno," names of the counties in which the groves so called are sit-

uated. The Tuolumne Grove is in the Yosemite Park, and the Mariposa near by. This latter is the one most frequently visited by tourists, and contains the "Wawona," a tree with a hole burned in its base, through which the stage road runs, and four-horse stages are driven without difficulty, and the "Grizzly Giant," one of the largest trees in the world.

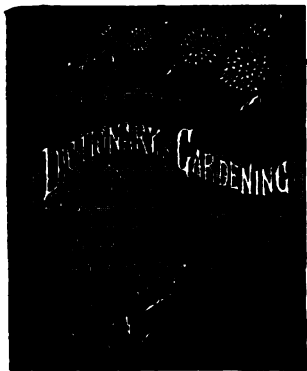
The stately grandeur of these enormous and lofty trees is so impressive it seems quite fit and natural that some of the larger ones should have been individualized and honored with distinguished titles. Nearly every State in the Union and every distinguished general of the civil war has a namesake among them. The "General Grant," in the General Grant Park, and the "General Sheridan" of the Giant Forest" (situated in the Sequoia Park), are individuals of the largest size. It is difficult to determine just which of the big trees is the largest, but these two and the "Grizzly Giant"—the gnarly base of any one of which will exceed thirty feet in diameter—are probably the biggest trees yet discovered.

The trees often grow in such inaccessible mountain retreats that some of the territory covered by them has never yet been thoroughly and systematically explored. Outside the lands reserved by the government, a California lumber company owns several thousand acres of these trees—enough to last forty years, cutting many millions of feet per year.—Harper's Weekly.

American Gardening we hold with highest praise and could not do without it in our home.—WESLEY EYER, Del.

I wish to thank you for the premium—Yellow Rambler—sent in such excellent condition.—D. S. HANKINS, Pa.

HOW'S THIS FOR A PREMIUM?



DICTIONARY OF GARDENING

A Practical Encyclopædia of Horticulture.

AMATEURS AND GARDENERS have long experienced the want of a full and reliable book of reference to which they could turn with confidence for an accurate description of any plant of horticultural value, and practical instruction in its cultivation. The *Dictionary of Gardening* is the most complete work of the kind ever published, and gives full information about all Flowering and Foliage Plants for the Open Garden, Ferns, Palms, Orchids, Cacti and other Succulent, Greenhouse and Stove subjects, Bulbs, Trees, Shrubs, Fruit, Herbs and Vegetables, as well as particulars of the various Garden Structures and Implements.

This unique and exhaustive work has had neither labor nor money spared upon its production, and having had the enormous advantage of being edited by such a thoroughly competent—practical as well as scientific—authority as Mr. GEORGE NICHOLSON, Curator of the Royal Botanic Gardens, Kew, England, assisted by the most eminent Botanists and Cultivators, its accuracy, both Scientific and Cultural, can be relied on—a point of the utmost importance in a work of this kind. That this is the fact will at once be recognized when it is stated that such world-renowned men as Sir JOSEPH HOOKER, Professor W. H. TRAIL, Professor OLIVER, Dr. M. T. MASTERS, Rev. PERCY W. MYLES, J. G. BAKER, WILLIAM BOTTING HEMSELEY, JOHN GARNETT, WILLIAM WATSON, JAMES VEITCH, PETER BARR, &c., have contributed to perfect the work.

The Practical Information and Botanical Classification have been brought down to the present date, and in all respects the *Dictionary of Gardening* has been made the Standard Work on Horticulture in all its branches, from the growing of the hardiest Plants to the cultivation of the most delicate Exotics.

A most important part of the work is that relating to Insect Pests and Fungoid Diseases; both these subjects are treated very fully, and more reliable information concerning their cause and cure will be found here than in any other book.

For convenience of reference, the *Dictionary of Gardening* is arranged alphabetically, the Species and Varieties of the plants described being placed alphabetically under their Genera. Under the name of the Genus will be found the Derivation of its name, the English name, Synonyms, Order, General Description and Cultural Directions, including Methods of Propagation. Then follow, in alphabetical order, the Species and Varieties of garden value, description of their Flowers and Leaves, Time of Flowering, Height and particulars of any Special Treatment required; and the best and most distinct of the sorts described are specially pointed out.

The number and beauty of the Illustrations in the *Dictionary of Gardening* are without a parallel in any book on Floriculture, and are of themselves sufficient to secure for the work the highest place in the Literature of the Garden. More than 2370 First-Class Engravings are given in the complete work, and the Colored Plates are magnificent examples of Chromo-Lithography, and are remarkable as much for their correctness as for the beauty and delicacy of their finish.

To make the work complete in every respect, a Supplement has been added, which, among other features of value, contains a Pronouncing Dictionary of the Scientific Names of every Plant; a list of Genera and their Authors; Indices to Flowering Periods, Heights and Colors of Plants and their Blossoms; Plants for Special Purposes and Positions; and Indices to Ferns, to Cacti, to Palms, to Orchids, &c., and other matter of real utility.

This splendid work, complete in 4 volumes, with Colored Plates, will be forwarded, carriage free, to any part of the United States, on receipt of \$20.00.

Circular and commendation will be mailed on application.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK.

TO OBTAIN THIS DICTIONARY ...FREE...

The above described set of Four Magnificent Volumes will be given, free, as a premium, for 50 subscriptions to *American Gardening* at \$1.00 each. To those who desire to obtain this work without delay, we offer this equitable arrangement: If you will faithfully carry out, to the best of your endeavors, the following agreement, we will at once forward you the four volumes, express paid, on receipt of \$14 in cash, giving you three months in which to send us sixteen subscriptions, at \$1.00 each, to complete the payment. A receipt in full will then be sent you, but naturally you will want to earn back your first payment to us of \$14.00, and this you can accomplish by continuing to solicit subscriptions until you have taken fourteen more at \$1.00 each, the names as received to be sent to us to be placed on our mailing list, and the money (\$14.00) to be retained by you, as collected, to make good the first \$14.00 paid us. We give you three months more in which to do this. In this way you send us in all \$50.00 and 50 subscriptions, and obtain, absolutely free, this perfect series of four unparalleled volumes, embracing all that is necessary to know in the literature of Horticulture. Address all orders and correspondence to

WHOLESALE MARKETS.

New York.

The market is beginning to get a good deal crowded with stock of every kind and it is becoming a little difficult to clean out.

Hothouse grapes are making from 75c. to \$1.50 per pound.

Hothouse peaches, \$2@33 per dozen.

Gooseberries are coming in from Hilton, N. J., and other districts; fruit is poor and under-sized; 4c. and 5c. per quart is the taking price.

Some excellent strawberries have been seen from Hilton, N. J.; also from Long Island growers. Some of these make 25c. per quart; other grades vary from 3c to 10c. per quart.

Fruit.

Strawberries—Hilton and Irvington, extra fancy varieties, quart, 10@25c.; up-river, fair to choice, per quart, 6@10c.; Jersey and Delaware, Gandy's Prize, per quart, 6@10c.; Jersey, Monmouth County, usual sorts, per quart, 5@9c.; lower Jersey and Delaware, usual sorts, per quart, 5@7c.; Baltimore, per quart, 6@8c.; Maryland, usual sorts, per quart, 4@7c.

Gooseberries—Prime, green, per quart, 4c. Huckleberries—North Carolina, large, blue, per quart, 12@13c.; ordinary, per quart, 10@11c.

Blackberries—North Carolina, cultivated, per quart, 10@12c.; small, per quart, 6@8c.

Cherries—Virginia, per 10-pound basket, 50@60c.; per small basket, 25@30c.; large, per pound, 7@9c.; small, per pound, 4@5c.; Baltimore, common to prime, per quart, 4@8c.; Maryland and Delaware, fair to good, per quart, 5@8c.

Melons—Watermelons, Florida, good to choice, per car, \$250@300. Muskmelons, Fla., per basket, \$1@1.50.

Peaches—Florida, choice, per carrier, \$2.50@3; ordinary, per carrier crate, \$1.50@2.25; Georgia, early sorts, per carrier, \$2.50@3; South Carolina, per carrier, \$2@3; North Carolina, early sorts, per carrier, \$1.75@2.50.

Vegetables.

Asparagus—Near-by, large, per dozen, \$2@2.50; near-by, average prime, per dozen, \$1.50@1.75; Maryland and Delaware, per dozen, \$1@1.50; inferior, 50c.@1.

Beets—Local, per 100 bunches, \$2.50@3; Southern, per 100 bunches, \$1@2.50.

Cabbages—Norfolk, Flat Dutch, per barrel crate, \$1.12@1.25; Norfolk, Flat Dutch, per barrel, \$1@1.12; Norfolk, Wakefield, per barrel crate, \$1@1.12; Norfolk, Wakefield, per barrel, 90c.@1.

Cucumbers—Charleston, per basket, \$1@1.25; Savannah, per basket, 75c.@1; Florida, per basket, 50c.@1; Florida, per crate, 50@30c.

Egg plants—Florida, per one-half-barrel box, \$1.50@2.50.

Onions—Eastern Shore, per one-half-barrel basket, \$1.50; Bermuda, per crate, \$1.50@1.75; New Orleans, per barrel, \$2.50@3.50; New Orleans, per bag, \$1.25@1.50; Egyptian, per sack, \$2@2.15.

Peas—Maryland, per barrel, \$1.25@1.50; Maryland, per one-half-barrel basket, 75@90c.; Jersey, per one-half-barrel basket, 60c.@1; Eastern Shore, per one-half-barrel basket, 60@90c.; Norfolk, per one-half-barrel package, 50@60c.; Long Island, per bag, \$1.

Radishes—Near-by, per 100 bunches, 25@30c.

String beans—Norfolk, per one-half-barrel basket, \$2.25@2.50; North Carolina, wax, per basket, \$1.25@1.75; North Carolina, green, per basket, \$1.25@1.50; Charleston, wax, per basket, 50c.@1.25; Charleston, green, basket, 50c.@1.

Philadelphia.

Much more activity has been noticed here this past week; consignments have increased very largely and the market has been well cleaned up on most days.

Strawberries are down very low, the best price for choice Gandy berries has been 10c., while inferior grades have been sold at \$1 per crate. The market is over-supplied. This is accounted for chiefly because of so much rain. The canners will not use the berries when water-soaked.

Hothouse tomatoes are still very plentiful, but are somewhat firmer than last week, and are now selling at 7@8c. per pound.

Asparagus—Choice Pennsylvania, \$2@2.50 per dozen bunches; Jersey, choice, \$1.75@2 per dozen bunches; Jersey, fair to good, \$1@1.20 per dozen bunches.

Beets—Charleston, per 100 bunches, \$1.75@2.50.

ARMSTRONG & McKELVY Pittsburgh.
EYMEER-BAUMAN Pittsburgh.
DAVID-CHAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ANGOR Cincinnati.
KOKSTEIN Cincinnati.
ATLANTIC New York.
BRADLEY New York.
BROOKLYN New York.
JEWETT New York.
ULSTER New York.
UNION New York.
SOUTHERN Chicago.
SHIPMAN Chicago.
COLLIER St. Louis.
MISSOURI St. Louis.
RED SEAL St. Louis.
SOUTHERN St. Louis.
JOHN T. LEWIS & BROS CO Philadelphia.
MORLEY Philadelphia.
SALON Cleveland.
CLEVELAND, Mass.
OORWELL Buffalo.
KENTUCKY Louisville.

CONSIDER THE COST. Suppose the building is 60x25x20. It will require to paint it, 14 gals. ready-mixed paint at \$1.25 per gal.—\$17.50.

Or, four 25-lb. kegs of white lead, \$6.00; five gals. pure linseed oil, \$2.00; four cans tinting colors, 80 cts.; 1/2 pt. Japan dryer, 15 cts.; 1/2 pt. turpentine, 5 cts. Total, \$9.00—a saving of \$8.50 in favor of Pure White Lead without considering its greater durability. Examine the brand (see list).

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price with list extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.

BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

THREE NEW CANNAS.

BAY TREES.

40 NEW IRIS.

HARDY PALMS.

AND EVERYTHING FOR DECORATING.

SIEBRECHT & SON, 409 5th Ave., New York.

Mention American Gardening when you write.

GLASS For Greenhouses, Grap-eries, Conservatories, Hothouses and Hotbeds. GLASS

VANHORNE, GRIFFEN & CO.

Importers of French Glass.

13, 15 & 17 LAIGHT ST., AND 52, 54 & 56 VARICK ST., NEW YORK.

Mention American Gardening when you write.

Offer No. 35.

SENT postpaid, for ONE \$1.00 NEW subscription at

....BEAUTIFUL....



Twelve Everblooming Roses

Grower's selection from leading varieties.

Of all premium offers this is decidedly one of the most tempting and we fully guarantee its absolute reliability. Grower says: "We will fill your orders with strong well-ripened plants, grown specially for the purpose, from 2 1/2 inch pots. This is our most popular collection and it has made hundreds of customers for us, as the testimonials in our possession will show." In this collection will be found such varieties as:

Perle
F. Kruger
The Bride

Virginia
Snowflake
Bon Silene
Empress of China

Bridesmaid
Pink Souper
Maman Cochet
Prince Hohenzollern

Cornelia Cook
Maurice Rouvier
Catherine Hermet

The collection embraces a variety of colors, each plant is distinctly labeled, and the collection will make a beautiful bed. Packed in stiff, telescoped pasteboard boxes, oil finished on inside, and shipped to any address in the U. S. in good condition.

Orders for this collection can be filled at any time, but subscribers in the North and West are advised not to have their orders filled until April 1, or later.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK.

Cabbage—Norfolk, per barrel, \$1.25@
\$1.50; Charleston, per barrel crate, \$1.00@
\$1.35. Cucumbers—Charleston, per basket, \$1.25
@ \$1.75; Florida, per crate, \$1.00@ \$1.50.
Celery—Florida, choice, per dozen, 35
@ 60c.
Egg plant, per crate, \$2.00@ \$2.25.
Onions—Bermuda, per crate, \$2.00@ \$2.25;
Egyptian, per bag, \$2; New Orleans, per
barrel, \$2.75@ \$3.
Lettuce—Pennsylvania, per barrel, \$1.00
@ \$1.50; Jersey, per barrel, 75c. @ \$1.25.
Peas—Maryland, per one-half-barrel
basket, 75c. @ 90c.; Norfolk, per one-half-bar-
rel basket, 50c. @ 75c.
String beans—North Carolina, green,
one-third-barrel basket, \$1.50@ \$1.75; North
Carolina, wax, \$1.25@ \$1.60.
Tomatoes—Florida, choice, \$1.50@ \$1.75;
fair to good, \$1.25@ \$1.40; Mississippi, per
crate, 4 baskets, \$1.00@ \$1.25.
Potatoes—South Carolina, per barrel, \$3
@ \$3.50; Florida, per barrel, \$3.50@ \$4; sec-
onds, \$2.75@ \$3.
California cherries have been sold at
auction this week at 75c. per box; apricots
at 60c. per box.
Mushrooms rather scarce; good stock
selling at 40c. @ 60c. per pound.

Obituary.

Robert Douglas.

This pioneer nurseryman died sud-
denly at his home, Waukegan, Ill., on
Tuesday, June 1, aged 84 years.

Mr. Douglas has been aptly named
the "father of forest planting in Amer-
ica." He was born at Gateshead, Eng-
land, on April 20, 1813, and came to this
country in 1836, locating permanently
at Waukegan, in June, 1844. He was
the first to raise evergreens from seed
in the open air here. Up to that time
all of the foreign evergreens were im-
ported from Europe at two or three
years old.

Mr. Douglas had seen the seedlings
growing in the north of England with-
out shade, and at the close of the war
he bought seeds in quantities and
sowed them by the acre. They came
up as finely as any he had ever raised,
but he did not raise a plant, as they
all damped off or scorched off before
autumn. The next year he used frames
covered with coffee sacks, and they did
well, and were no great trouble, as the
rain went through so that they did not
need watering; but the coffee sacks
soon rotted. After that he made lath
frames, such as are now in common
use. But for the past twenty years he
had grown them under tall arbors. Mr.
Douglas was the first to plant and care
for artificial forests in America and on
the largest scale that any have been
planted.

After the *Catalpa speciosa* became
noted he grew millions of this tree.
Many Western States now have forests
of this and other trees, which were all
planted by this enterprising man. An-
other of his noted introductions to cul-
tivation is the blue spruce, some mag-
nificent specimens of which may still
be seen on his grounds in Waukegan.

Robert Douglas's name is associated
with all the early efforts of founding
horticultural societies in America, in-
cluding the American Association of
Nurserymen. He was a genial, modest,
unselfish and liberal-minded man, hon-
orable and upright in all his business
dealings. He had rendered grand and
noble service to the cause of horticulture
during the past half century.

He planted large forests near Far-
lington, in Kansas, and elsewhere, and
his counsel has always been in demand
wherever forest problems were studied
in this country, as for example, at the
Leland Stanford University, in Califor-
nia, and George W. Vanderbilt's estate
at Biltmore, N. C. He was one of the
trusted assistants of Professor Sargent
in gathering data for his forest report
of the Tenth Census, and many of the
specimens in the Jesup collection of
woods in the Museum of Natural His-
tory here were collected by him. No
one in his time has devoted himself to
the study of trees with greater intelli-
gence or success, and no one has done
more to increase the love for them or
to encourage the planting of them in
the United States.

Diplomas and Certificates



HORTICULTURAL SOCIETIES,
FOR FAIRS, INSTITUTES, : :
FLORISTS' CLUBS, ETC.

These should be selected well in advance of the date needed, and sec-
retaries of above should send now for our set of samples, all of which
have been especially designed by first-class artists and engravers for
the purpose. Owing to the wide demand for these samples and their
expensiveness, we will mail the set of five, postpaid, for \$1.00; money
refunded on return of samples, or placed to credit of order, as directed.
One single sample sent free on application if the writer will explain the
exact purpose for which it is wanted.

A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.

HEADQUARTERS FOR ALL PRINTED SUPPLIES.

FARMERS
REDUCE the Price of Your Insurance
by roofing your building with our CORRUGATED
IRON AND STEEL ROOFING.
No more fires from defective flues, where the chimney
passes through the roof, or from sparks falling upon the
roof. Cheaper than shingles, because the first cost is no
greater, while the lasting qualities are double. A GOOD
CORRUGATED STEEL ROOF at 2½ cts. per square
foot. A building roofed with iron or steel is entitled to the
same rate per thousand of insurance as one which is
roofed with slate—the difference in first cost is in
favor of iron and steel.
For circulars, prices and estimates, address
THE BERLIN IRON BRIDGE CO.,
EAST BERLIN, CONNECTICUT.
Mention American Gardening when you write.

Offer No. 81.

FOR TWO NEW SUBSCRIPTIONS We will send, postpaid, this won-
derful **Combination Tool** needed
in every garden and by every Gardener and Fruit Grower.

KELLY'S PRUNING SHEAR AND GRAPE PICKER
A NEW DEPARTURE IN
PRUNING AND GRAPE
SHEARS.
A COMBINATION SHEAR AND
HOLDER WORKING WITH ONE MOVEMENT
OF THE HAND. IN TRIMMING ROSE OR PICKING GRAPES THE
HAND DOES NOT COME IN CONTACT WITH THEM.
THEY ARE ALWAYS
READY FOR USE.
JUST FITS THE HAND.
MADE OF SOLID STEEL.
FULLY WARRANTED.
THEY WORK
WITH THE GREATEST
EASE, A CHILD
CAN USE THEM. HOLDS
FIRMLY ANYTHING CUT
OFF UNTIL RELEASED
BY THE OPERATOR.

A PRUNING SHEARS, FLOWER GATHERER and GRAPE PICKER
ALL THREE IN ONE.

AS A FLOWER GATHERER.—In picking flowers or removing dead leaves they
are held firmly by the shears until released by the operator.

AS A GRAPE PICKER.—In picking Grapes the bunch cut off is firmly held by
the shears and placed in the basket without touching them with the hands, pre-
serving the bloom on the grapes; leaves left hand free to hold up the vines or basket.

IN ADDITION.—The holders do not extend to the point of the shears, thereby
facilitating the trimming off of small branches, leaves and defective grapes.

Every one who gathers flowers or fruit has been annoyed by the difficulty in
catching the fruit or bloom after it was severed from the parent stem. With
this instrument there is no danger of fruit or flower dropping to ground, or of
spoiling trees, vines or plants when clipped from high places.

Every pair of Shears mailed out by us is made from High Grade cutlery
steel and fully warranted, and should one be found defective, when used for
the purposes advertised, we will replace. Patented March 16, 1897. When
not wanted as a premium these shears can be obtained from the publishers of
AMERICAN GARDENING, postpaid, for \$1.00.

AMERICAN GARDENING, P. O. Box, 1697, NEW YORK.

OUR LEADING PREMIUM OFFERS

AND

THE CHOICEST INTRODUCTIONS FOR 1897

The Three Best Known Cannas are

OFFER

No. 66.

Austria, Italia and
Mrs. Fairman Rogers

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed Madam Crozy type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of Mme. Crozy, their superiority is again evidenced in the fact that each branch presents a rounded head, which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{4} \times 1\frac{1}{4}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.

ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. Austria is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. Italia as flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the *Gladiolus*, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of Austria with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 33 growths, and attained a height of 42 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and Italia were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.

One Plant for One new subscription; the set of Three Plants for Two new subscriptions.

Plants can be bedded out to advantage until well into June.

AMONGST OTHER PREMIUMS WHICH MAY STILL BE OBTAINED, WE MENTION:

TWO DISTINCT ROSE COLLECTIONS; twelve good plants in each; offers good until July.

Collections of **CHOICE DAHLIAS;** their cultivation is meeting with revived interest.

CHRYSANTHEMUMS—We are still offering **Two Choice Collections** of the Queen of Autumn.

GLADIOLUS—Choice Bulbs. May be planted until quite late for Fall flowering.

"**YELLOW RAMBLER,**" Rose; the novelty of 1897.

Nearly all of these unexcelled premium offers are for **JUST ONE NEW SUBSCRIPTION**, which it would not take you ten minutes to earn. Full descriptive list mailed on application.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK.



VEGETABLE PLANTS.—All kinds. Price list free. E. C. HARGADINE, Felton, Del.
Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

VEGETABLE PLANTS

FOR SPRING AND SUMMER.

We grow a full line of all the desirable varieties. We offer Tomato, Lettuce, Cabbage, Celery and Sweet Potato plants at 25 cents per 100; \$1.25 per 1000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

CELERY PLANTS

We grow Celery Plants by the acre on land specially adapted to them. Sown thin, each plant is strong, stocky and well rooted. White Plume and Golden Self Blanching, etc., we ship safely to all parts of the United States. Price, 500, 750, 1000, \$1.25; 5000, \$5.00.

WILSON BROS., Tecumseh, Mich.

Mention American Gardening when you write.



UNIVERSAL INSECTICIDE
For Flowers, Trees and Animals.

Recommended and in use by the foremost Florists and Nurserymen in the land. Sample 4 oz. package sent by mail upon receipt of 25c.

Rose Manufacturing Co.
Niagara Falls, N. Y.

Mention American Gardening when you write.

CYPRESS
[IS MUCH MORE DURABLE THAN PINE.]
CYPRESS SASH BARS
[UP TO 32 FEET IN LENGTH OR LONGER.]
GREENHOUSE
AND OTHER BUILDING MATERIAL.
Send for our Illustrated Book "CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.
THE A. T. STEARNS LUMBER CO.,
Neposens, Boston, Mass.

Mention American Gardening when you write.

200 CELERY PLANTS



AS FOLLOWS:

- 50 Plants White Plume.
- 50 Plants New Rose.
- 50 Plants Golden Self-Blanching.
- 50 Plants Giant Pascal.

This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to AMERICAN GARDENING. Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

ASK YOUR SEED DEALER FOR

SLUG-SHOT

TO DESTROY

Current and Cabbage Worms, Potato Bugs, Cucumber Fleas, Rose Lice and Slugs, Lice on Cattle, Fowls, Etc.

SLUG-SHOT stands to-day the most successful general insecticide in the world for use on VEGETABLES, FRUITS OR FLOWERS. It is put up in various sized packages to suit all wants. We prepare all sorts of INSECTICIDES and FUNGICIDES for spraying or in powder. GRAPE DUST—Powder for destroying Mildew on Roses and Gooseberries. If you have trouble with insects or blights, write and we will try to help you. Send a postal for pamphlet to B. HAMMOND, Fishkill-on-Hudson, New York.

Mention American Gardening when you write.



TRADE MARK.

GRAPE DUST—Powder for destroying insects or blights, write and we will try to help you. Send a postal for pamphlet to B. HAMMOND, Fishkill-on-Hudson, New York.

"JADOO" FIBRE.

A New Potting Material
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address **THE AMERICAN JADOO CO.**

513 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

LORD & BURNHAM CO.,

ARCHITECTURAL ARCHITECTS AND BUILDERS

HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York.

Mention page

HOUSE PLANTS

AND HOW TO SUCCEED WITH THEM.

By LIZZIE PAGE HILLHOUSE.

This work has been written by a woman for women. Recognizing the fact that no practical and easily understood guide covering the subject has ever been published, Mrs. Hillhouse has undertaken to fill the deficiency, and most ably and effectively has she accomplished the task. The result is a book of information and instruction, written in simple, easily understood language, which will be prized and consulted by every woman fortunate to become its possessor. Of all books of reference issued for women, "HOUSE PLANTS" will take its position second only to the much prized and ever needed family cook book.

"HOUSE PLANTS" will be issued from our press, June 24: It is handsomely bound in cloth, beautifully illustrated, and will be mailed, postpaid, to any address on receipt of \$1.00.

AGENTS WANTED.—This meritorious work will be sold exclusively through our agents, and application for terms and territory should be made at once. We are in a position to offer large discounts, and so universal will be the demand for the book, every lady at all interested in plants being sure to need one, that agents will easily make from \$4.00 a day and upward. Send us \$1.00 for your first copy, terms, etc., the discount will be allowed on this copy when your second order reaches us.

For full particulars, apply to

A. T. DE LA MARE PTG. & PUB. CO. Ltd., P. D. Box 1697, New York.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 130.
COMBINED SERIES VOL. LI.

NEW YORK, JUNE 19, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

American Association of Nurserymen.....	440	Celery.....	439	Poultry Notes.....	447	Shrubs, Decorative Value of Flowering... ..	438	Vegetable Garden.....	439
American Seed Trade Association.....	446	Cucumbers Under Glass.....	440	Private Gardeners.....	444	Societies, Reports.....	444	Violets, Planting Out... ..	439
Ants.....	443	Fruit Garden.....	438	Questions Answered ...	448	Spent Manure.....	449	Window Gardening.....	447
Aquilegias.....	439	Geraniums.....	447	Readers' Notes.....	443	Spruce, Insects on.....	448		
Arouse Ye!.....	442	Grapes.....	438	Rose Bugs.....	449	Strawberries.....	444	Illustrations.	
Asparagus.....	439	Home Plot, The.....	447	Roses, A Plea for Garden.....	443	Strawberries, Forcing... ..	443	Apple Blossoms.....	439
Asparagus Rust.....	437	Injurious Insects, Legislation for.....	440	Roses Not Opening.....	448	Strawberry Plants for New Beds.....	438	Crabs, Three Ornamental Flowering.....	437
Berberis Japonica.....	442	Market Reports: N. Y., and Phila.....	450	Scale on Orange.....	449	Strawberry Worm.....	449	Cornus Florida rubra ..	441
								Halesia tetraptera.....	438

The Asparagus Rust Again.

The season of 1896 was the first one in which the genuine rust of the Asparagus (*Puccinia asparagi* D. C.) had been observed in this country, at least in the Eastern States and in quantity to make its presence one of alarm to the truckers. (See AMERICAN GARDENING, Oct. 3, 1896, page 630.) During the autumn months the brush of the Asparagus fields instead

of brown form of spores having replaced the one of brighter hue. In this condition the story of the outbreak and life history of the fungus closed for 1896.

This microscopic parasite has long been known in Europe and has three forms, at least, in which it thrives upon the Asparagus.

The brown pustules of late autumn, the stage in which the fungus passes the winter, is followed the next season by a



FIG. 124.—SOME ORNAMENTAL CRAB APPLES.

Pyrus Malus Parkmani.

P. M. Coronarium.

P. M. Floribunda

of being of a rich luxuriant green, was changed to a brown, suggesting the ravages of an insect, or the work of an untimely frost.

Early in autumn the surface of the infested Asparagus stems was more or less covered with patches or pustules of an orange color, due to the myriads of spores that had formed in minute rifts and ruptures of the epidermis. Later on in the fall the same spots upon the stems became dark colored, a

form very different from either that have been previously mentioned. This is commonly known as the "cluster cup" stage, and consists, so far as the eye sees, of minute cup-shaped bodies which arise from the infested stem in small groups or clusters, hence the common name for this form of the rust fungi.

It is this "cluster cup" form that was to be expected upon the Asparagus as the beginning of the attack of the rust for

the present year, and this prediction has been verified during the past week. On the third of June samples of the cluster cup fungus upon the asparagus were sent the undersigned from the centre of a large asparagus industry in New Jersey. At this time the cutting of the beds is at its height and the rust is confined to the young plants that are allowed to grow to gain strength for cutting in future years. The first rust was found upon the plants that grew in a vineyard that had been in asparagus some years before. These were vigorous shoots that came from roots that had not been killed out. The clusters of cups are most frequently to be found upon the main stem and a foot or so above the ground, while not infrequently they appear close to the soil and even the fine brush at the top of the plant is sometimes rusted.

An examination of young beds set the present season showed that these plants were bearing the fungus cups and the beds of last year's setting were in like manner infested. Old beds that are being cut from day to day do not have their stems stand long enough for the fungus to show itself, but after cutting ceases there is reasonable certainty that these beds will also show the first form of the rust and be followed by the second and third stages of the fungus before the season closes.

It is too early to know the results that will follow the treatment recommended last autumn, namely, the cutting and burning of the rusted brush. One thing is already certain, and that is the great falling off of the yield. From reports received upon this point from various growers, and those in charge of shipments at the centres of asparagus growing, it is gathered that the yield is not more than half that of the ordinary season. This may be due in small part to the cool weather that has prevailed; but there is sufficient ground for attributing it to the rust, which was overwhelming in its attack last season. It is also learned that there is no material difference in the yield upon fields where the brush was cut and burned and where it was left standing through the winter. The effect of the burning upon the amount of rust later in the season will be looked for with much interest.

Growers of asparagus are anxious to know what to do now in view of the fact that the first form of the rust is in sight. All asparagus that is "growing wild" should be destroyed, as it is a propagating place for the rust. Spraying should be resorted to as soon as cutting is through and shoots begin to form their feathery sprays for the season's work of assimilation. The Bordeaux mixture or some other standard fungicide may be applied at intervals of about ten days. The fungus is not in the group that has heretofore yielded promptly to this treatment, but there is hope of doing some good. The value of spraying with fungicides is being tested in the field of asparagus upon the grounds of the Experiment Station, and as soon as possible the results will be placed in the hands of the public in general and the asparagus growers in particular.

BYRON D. HALSTED, N. J. Experiment Station, June 10, 1897.

Cost of Hauling.—It has been estimated that 500,000,000 tons of farm produce are hauled to market annually in the United States and that the cost of marketing it is \$2 per ton, or just about \$1,000,000,000. This is not money paid out, but is the value of the time spent by farmers with their teams in marketing crops or what these men and teams would have earned if they had been hired for cash to do this amount of hauling. The secretary of the Farmers' National Congress and the United States Department of Agriculture agree in estimating that about 60 per cent. of this vast amount, or \$600,000,000, would be saved each year if farmers were able to do this hauling over good roads.

The Fruit Garden.

Strawberry Plants for New Beds.

As soon as the crop from each variety is over clean off the mulching, fork slightly and plunge 2½-inch pots in every other row, so that the pots are just below the level of the ground; keep the runner in place on the pots with small stones. If not convenient to do that use wire about the thickness of a pin, cut into two-inch lengths and doubled. We now use thin one-inch staples. The ground for the plants should have been selected, heavily manured (don't use cow manure) and now bringing a crop of early vegetables to maturity, which should all be out of the way before the middle of July. As soon as possible thereafter plow under another coat of short, rotten manure and harrow. The plants being ready in pots they can be successfully planted in the driest weather if necessary by marking out the lines with the hoe, as if for seed planting, and then running water along the drills; cover and keep the ground raked. Our plants are set out in lines 2½ feet apart and the plants 9 inches in the line about the third week in July, depending somewhat on a chance thunder shower about that time. The only special points to mention are to have the ground reasonably firm and the plants firmly set, so that they will not settle, and the crowns become covered with soil.

Spraying in this locality has been a constant return over the same ground owing to the plentiful supply of rain every few days, this no doubt causing the very noticeable scarcity of the bag worm this year in this vicinity.

Decorative Value of Flowering Shrubs.

During the past spring there has been a very noticeable increase in the use of all kinds of flowering shrubs, in choice and large decorations, especially in New York City; and suburban towns have been following suit. The average run of city and country decorators, up to the present time, have seemingly overlooked the decorative value of this class of stock; but now fashion and popular taste demand that they give it attention.

Society happenings during the winter months have had their gorgeous decorations of roses and carnations, so much so that when spring came people tired of these flowers and selected for decorations at this time invariably spring blossoms. Thus has the fashion been created and some charming effects have been the result.

In New York City the past spring, and even now in June, so far, the large decorations consist mostly of outdoor flowering shrubs, or as fashion is pleased to name them, "spring flowers."

At a wedding decoration a short time ago three large rooms and the entrance hall were absolutely covered with *Cornus florida*, apple blossoms, *Pyrus Malus*, *P. M. floribunda*, *Spiraea prunifolia*, *Pyrus japonica*, etc. Three truck loads of these were utilized, and it is said that the cost was more than if roses had been used; so the selection of these flowers was not a question of expense. The sprays of blossoms were hung on the walls by the use of ordinary picture hanging hooks and wires attached to the headings. The bride carried orange blossoms and gardenias.



FIG. 125.—HALESIA TETRAPTERA.

Grapes.—Keep the wood laid in so that all parts of the trellis become covered with healthy full-grown leaves (the lungs on which the roots depend); a sufficient supply of these in good shape, clean and not crowded with small trash, stopping the circulation of air, will go a long way toward making next year's fruit prospects good.

J. HOLLOWAY, L. I.

At a more recent wedding thousands of snowballs were used—*Viburnum opulus* and *V. plicatum*.

A dinner decoration was executed recently where the tables were arranged to form a hollow square. The guests, seated only on one side of the tables, looked into a bank of 22x50 feet of spring flowers, rising from the floor between the tables.

Not only have flowering shrubs entered largely into dinner and wedding decorations this season, but they have also found a place in funeral work, it having become common practice to fill the body of large crosses and broken columns with *Viburnum plicatum*. Other designs have also been noticed in which the above and other flowers of a like nature have been used.

Our illustrations show flowering branches of four of the most useful and popular shrubs of this season. Perhaps first of all can be mentioned the apple blossom—*Pyrus Malus*. The double white apple possesses very considerable

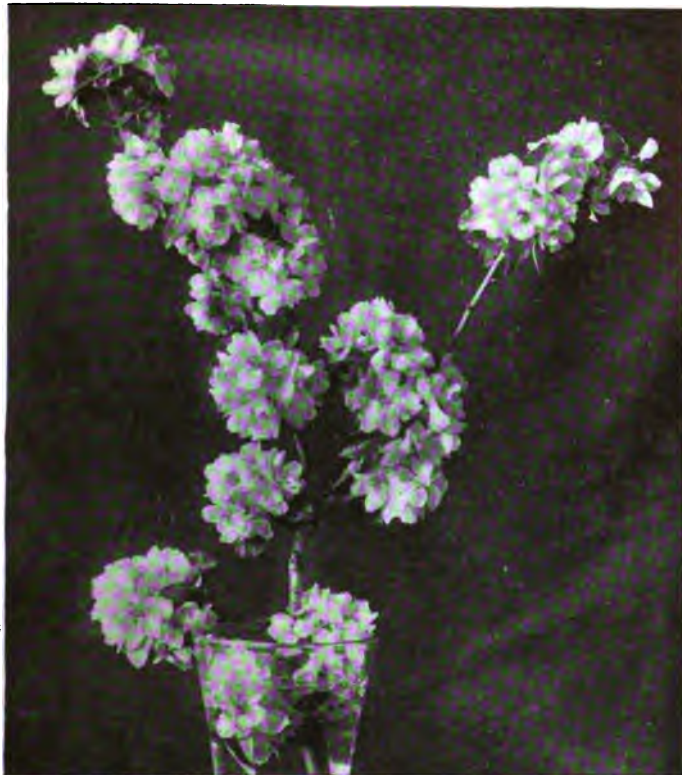


FIG. 126.—APPLE BLOSSOMS. (See page 438.)

merit, its large white flowers rendering the sprays available for almost any kind of work. *P. M. coronarium* is a large double pink of great beauty. *P. M. floribunda* is a single pink flower, rather smaller than the two first named, but owing to its great floriferousness and compact habit it is of great value to the decorator. But in *P. M. Parkmanii* we have perhaps the gem of the genus, its vivid pink, good habit and great keeping qualities all contributing to make it one of the grandest spring flowering shrubs.

Halesia tetraptera, commonly called Snowdrop tree, is well described by its common name, flowering, as it does, like so many large snowdrop blooms, regularly distributed over all the branches.

Cornus florida has been largely introduced into wall decorations this season, the subject of our illustration, its var. *rubra*, makes a pleasing change from the white.

Planting Out Violets.

Can violets (rooted runners) be set out at the same time as carnation plants, in the open ground, and can they stand full sun exposure?—X. Y. Z.

Yes; but in practice some of the leading violet growers differ in their procedure. Some of them do plant out in the open field just as for carnations, and others plant only in shallow frames, which can be shaded; yet others select positions where trees will lend a partial shade. Our own preference is to plant out in the open, for it is reasonable to suppose that the plant will have more constitution to it in the fall and that it will lift better. A large soft-grown violet plant usually goes back quite a good deal when planted in the house.

The Vegetable Garden.

Pole Limas.—Look round these, it is often necessary to tie them up to give them a start up the poles; otherwise they will fail to cling, especially during this cool, wet weather. Every assistance should now be given to encourage quick growth. If the seeds were planted on slightly elevated hills, where the water will quickly run away, it is a great advantage in wet seasons.

Celery.—This is excellent weather for celery, and all other things being equal it should now be growing rapidly. As celery is richly appreciated at all

well. The weeds should not be allowed a foothold and care should be taken to cultivate whenever the weather and soil are dry enough.

W. M. EDWARDS, N. Y.

Notes on Aquilegias.

Aquilegias, or Columbines, as they are commonly called, are among the handsomest of common garden flowers, and one or more species may be found in almost every garden. There are some sixty-four known species and their geographical distribution extends all round the north temperate zone.

No flowers cross-fertilize more readily than Aquilegias, and if more than one species be grown in a garden, unless planted at great distances apart, the seedlings are very apt to show the results of crossing, or, at all events, to be anything but typical. The flowers present quite a good range of color, from white through all shades of blue to chocolate, and from yellow to scarlet.

They grow well in any good garden soil and are easily raised from seed. We have some twelve distinct species in this garden, though some have not yet flowered. The writer has seen and grown a great number of species, but when one has *Aquilegia coerulea*, *A. olympica*, *A. Stuarti*, *A. chrysantha*, *A. Skinneri*, *A. glandulosa*, *A. vulgaris*, and last but not least native *A. canadensis* one has about the cream of the whole genus.

A. coerulea is a native of Colorado and the Rocky Mountains, and among the blue species we consider this the best. Under cultivation the flowers attain a good size, measuring three inches in diameter. The color, as the specific name indicates, is of a sky-blue, the tips of the petals shading to white. This species has, however, one falling in being more delicate in constitution than most other species, and it is necessary to raise a few plants every year, as some will die out, no matter how well cared for. It is one of the earliest to flower and the flowers last quite a long time.

A. olympica, a native of Mount Olympus, is also a beautiful species and much more robust in habit than the preceding. The flowers are a size smaller, of a dark blue color, and the petals edged with white. The spurs are also shorter and hooked. These two species should be in every collection.

A. glandulosa is of much dwarfer habit, growing only about a foot high, but the flowers are of a pleasing blue color and of good size.

A. vulgaris is, perhaps, the best known of the whole genus, being the form most commonly seen in gardens. There are many varieties of this species and a great variety of colors. It is a native of Europe, and is one of the best for naturalizing in the wild garden or shrubbery.

A. Stuarti is not at present in our collection, and I have not seen it for some years, but the beauty of the large creamy-white, long-spurred flowers is still impressed on my memory.

A. chrysantha, the golden Columbine, is a native of the Western States, and is a magnificent species. It produces its lovely yellow flowers in the greatest profusion and has proved perfectly hardy with us. Its season of blossoming is later than that of most of the other species.

A. Skinneri, another Western species, resembles the above in habit and color, except that the spurs are red or deep orange. It is also a very desirable species.

A. canadensis is, perhaps, too well known to need description, but it is a most effective subject when planted in masses, either in the rock garden, herbaceous border or wild garden.

EDWARD J. CANNING, Botanic Garden, Smith College, Northampton, Mass.

times and at all seasons, a little should be planted quite early for first use. If planted closely it requires abundance of water, and as soon as large enough to blanch use any wide boards and set on edge near them on every side. It is best not to earth up celery during the hot weather.

Cucumbers and Tomatoes.—As soon as large and ripe enough pick off; this should always be done. If they are left on the vines to seed they will soon be exhausted, with a resulting poor crop.

Leeks may now be transplanted; a good way to grow them is to make a trench, similar to the old method of trenching celery—planting a double row in a trench from 6 to 8 inches apart each way. These require a lot of well-decomposed manure dug in the trenches if large size is wanted.

Asparagus.—As fast as other vegetables are coming in fit for use just so much easier we should be with the asparagus bed. Coming at a season when vegetables are scarce, cutting should be stopped as soon as peas are ready to take its place. If the cuttings have been small and weak this is the time to remedy it, by applying a liberal dressing of a good fertilizer and thoroughly cultivated in the ground.

Cultivation.—Cool Weather.—The unusually cool and wet weather we experience this month is not conducive to the best growth of many of our tenderest vegetables, as egg plants and lima beans; and on the other hand other vegetables are growing rapidly. Cauliflower and spinach should be doing

American Association of Nurserymen.

The twenty-second annual convention of the American Association of Nurserymen was, to use the words of its Committee on Resolutions, "one of the most laborious and useful conventions since its first organization," as well as an enjoyable occasion from a social standpoint. The attendance was large, the weather fine and St. Louis, with its well-known hospitality, contributed much toward the pleasure of those who attended. Two large bouquets of roses which adorned the president's table expressed the welcome of the St. Louis Florist's Club, and the Mayor of the city, in a most cordial speech, welcomed the members of the association on behalf of all the citizens. An invitation to the annual Shaw banquet was extended to the members of the convention by the trustees of the Missouri Botanical Gardens, which invitation was accepted with due appreciation of the high compliment it implied.

Hon. N. J. Colman, Secretary of Agriculture under the Cleveland Administration, delivered an eloquent address of welcome on behalf of St. Louis and the State of Missouri. He referred to the period when he, as member of the American Association of Nurserymen, had been twice made its president, and said: "My friends, I have coveted this opportunity of again meeting you. I know that many of us are bound by the ties of friendship which will last as long as we shall travel the journey of life. It is, perhaps, the last time that I may ever have the opportunity of meeting you and addressing you, but I bid you God-speed in the good work in which you are engaged. There is no vocation in life more useful. If a man is classed a public benefactor who has made two blades of grass grow where one grew before, what shall be said of the nurserymen, who have caused millions of trees, millions of flowers and millions of shrubs to grow where none ever grew before? You are the missionaries in a noble work."

Hon. Silas Wilson, who presided over the convention, made a brief and fitting response to the addresses of welcome, after which the business of the day was taken up.

The president, in his annual address, referred to the bill formulated by the convention of Entomologists and Fruit Growers at Washington, D. C., on March 5th, 1897, known as the Federal Insect or San Jose Scale bill, which, if it should become a law without amendment or modification, would certainly work unreasonable hardship upon the nurserymen of the country. He said: "While I am in sympathy with the disposition manifested by the Fruit Growers and Entomologists to stamp out the San Jose Scale or other destructive insects and diseases wherever found, I am also in favor of the great nursery interests of the United States being at least consulted before such important legislation should be enacted; I have, therefore, appointed a Committee on Legislation—men of experience and ability—in order that they might present a report on this important subject at this meeting."

The report of the treasurer, Mr. N. A. Whitney, showed a balance on hand of \$1,796.26.

A paper was then read by Hon. N. H. Albaugh, Tadmor, O., entitled, "Insect Laws, State or National; Which Shall It be?"

The different States named their vice-presidents for the ensuing year, who, at the afternoon session, reported the nomination of the following officers: President, Irving Rouse, Rochester, N. Y.; vice-president, A. Albertson, Bridgeport, Ind.; treasurer, N. A. Whitney, Franklin Grove, Ill.; secretary, George C. Seager, Rochester, N. Y. Executive Committee—C. L. Watrous, Des Moines, Ia.; R. C. Berckmans, Augusta, Ga.; F. A. Stannard, Ottawa, Kan. On motion the secretary cast the ballot of the

convention for these officers for the ensuing year and they were declared duly elected.

Place of Meeting.

The report of the vice-presidents named Omaha, Neb., as the next place of meeting, which was opposed by many of the Eastern members, who suggested as a compromise that Detroit or Chicago be named. It was urged on behalf of Omaha that the Trans-Mississippi Exposition to be held in that city next year would prove an additional attraction, while it was stated on the other hand that on account of its being so far west, the Eastern members would be unable to attend. The matter was finally decided by ballot in favor of Omaha, that city receiving five more votes than Chicago.

Transportation Rates.

Mr. Brooke, of Kansas, chairman of the Transportation Committee, made an oral report in which he said: There was \$500 placed at the disposal of the committee by this association last year; we did not expend a cent of the association's money, but we accomplished a great deal of good by way of freight rates, mostly with the western department. The Western Transportation Committee placed a hardship upon the Western people by making trees in bulk at the Class A rate. We succeeded by manipulation and by conferring with railroad men of our railroads in securing a reduction in that respect. Now I would like to recommend that a committee be appointed to act for the Western classification people on these two points: First, request the railroad people to reduce the size of a bundle to be admitted as first-class from 100 pounds to 50 pounds; second, that in case of shipments for short distances of a considerable number of trees, though not reaching carload rates, that a Class A rate be made instead of a one and one-half rate. I would also suggest that steps be taken to help the men in the South out of the high rates that they have at present. The railroad men of the country are gentlemanly men; they are always ready and willing to go in and examine with you and will right a wrong wherever it exists; such has been the case so far.

It was moved and carried that the present Committee on Transportation, consisting of N. H. Albaugh, Irving Rouse, A. L. Brooke, W. F. Helkes and Silas Wilson, be continued and a vote of thanks was tendered the committee for its efforts during the past year.

San Jose Scale.

Professor W. B. Alwood, Virginia Agricultural Experiment Station, then spoke on the subject of "Inspection in Relation to Suppression of San Jose Scale." The speaker said in part:

At the present time, from my own record, I know that nineteen States on the Atlantic and adjacent States inland are infested with the San Jose scale. How the scale came into the Eastern part of the United States it is not necessary to go into now, except to say that it came on nursery stock from California and for five or six years it was spreading upon the eastern half of this continent in the nurseries and orchards before we had the first inkling that there was a San Jose scale this side of California except in our cabinets. It is now four years since the first case was known and it is only during the last eighteen months that we have fully to realize the extent of the dissemination of the San Jose scale in the East. I may say further that it is only within the last few weeks that we have had brought to our attention some of those alarming cases where the scale has existed right under the nose of specialists for years without having been detected. Now these cases which I shall cite are all arguments for the necessity of most thorough inspection laws, so that we shall now be able, by the facts brought out by inspection, to provide such measures, whatever

they may be, as will stop the further dissemination of this scale as it has been heretofore widely disseminated.

The speaker stated that a law had been passed by the State of Virginia providing for the appointment of inspectors and giving them almost absolute power in regard to treatment of infected premises, and stated that in the first two days' work after his appointment as such inspector he had located ten cases where the scale had never been known before. He then went on to cite a large number of cases where the scale was found to have existed for some time, and its presence had not been suspected, and where only a prompt destruction of the infected stock could prevent the infection from spreading farther. He said, "I do not believe in treating nursery stock for the scale. I believe in burning it."

A case of scale was found to exist, Professor Alwood went on to say, within a few steps of the door of the Horticultural Building of Cornell University—had been there for three years without having been detected, and was only found the other day by a man from the Experiment Station. The scale is adapting itself to different climatic conditions; it has been found in the mountainous regions of Virginia at a height of 2,000 feet; in Western New York and as far north as Canada. It infests all the deciduous fruit trees that belong to the rosaceae; among trees it infests the black walnut, the American chestnut, the American and European Lindens, the Catalpa, Cut-leaf Birch, etc. There is at present no case on record where fruit has disseminated the scale, its spread generally taking place from branch to branch where trees are planted closely together, and in one case at least the infection was carried from place to place by peach gatherers who had brushed up the scale with their garments.

Professor Alwood's discourse was listened to with marked attention and the numerous questions and remarks which it elicited bore testimony to the deep interest with which nurserymen at the present time regard this subject.

Legislative Report.

The report of the Legislative Committee was then called for and the chairman, Colonel Watrous, presented the following bill, for which he asked the endorsement of the convention:

AN ACT.

To provide rules and regulations for the inspection of trees, plants, shrubs, vines, grafts, cuttings and buds, commonly known as nursery stock, imported into the United States. And for rules and regulations for the inspection of trees, plants, shrubs, vines, grafts, cuttings and buds, commonly known as nursery stock, grown with the United States, which become subjects of Inter-State commerce.

Section 1. Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, that all trees, plants, shrubs, vines, grafts, cuttings and buds, commonly known as nursery stock, imported into the United States from foreign countries, shall be subject to inspection in the hands of the owner, and before reshipment, sale or planting out, according to rules and regulations prescribed by the Secretary of Agriculture, and when so inspected and found apparently free from injurious insects or diseases the certificate of the officer making such examination and finding shall be issued to the owner or owners of such nursery stock. A copy of this certificate shall be attached to and accompany each carload, box, bale or package, and when so attached and accompanying shall operate to release all such nursery stock from further inspection, quarantine or restrictions in Inter-State commerce.

Sec. 2. Whenever it shall appear to the Secretary of Agriculture that any foreign country shall have provided proper and competent inspection for nursery stock about to be imported into this country, he may by proclamation or otherwise accept such inspection and certification in lieu of the inspection as provided for in Section 1 of this act. This acceptance by the Secretary of Agriculture shall operate to relieve all such nursery stock when accompanied by a copy of the certificate of inspection from further restrictions in Inter-State commerce.

Sec. 3. All trees, plants, shrubs, vines and buds, commonly known as nursery stock, grown within the United States, may become subjects of Inter-State commerce, under the rules and regulations as hereinafter provided. The Secretary of Agriculture shall cause to be inspected all trees, plants, shrubs, vines and buds, known as nursery stock, which are subjects of Inter-State commerce, and which are about to be transported from one State or Territory or the District of Columbia into another State or Territory or the District of Columbia. This examination shall be made prior to September 1 of each year in the manner provided for and prescribed by the Secretary of Agriculture, and if such nursery stock is found to be apparently free from dangerously injurious insects or diseases, the certificate of the officer making such examination and finding shall be issued to the owner or owners of such nursery stock, a copy of which certificate shall be attached to and accompany each carload, box, bale or package and when so attached and accompanying shall operate to release all such nursery stock from further inspection, quarantine or restriction in Inter-State commerce.

Sec. 4. That it shall be unlawful for any person, persons or corporation to deliver to any other person, persons or corpora-

in the Treasury of the United States, not otherwise appropriated, to carry into effect the provisions of this act.

Sec. 7. This act shall take effect on and after the 30th day of June, 1898.

After a lengthy discussion the convention voted to recommend the bill and urge its passage by Congress.

A resolution was also adopted, asking the Governor of Illinois to veto a certain bill relating to the nursery trade which had passed the Illinois Legislature and was now before the Governor for his signature, on the ground that the bill was oppressive in its nature and would work great hardship, both to the people of the State of Illinois and to the nurserymen of the whole country.

Committees and Reports.

At the close of the first day's session the president appointed the following committees: On president's address—W. J. Peters, Ohio; H. J. Weber, Missouri; W. F. Helkes, Alabama. Treasurer's report—Mr. Ilgenfritz, Michigan; Peter Youngers, E. M. Sherman, Iowa. Exhibits—J. W. Manning, Mas-

specimen of the latter measures one inch in diameter, three feet in height.

F. G. Sanders & Son, of Plaindealing, La., showed ripe Eureka peaches, Biery, Abundance and Norman plums and Margaret apples; also a specimen of variegated-leaved Liquidambar.

M. B. Fox, of the Rochester Lithographing Company, made a good exhibit of lithograph plates of fruits, flowers, etc., plate books and bindings for nurserymen's use.

J. P. Sinnock, of Moberly, Mo., a specimen of variegated-leaved ash, a sport from the native green ash.

E. H. Ricker, of the Elgin Nursery Company, seventeen specimens of seedling evergreens (mostly two years), two of European Larch, all vigorous and healthy; also samples of baled moss for nurserymen's use.

Joseph Nelne, of Jacksonville, Ill., samples of well-rooted Irish Juniper cuttings.

Dayton Fruit Tree Label Company, a very full and artistic display of tree and plant labels.

Hiram T. Jones, of New York, shows specimens of Rosa rugosa stock for working tree roses on, grown by J. Blaauw, Boskoop, Holland.

Z. K. Jewett, of Sparta, Wis., samples of live Sphagnum moss for nurserymen and florists' use.

F. L. Williams, of Lamavoa, Ill., a device for transplanting small stocks and plants.

An exhibit of Sneed peaches from Tennessee was of such taking quality as to be all gone when the committee reached the basket.

The report of the Committee on Resolutions expressed thanks to the Mayor of St. Louis, the managers of Shaw's Botanical Garden and several others who had contributed to the comfort and pleasure of the members; also congratulated the out-going president, Hon. Silas Wilson, and his corps of helpers on the success of their labors the past year, and expressed thanks for the vigilance manifested in their respective positions.

The Tariff Committee reported that as a result of their efforts there had been secured a duty of \$1 per thousand on Myrobalan plums, Mahaleb and Mazzard cherries, three years old or less; \$1.75 per thousand on apples, pears, quinces and plums, three years old or under; three cents each on roses, budded, grafted or on their own roots; \$1.75 per thousand on all kinds of evergreen seedlings, three years old or under, transplanted or not; also that 25 per cent. ad valorem has been placed on all kinds of trees, shrubs, vines or material known as nursery stock.

The Committee on Necrology reported the deaths of the following: J. S. Sears and Lemuel Herendeen, of Geneva, Ill.; J. G. Bubach, of Princeton, Ill.; Robert Douglass, of Waukegan, Ill., one of the original members of the association, and active in organizing the same; W. M. Samuels, of Clinton, Ky., pomologist.

A resolution was adopted endorsing the application of F. G. Withoft, of Dayton, O., as a special agent under the Secretary of Agriculture of the United States.

Piece Roots vs Whole Roots

Mr. E. J. Holman, of Leavenworth, Kan., read a very brief paper entitled, "Piece Roots vs. Whole Roots," and offered a resolution endorsing the piece-root method of propagating apple trees, which resolution, however, was laid on the table.

(To be continued.)

Are You Renewing.

To those of our readers whose subscription has expired, or is to expire with the close of this month, and who will send us a prompt renewal (adding fifteen cents to pay for packing and delivery), we will at once forward one canna, well established, their choice of either Austria or Italia, the two great novelties of the season. This is an offer without parallel, but which, if desired, must be applied for at once.



FIG. 126.—CORNUS FLORIDA RUBRA. (See page 438.)

tion or to the postal service of the United States (except for scientific purposes, or by permission of the Secretary of Agriculture) for transportation from one State or Territory or the District of Columbia, to any other State or Territory or the District of Columbia, any trees, plants, shrubs, vines or other nursery stock which have not been examined in accordance with the provision of Section 3 of this act, or which, on said examination, have been declared by the inspector to be dangerously infested with injurious insects or diseases. Any person, persons, firm or corporation who shall forge, counterfeit or knowingly alter, deface or destroy any certificate or copy thereof, as provided for in this act, and in the regulations of the Secretary of Agriculture, or shall in any way violate the provisions of this act shall be deemed guilty of a misdemeanor, and on a conviction thereof shall be punished by a fine not to exceed \$500 nor less than \$200, or by imprisonment, not to exceed one year, or both, at the discretion of the court.

Sec. 5. The rules and regulations herein provided for shall be promulgated on or before the first day of July of each year.

Sec. 6. That the sum of \$100,000, or so much thereof as may be necessary, is hereby appropriated out of any moneys

sachusetts; C. M. Dennis, Illinois; Mr. Hobbs, Indiana. Necrology—T. S. Hubbard, New York; J. Van Lindley, North Carolina; M. Bissell, Virginia. Resolutions—A. L. Brook, Kansas; Mr. Albaugh, Ohio; Mr. Harrison, Maryland.

The work of the second day's session was begun by listening to the reports of various committees.

The Committee on Exhibits presented the following report: "We find the following exhibits: By E. H. Reil, Alton, Ill., Ruby strawberry; large, even size; conical, bright red; moderately firm; tart; plant apparently strong, vigorous, healthy and productive.

A. H. Griesa, Lawrence, Kan., Fink apples in a good state of preservation, showing it to be a long keeper. He also exhibits a branch of Superb Apricot, showing good size and productiveness.

D. Hill, Dundee, Ill., shows forty-four species and twenty-one varieties of evergreens, showing the rarer kinds of Picea pungens, Abies concolor and Pinus ponderosa. One three-year-old

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1906.

PUBLISHED BY

A. T. DELAMARE PTD. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 35 cents per agate line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Arouse Ye! **I**T has been the aim and ambition of the publishers of AMERICAN GARDENING ever since it came into their possession, through purchase in the fall of 1892, to provide a journal for those interested in horticulture and the arts and sciences kindred to horticulture, which, out of the contents of its own pages, would verify and prove the statement (when the time was opportune for the proclamation) that AMERICAN GARDENING, without cavil or fear of contradiction, had assumed, and did now occupy the proud position of being foremost in, and the acknowledged leader of American horticultural journalism.

The time has come, the position is attained, and whilst self-praise may convey no recommendation as between man and man, the publishers believe there are times when their right to say a few words on behalf of their own creation

may be indulged in with propriety and with resulting benefit to the readers and to themselves.

Such a plethora of reading matter as that which, through a stretch of the laws allowing its dissemination, practically without cost, has been let loose upon the citizens of the United States, has never been inflicted upon the people of any other nation. This free distribution has proved an injury to all good literature; it has promoted the circulation of the cheap novel, as well as of the cheap periodical—both decidedly cheap in every respect. Exceptions there are which all recognize, but the scope of the law regulating second-class postage has been broadened and abused to such an unlimited extent that its framers and projectors would not themselves recognize their work. Literature of every description has been injured, and the literature of gardening has received perhaps more than its full proportion of injury; poor food, illy and hastily prepared, has been served without forethought, plan or arrangement, and with so free a hand as to swamp material of higher order, thus bringing about an apathy toward garden lore and a lack of discrimination in gardening operations on the part of the great public. This indifference sorely perplexes the spirit and tries the patience of all who have at heart the elevation of horticulture, and who desire to see the time come quickly when its softening, refining influence will attest its sway over all the people.

Let us now abandon generalities and argue specifically. The masses are ripe for a better education, they would welcome the translation from theory into practice, from ill-advised conditions into solid facts, from barren or profitless efforts into matured results, yielding pleasure and profit at every step undertaken. And it is within the power of the readers of AMERICAN GARDENING and other journals of its class to bring about this most desirable change by force of example and by figure of speech. Half a loaf may be better than no bread, but if it be sodden and poorly baked it were almost better for the starving one to die outright of hunger than to linger on through the slow tortures of dyspepsia.

Thousands there are, yes tens and hundreds of thousands of people, who might just as easily have their surroundings refined as have them in their present condition of unemptiness could they but be started off aright.

Neglected areaways and back yards—which should be entitled to the name of garden—void of tree, shrub, or plant, save what has sprung up by chance, mark the city dwelling; apologies for a green-sward facing the road, and weed crops only where the flower and kitchen gardens should be, attest the dwelling of the suburbanite; complete lack of any attempt at home ground improvement is everywhere to be noted around the pre-

cincts of the farm home, even the cultivation of vegetables and fruits in variety with which to vary the monotony of the staple bill of fare being too oft neglected.

This is a strong picture of prevailing conditions, but who will gainsay it? It should be the exception: it is the rule. The exceptions are so few and far between as to be noted of all men.

Our parks should teach city people to do better, for here is fair example ever before their eyes. The man of the country has not such a picture of cultivated beauty from which to draw, but he has Nature's own handiwork ever before him from which to pattern, and what a rare artist she is.

Philosophers may dream and scientists probe mysteries, but the cause of horticulture and its elevation must be the work of those who reverence, love, and admire plant creation from the humblest, minutest wild flower to the stately, spreading oak.

Apathy, indifference, or disregard for the conditions of others so long as our own are thriving, must be brushed aside, and a genuine spirit of brotherly interest manifested by those who do know toward those who are not thus fortunate.

To criticize is easy; to apply a remedy is harder. How can we best exchange the prevailing spirit of unconcern for one of profound sensibility? What have our readers to say?

Berberis Japonica.

Berberis (Mahonia) japonica, when seen in perfect shape, is one of the finest of evergreen shrubs, and when in early spring a glint of sunshine strikes the expanding bouquets of fragrant, golden, lily-of-the-valley-like flowers, an enthusiast may be pardoned for thinking it should be placed at the very head of the list. Give the plants a situation where the sun will not strike them between the hours of 10 A. M. and 3 P. M., and out of the sweep of winds in winter.

It is perfectly hardy here, but has the bad habit of starting its flowers so early in the fall that they are some years badly damaged before spring; yet the foliage never has the dead, drooping look of the rhododendrons in winter.

The plant from which the piece illustrated was cut had at the time sixteen other pieces, making a very attractive color picture, which cannot well be shown by the camera.

JAS. HOLLOWAY, Glen Cove, L. I.

[We very much regret that the illustration of this plant was inserted in our issue of May 15 (page 355) with the title of B. nepalensis. The figure undoubtedly represents B. japonica, which plant has leaflets with five spring teeth and one terminal one, whereas B. nepalensis has leaflets five to ten-toothed on each side, tricuspidate at the apex and is not so hardy.—ED.]

Are You Renewing?

To those of our readers whose subscription has expired, or is to expire with the close of this month, and who will send us a prompt renewal (adding fifteen cents to pay for packing and delivery), we will at once forward one canna, well established, their choice of either Austria or Italia, the two great novelties of the season. This is an offer without parallel, but which, if desired, must be applied for at once.

A Plea for Garden Roses.*

Ten years ago, at this place, a plea was made for garden roses and annually since that plea has been repeated with a yearly accretion of force, until it has been heard over the length and breadth of the land. It is not a figure of speech to say that the eyes of Rose lovers throughout the country are now turned to Annandale, and because of its Rose show, if for no other reason, it will soon be recognized on the map. I know not the history of this hamlet, nor why it bears its present name, but if the time ever comes when it may be deemed wisdom to change its title, I suggest the more appropriate one of Rosedale. The great State of New York is yet without a post-office of that name and here, if anywhere, is the place for the name, and the name for the place.

The Dutchess County Horticultural Society meets here to-day and has honored me by putting me forward at this, the tenth hour, as it may be called, to make a "plea for garden roses." It is devoutly wished that some one more capable had been assigned to the task; that even some other title had been selected, for in the presence, as it were, of the Queen herself, what plea is necessary? She is enthroned here in regal beauty, with fragrant lips wide open, bidding gracious welcome to her devotees, with smiles for all and frowns for none. Here she sits in all her glorious raiment of velvet incarnadine, the satin sheen of pink, the gold of Ophir, the bridal white; dyes gathered from India, from Gaul, from Merrie England, from the Emerald Isle, from Sunny Italy, from the Balkan slopes, from the plains of Damascus, from China, from Japan, from our own boundless prairies, from the Rhone, the Rhine and the Danube—aye, even from the Garden of Eden. The suns of centuries have purified them; have distilled the matchless perfumes; man's best efforts have been put forth to aid nature, who was already prodigal in her gifts, and hence, instead of making a plea for her, it would, perhaps, be more appropriate to sing a hymn of praise, of love, of loyalty to our Sovereign Queen, the Rose.

Mrs. Hemans, in her beautiful verse, "A Thought of the Rose," has fittingly and delightfully epitomized all that might be said of fact and fancy in relation to her:

How much of memory dwells within thy bloom?

Rose, ever wearing beauty for thy dower!

The bridal day—the festival—the tomb—
Thou hast thy part in each, thou state-
liest flower;

Therefore, with thy soft breath come
floating by

A thousand images of love and grief—
Dreams, filled with tokens of mortality;
Deep thoughts of all things beautiful
and brief.

Not such thy spells o'er those that haled
thee first,

In the clear light of Eden's golden day!
There thy rich leaves to crimson glory
burst,

Linked with no dire remembrance of
decay.

Rose! for the banquet gathered, and the
bier!

Rose! colored now by human hope or
pain;

Surely, when death is not, nor change,
nor fear,

Yet may we meet thee—joy's own flower
—again!

He must be bold, indeed, who would make a plea for Roses, for of all subjects in horticulture none have been so widely written about as this one; and every phase of it has been touched upon. It is of "garden Roses," however, of which we speak. There is little need to make a plea for winter Roses, for the commercial spirit will take care of them. The poetry that attaches to

The last rose of summer left blooming
alone,
All its lovely companions are faded and
gone,

does not attach to them, for they are gathered and sent into market, or to the town house for ball or festival.

The Beds.

There is so much to be said on the subject that it is difficult to decide where to begin. It is an axiom, however, that poor soil will not produce good Roses. The most fertile spot in the garden should be selected for the Rose beds, and be sure that they are not close to trees, as these not only rob the Roses of the needed sunlight, but are a continual drain upon the soil. A belt of evergreen trees on the north side of the garden, a house, or anything which protects them from bleak winds, is of the greatest benefit.

The finest Rose garden which I have as yet seen, that of Hon. Joseph S. Fay, at Wood's Holl, Mass., is protected on all sides by trees and buildings. The soil is a rich, deep loam and the result is shown each year in the number of prizes carried away at the Boston Rose show. Due credit should be given, however, to the gardener in charge for his skill and care.

The Soil.

Above all things, be sure that the soil is well drained; a cold, wet soil is a sure invitation to every form of disease to which the Rose is heir. It may seem tiresome to go over the dry and oft-told details of planting, but these must be attended to very carefully. No amount of care bestowed afterward will make amends for slipshod work at the start. The soil should be dug to the depth of at least one foot, or better still, if the top soil is of a sufficient depth, it could be trenched; if, however, the top soil is only a foot deep and the sub-soil is clayey, it is better to dig it only to the depth of a spade. A coating of three inches of well-rotted cow manure should be dug in and thoroughly incorporated with the soil, and a sprinkling of pure bone meal is a very valuable adjunct. It is well to bear in mind, in forming the bed, that it should not be too wide; it should be of such a width that it can be cultivated and the flowers gathered without continually tramping on it.

Planting.

There is a proper way to do most things and next in importance is the proper time; in fact, they go hand in hand. In a country as large as ours—and it is to be assumed that anything said here will, through the courtesy of the horticultural press, be scattered broadcast—it is, of course, out of the question to name one time for planting suitable for the varying conditions of climate in this country. The best time, if dormant roses are to be planted, is when the ground is free from frost in the spring, and it is dry enough to cultivate. Roses are late ripening in the fall and it is questionable if it is wise to plant immature plants.

Pot-grown plants that have had a rest during winter are unquestionably the best to set out, as they are in condition to take root in the soil and grow without check after being planted. These need not be set out until about May 1.

The method of planting varies with the stock to be planted. If budded or grafted Roses, they should be planted so that the junction of the stock and scion is say two to three inches below the surface of the soil, the object being to prevent, as far as possible, the growth of the stock to the detriment of the Rose which has been budded on it. Planted in this way roots will be emitted from the Rose where it has been budded, and as the stock buds eventually die the plant lives in addition on its own roots no further trouble from "suckers" will be had. If the stock grows its shoots should be pulled off as soon as they first appear, and the appearance of the brier upon which Roses are budded or grafted is so different from the Rose itself that there is really no trouble in distinguishing them.

(To be continued)

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Forcing Strawberries.—In American Gardening of June 5, page 410, you make a very important statement under the heading, "Forcing Strawberries," stating that those who have no greenhouses can certainly have strawberries three weeks, or perhaps a month, ahead of the outdoor crop by lifting the plants in the fall, planting them in cold frames and then giving them no special attention till early spring. Please refer to a work on strawberry culture or give plain, brief directions for this kind of culture: The cold frames, how near plants should set together, treatment in early spring, etc., and help many subscribers who are unable to build hothouses.—M. W. SMITH, Fairlee, Vt.

[We are unable to refer to any published account of the procedure, but in due season intend to give ample directions in these columns.—ED.]

Willows for Baskets.—I notice in American Gardening of May 29 John Nemeth, Pa., makes inquiry regarding willow for basket purposes. Please say that I can furnish him all he can use.—W. G. WARE, Trezevant, Tenn.

—The person inquiring for willows is asked to communicate with The Floral Exchange, 614 Chestnut Street, Philadelphia, Pa.

A Young Florist's Opinion.—My experience in growing flowering plants is very limited and I watch the different papers very closely for hints. There are probably many in just my position. It is not so much the old, experienced florist who needs these helps, so if you will continue to give practical hints in growing chrysanthemums, carnations, geraniums, etc., and also modes of combating insects and fungus diseases throughout the summer you will confer a lasting benefit upon the young florists and gardeners of the country.—H. L. C., Ripon, Wis.

Ants on Lawns.—I would like some information on the subject of ants, and if some of your readers can give a remedy for the pests I should be greatly obliged. The case is this: The soil here is a clear sand and the black ants seem to take a special liking to it; they have possession of some parts of my lawn and it seems impossible to get them away.—F. C. R.

Ants on Lawn.—Have been troubled with ants in the lawn for a year; have tried a great many remedies without success. Can any one offer any suggestions on the subject?—J. L. E.

Ants and Pansies.—Please say do ants injure pansies? Last season I raised my own plants, which were in prime condition when transplanted and started off well, but soon began to wither and finally seemed to dry up. This year I bought plants and set in same place and they seem to be going the same way. There seem to be a good many ants in the ground.—FRANK C. DOWD.

The ants may cause the damage indirectly by so loosening the soil and channelling the bed that it becomes dry and dusty; the continual working among the roots of the plants cannot be good for them. We do not think that the ants attack the plants directly.

*Paper read by Mr. P. O'Mara, at the Annandale (N. Y.) Rose Show, June 16, 1897.

For Present Sowing.

TURNIP SEED. We have all the best varieties.

CUCUMBER SEED FOR PICKLES. Our STOCKS are the Finest.

The first Consignment of our **SURE CROP, Mushroom Spawn,** just arrived.

Quality! BETTER!! than ever!!!

Descriptive Catalogue Free, by mail.

WEEBER & SON, Seed Merchants and Growers.
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

CANNAS Austria, Columbia, Italia, John White, 4 inch pots, by express for one dollar. Price list of seeds free. Please don't send stamps.

H. BEAULIEU, Seedman.

Belmont Ave., Woodhaven, N. Y.

Mention American Gardening when you write.

CELERY PLANTS

We are growing celery plants by the million on ground specially adapted. The roots are long and heavy. **White Plume, Golden B. B., Giant Pascal,** and all popular sorts. Evenly sorted and safely packed at \$1.25 per 1000; 5,000, \$6.00.

KIRKWOOD CELERY CO., Kirkwood, Ohio.

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

— Celery and Cabbage Plants.

Celery—Giant Pascal, White Plume, New Rose, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000.
Cabbage—Succession, Flat Dutch, Drumhead, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000.

For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

Offer No. 80.

FOR ONE NEW SUBSCRIPTION

200 CELERY PLANTS

AS FOLLOWS:

50 Plants
White Plume.

50 Plants
New Rose.

50 Plants
Golden Self-Blanching.

50 Plants
Giant Pascal.

This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to **AMERICAN GARDENING.** Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

We Solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Jackson Dawson sailed on Saturday last on the steamship Gallia for a twelve weeks' visit to Europe. A dozen or more representatives of the profession were at the dock to wish him a pleasant journey and safe return.

Edward J. Johnson, of Providence, was in town on Wednesday.

William Cashman, of West Chester, Pa., has secured a position as gardener for ex-Burgess Edward Crozer, of Upland, Pa. Mr. Cashman is a well-known football player.

B. Draper has resigned from the service of Mr. George Greene, at Katonah, N. Y., having been engaged to take charge of the estate of W. J. Mathereson, Esq., Missquagal Point, St. James, L. I.

W. G. Marshall, with J. M. Thorburn & Co., was married this week at St. John's Protestant Episcopal Church, West Hoboken, by the Rev. A. Bently, to Miss Lucie M. Voyer. The bride and bridegroom left for the bridegroom's home, Edinburgh, Scotland, per steamship Furnessia to-day (Saturday).

W. M. Edwards has been appointed gardener to J. D. Crimmins, Esq., Norton, Conn.

J. Fraser is engaged as gardener to George Greene, Esq., Katonah, N. Y.

Robert M. Grey, the well-known orchid grower and former correspondent of American Gardening, is now in New York City on a visit.

Meetings.

Tuesday, June 22.—Massachusetts Horticultural Society: Rose and Strawberry Show, (2 days) at Boston.

Wednesday, June 23.—Newport (R. I.) Horticultural Society.

Saturday, June 26.—Massachusetts Society Prize Exhibition, Boston.

American Institute.

On Tuesday, June 8, the Farmers' Club and Horticultural Section of the Institute held their last meeting and exhibition of the season, and in many respects it proved to be the most interesting and instructive of all.

Flowers and Plants.

To orchid lovers and experts the superb exhibit of twenty-three forms of *Cattleya Mossiae*, from C. G. Roebling, Trenton, N. J., was a rare treat. A prominent speaker at the afternoon meeting remarked that it was not possible to duplicate the exhibit this side of the Atlantic. The diploma of the American Institute was awarded to Mr. Roebling, and a cultural certificate to his gardener, Mr. H. Clinkaberry.

J. T. Lovett, Little Silver, N. J., made a remarkable showing of 120 varieties of garden *Pæonias*, including one of American origin, a very floriferous pink. A cultural certificate was awarded.

John Lewis Childs, Floral Park, N. Y., put up 93 vases of that many herbageous flowers, making an exhibit that of its kind is rarely equaled, and well merited the certificate which it received. J. Miller, Oasis Nursery, Westbury Station, L. I., showed 54 vases of *Pæonias*, *Iris* and other hardy flowers; several of his *Pæonias* were of exquisite color and form, and should prove valuable as cut flowers.

Leach Bros., Jersey City, N. J., put up 36 plants of their well-known strain of double and single *Petunias*.

Siebrecht & Son, New Rochelle, made an interesting display of hardy flowers; one unique feature of their exhibit was a collection of *Rosa rugosa* hybrids. Several of these are very remarkable, showing H. P. coloring; also taking on the double form, and being of large

size. A certificate was awarded this group and the committee expressed a wish to see the blooms again when named, that individual kinds could be acted upon.

Another novel feature of the exhibition was a collection of wild flowers from Oakes Ames, Esq., North Easton, Mass. (Carl Blomberg, gardener). The botanists of the city in this had a rare treat afforded them. There were more than 50 species represented, most noticeable among them being *Cypripedium spectabile*, *Arethusa bulbosa*, *Habenaria Hookeri* and *Cypripedium acaule*.

The only exhibit of roses came from M. R. Cook, Bayonne, N. J. (J. G. Aitken, gardener). This exhibitor put up 38 varieties and 45 kinds of herbaceous flowers besides. A first-class certificate was awarded to this collection.

W. H. S. Wood, Greenwich, Conn. (W. Duncan, gardener), exhibited 17 different hardy flowers, including a nice assortment of *Digitalis*; cultural certificate.

W. D. James, Madison, N. J. (W. Duckman, gardener), staged a nice lot of *Pæonias*.

Vegetables

A. Herrington, Madison, N. J., put up a lot of finely-grown Boston market and Trianon Cos lettuces; also two dishes of Lorillard tomatoes.

N. Butterbach, Oceanic, N. J., staged new potatoes—the Bovee, eight weeks from planting in frames; some fine onions which had been planted last fall and left outside all the winter; also two plates of a new, early pea. For the early date and backward season these were of great merit, and undoubtedly this pea is ahead of all first earlies so far known.

Mr. Aitken contributed two dishes of peas, which, for the season, were very creditable; the varieties were Daniel O'Rourke and Elliott's Early.

Fruits

The display of fruits was of more than usual interest; strawberries were the main feature. Of these the largest exhibitor was Mr. T. J. Dwyer, Cornwall, N. Y., who had 24 varieties, including the best of recent introduction, and some of the old standby berries, such as Charles Downing, Wilson, Champion, etc. Handsome fruits were seen in Marshall, Gandy, Haverland, Brandywine, Parker Earle, Beder Wood, Jessie and Bubach.

Messrs. E. & J. C. Williams, Montclair, N. J., had eight varieties of strawberries of very high finish—Brandywine, Gillespie, Marshall were noticeable; also Lady Thompson, a round berry, moderate size, and of a pale color. An unnamed variety was the best of all, however; very fine in form, color and flavor; more will be heard of this.

Mr. Butterbach also contributed to this display, having four plates of enormous berries.

Messrs. W. D. Barnes & Son, Middlehope, N. Y., sent several berries, plants and all. Lady Thompson showed its cropping qualities to be good. A plant of the Hunn bore evidence to the lateness of this variety. The fruits had just set in some instances. It is, indeed, a remarkably late variety.

Market Exhibit.

Archdeacon & Co., 100 Murray Street, put up three bunches of Black Hamburg Grapes, three quarts of Hilton Gem strawberries; also plates of River's Early and Hale's Early Peaches.

Mr. T. J. Dwyer's Address.

First, we will consider the proper land for the most perfect development of this fruit. It has been my experience that many people defer planting the strawberry for the reason that they think, in order to be successful with it, they must have some especially favored land, situation or location. This is a great mistake. The strawberry may be grown to perfection on any land that will produce a crop of potatoes, corn, peas or other

vegetables. Ground that has been used for vegetables or fruit is the best for the strawberry. Almost any soil will answer, but we must remember that the best results are obtained from a dark, rich, loose soil with a clay sub-soil. Strawberries should not be planted on newly ploughed sod ground, nor in land that water remains on after a rain. Such land bakes, and consequently the soil is coarse and lumpy. The only failure we have had in our twenty-five years' experience has been on such land as this. I would feel just as confident in planting twenty-five acres in strawberries north of Albany as I would at my own home at Cornwall. In fact, the men who made most money on strawberries last season were those in the vicinity of Albany. In 1895 I sold to Mr. Arthur Cowie, of Troy, N. Y., 16,000 strawberry plants. His brother and manager called on me during the summer of '96, telling me that he had sold from these 16,000 plants in that year one thousand dollars' worth of fruit. Deducting plants and all other expenses, he should have had a profit of \$600. Of course I know of other instances where the profits have been proportionately as large, but only give this illustration to show what can be done in that part of the State.

How to Plant.

This is a subject on which many differ. We plant each year over ten acres of strawberries, and we make the growing of these plants one of our leading specialties. We have quite thoroughly investigated the methods of planting. We now do all our planting with the garden line, using good, strong, durable trowels to make room for the plants. Many have said to me: "Don't you lose considerable time in shifting this line for each row?" No, we do not lose, but we do use some time in this way. And let me tell you something, and I have had the practical experience to know, for I have been there for days at a stretch: The man who helps set a row of plants some four or five hundred feet in length deserves a little time to straighten his back and shift the line. I have observed that the fellows who are so anxious that no one else shall waste their time make very little good of their own time, at least as far as planting is concerned. The plants should be set close to the line and at a depth that the crown will show; always firm the soil around the plants with the hands and weight of the body, leaving the plants so firm in the ground that the leaves will part in two before they will allow the plants to leave their place. In the absence of rain shade the plants for a few days with light material that will admit the air and light.

Watering.

We don't recommend watering except in extreme droughts, and then only in large quantities, where mulching can be done at once. Set your plants 15 to 18 inches apart in the row and 3½ to 4 feet apart between the rows. Of course this watering and mulching need not be practised when pot-grown plants are used.

When the Plant.

The spring months is a good time to plant the strawberry, but remember, not the only good time; we plant ninety per cent. of our strawberries during the months of August, September and October. In October, '95, we planted nearly 50,000 layers strawberry plants in one field, and I do not think that out of the lot we lost 100 plants, and this was a very dry time, as some may remember. However, it is now our practice to use nearly all pot-grown plants for all our plantings. We planted for ourselves in September and October of last year 25,000 pot-grown plants. Think of this: On the ground where you now have your early vegetables, you can, one year hence, have a full crop of strawberries, no matter what these so-called authorities say to the contrary. I know that these are the best kind of

plants to use, but they don't pay well. There are a good many things in this world that don't pay well, if we look at everything in a financial way; for instance, it don't pay to play with the baby—but it is a great pleasure. But I claim it does pay to use pot-grown plants. Let us see. These plants will cost you 2½ cents each. Every plant set during the month of August or September will make eight more plants before the ground freezes. The following June these plants will produce one-half pint of fruit each. At ten cents per quart you will get over twenty cents from each plant bought. Besides this, you have a bed that, with reasonably good care, will give you three or four more crops of fruit.

Cultivation.

Use the cultivator and hoe for this purpose always. Strive to kill the weeds before you can see them. It will cost but little more to cultivate an acre of strawberries than it will to cultivate an acre of potatoes or corn, providing, of course, the work is done at the proper time. Keep the ground free from weeds. If you do this you will give the proper cultivation. A few inexperienced growers, and, in fact, too, a few that should know better, never cultivate their beds during the spring months. This is a great mistake. We plow between the rows as early in spring as the ground is fit to work, and use the cultivator as often afterwards as is necessary to keep the ground mellow, right up to the time when they are in full bloom. This spring cultivation increases both the size and yield of fruit. If you have a matted row about sixteen inches wide you have the very best thing for fruit, and will have ample room for horse and cultivator between the rows.

Winter Protection.

One of the most important things necessary for a good crop of fruit is the protection of the plants during the winter, and more especially during the spring months. Many materials are used for this purpose, but positively the best covering is horse manure. As soon as the ground becomes frozen you can drive on the beds and cover the plants well from view with horse manure, and let it remain on the plants in the spring until very late. Strawberries need both food and covering and I know of no better way of supplying these needs at one and the same time than to cover them with this manure. "Yes, horse manure will bring weeds, the greatest blessing we have. Plants choked by weeds always remind me of the crying babe in the cradle; both need care, attention and nursing—and these are the only means they have of asking for them."

Varieties.

This very important matter I have left for the last. There are some sorts that will only succeed on some especially favored locality, but fortunately we have some varieties that succeed and give profitable results over a wide range of country. I will confine myself mainly to these kinds.

We think the very best variety under cultivation to-day, all things considered, is the Marshall. It is of quite recent introduction; the plants are luxuriant, healthy growers, with dark, rich foliage; the flowers are perfect; it is productive of large, handsome, uniform fruit of the very best flavor, and dark, rich color, with no white tip; one of the firmest shipping berries we have, ripening early and continuing in fruit until very late. We have had it on our table twenty-six days in succession; valuable either for market or home use.

Brandywine.—A variety of recent introduction, the plants are strong, vigorous growers, with an exceptionally fine foliage. It is very productive and the fruit is large, averaging nearly as large as the Sharpless, the fruit retaining its size throughout the season. The fruit is firm, of good shape and of very good flavor. The flavor, how-



and one which will support you when the fell hand of disease is upon you, and which will bring you back to perfect health and strength, putting a ring in your voice, a sparkle in your eye and a spring in your walk is that world endorsed remedy

Warner's Safe Cure

It never fails in all those diseases brought about by disordered Kidneys and Liver and is a positive cure for

**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

Try a bottle and you will add your testimony to the thousands already cured by it. Beware of substitutes. There is nothing "just as good" as Warner's Safe Cure.

...THE COMPLETE...

BOOK CATALOGUE.

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers
The Fruit Grower
The Nurseryman
The Private Gardener
The Market Gardener
The Seedsman
The Farmer
The Poultry Keeper
The Student of Botany, Entomology and Ornithology
and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE PTS. AND PUB. CO. LTD.
P. O. Box 1697, New York.

ever, is not of the best. The Brandywine ripens in mid-season and continues in fruit until late in the season.

Parker Earle is also a comparatively new berry. The plants of this variety have a tendency to make enormously large hills or stools. From two to three hundred berries and blossoms are often found on a single plant. Of course, a variety that sets such a large amount of fruit needs a large amount of food and drink to bring all to perfection. When this is provided there is no more profitable variety than the Parker Earle. The fruit is firm, of light red color, with a short neck, averaging in size about like the old Charles Downing.

I consider the Marshall, Brandywine and Parker Earle the three leading varieties of the time.

Among the newer sorts I can recommend a trial of Glen Mary, William Belt and Michigan. I believe these three have a great future. However, this can only be determined after a year or two more of trial among the standard varieties. I regard Lovett's Early as a very profitable variety, and know of instances where large profits have been made from the planting of this. Michael's Early, Bubach and Haverland are also valuable varieties.

Some growers still hold on to the Sharpless, while others use the Gandy for a late variety. While these are two very fine varieties, we do not recommend them for profit, as they are not nearly as productive as the other kinds named. Our knowledge gained from a large list of patrons from all parts of the United States and from our own practical experiences makes it possible for us to say that all the varieties we have named, with the possible exception of the William Belt and Michigan, may be relied upon to do well in any part of the country where the strawberry can be grown.

Mr. Dwyer's list for private use is: Van Deman (shy leaver), Marshall, Gandy. For money: Lovett's Early (one of the most productive), Marshall, Parker Earle.

An interesting discussion followed. Mr. Stephen Hoyt, New Canaan, Conn., objected that the Marshall rusted; also he had discarded the variety because it did not set well. Mr. Dwyer agreed that it did rust, but, said he, "so do many of the best berries, Charles Downing, for instance." On the whole, Marshall was as healthy a plant as there was to-day. He had heard other people complain of its failure to properly set all its blooms, but he had not experience of the trouble.

Other questioners brought out further information. He would not set new beds of layer plants after October 20, but pot plants at any time that the soil could be worked.

Greenville was a "splendid berry" if fertilized by Lovett's Early; plant three or four rows of the former to one of the latter.

In a small garden, where hand cultivation is easily given, one can plant at two feet apart; but three feet is better.

Give water only in extreme drought and then let it be thorough—a quart to each plant, pouring the water in a hole and covering by a mulch.

A good crop of berries should be 250 bushels to the acre; he had seen 500. Dr. Hexamer recalled a record of 12,000 quarts to the acre (mostly great American) the correctness of which was vouched for by a special committee of the American Institute.

Mr. Williams, Montclair, N. J., did not place Marshall as highly as did Mr. Dwyer; it was too soft; so was Gillespie. Bubach was a better commercial berry. For home market use his selection, however, would be Marshall, Bubach, Brandywine.

Hon. James Wood, president of the Eastern New York Horticultural Society, remarked that he was gratified to hear commercial berry growers talk of quality; he had thought that had been eliminated in their estimate of a berry and quantity substituted; at all

events it seemed that so far as the Southern growers were concerned such was the case. "The Southern berries were the worst trash that could be offered to human beings to eat." As to what was the "best" berry, it all depended on the soil and conditions. On his own place, in a 100-foot row of the same variety were good and bad ends; Lovett's Early on a light, dry soil at one end of the row was magnificent; at the other end a failure; Gandy showed the reverse of this. The value of cultivation was very great; it not only retained moisture at the roots but warmed the soil, and warmth gave saccharine matter in the fruit. Mulching gave moisture, but no sugar. The best berry he had ever known was Black Defiance. He had noticed in Denmark that the best berries were of Black Defiance type and had imported some plants for the purpose of testing in our climate.

Mr. J. T. Lovett, Little Silver, N. J., agreed that the old Black Defiance was "a splendid berry."

Dr. Joseph B. Ward, of Lyons Farms, N. J., was of the opinion that strawberries had not improved in flavor in forty years; "there is not one to-day so good as Burr's Pine. Considerable amusement was caused by the veteran doctor's historical account of the development of berry picking. He exhibited samples of old berry boxes. The earliest was a long, narrow measure with a handle, made to hold a pint, "for which we expected to get 10 cents." They were awkward to pack so on his farm they had used china bowls with a hole in the bottom; but the quart box of to-day was the best of all for all purposes, and a great relief for those who had to pack the berries for transit. His best berry was the old Charles Downing; he was planting Glen Mary and Parker Earle.

N. Y. Florists' Club.

An interesting exhibition of flowers was held on Monday last at the club's rooms. A collection of fifteen varieties of Scotch Pinks was a noteworthy feature. These came from W. A. Manda, South Orange, N. J. He also sent *Coreopsis lanceolata* var. Harvest Moon, specially noticeable for its large size; *Rosa Wichuriana* hybrids, *Lilium flavum*, *Arenaria balearica*.

Pitcher & Manda had a collection of herbaceous plants, in which *Thermopsis Caroliniana* was prominent.

J. L. Childs, Floral Park, N. Y., had another fine group, in which Irises were well represented, and was awarded a silver medal.

J. Miller, Oasis Nursery, Westbury Station, L. I., sent 154 varieties of *Pæonia*, also Irises, and received a silver medal and certificate.

Some sweet peas on view struck us as a happy selection of typical varieties; they were *Blanche Ferry*, *Firefly*, *Blanche Burpee*, *Ovid*, *Dorothy Tennant*, *Gray Friar*, *Kathleen Tracy* and *Emily Eckford*; each in its respective color is a leading variety.

Cannas Burbank with large flowers, and *Yellow Crozy* of fine, clear yellow, came from C. W. Ward, Queens, L. I., and *Siebrecht & Son*, New York, had some handsome *Pæonias*.

Madison, N. J.

There was a full meeting of members of the Morris County Gardeners and Florists' Society in Masonic Hall, Madison, on Wednesday, June 10, when it was definitely decided to hold a show in the fall at Morristown, the dates selected being November 3, 4 and 5. Committees were elected to make early arrangements for securing a suitable hall and to draw up a schedule.

Mr. W. Duckham, vice-president, addressed the meeting on the subject of "Spraying for the Destruction of the Elm Beetle," and in a short but thoroughly practical paper described the modus operandi as carried out by him on the estate of D. Willis James, Esq.,

for the past four years. He was firmly convinced of the efficacy of the practice and advised its more general adoption, not merely to preserve the foliage, but the life of the tree itself, for many fine trees in this locality were in danger of permanent disfigurement, if not of total destruction, from this pest. An interesting discussion then followed, which brought out the fact that some of the owners of fine estates were anxious to see this matter of spraying publicly taken up, and one of them had expressed an opinion that the Morris County Gardeners and Florists were the body that should have the conducting of the work. The meeting generally favored the scheme and a sub-committee was appointed, with Mr. Duckham as its president, to confer with the local governing authorities and get an expression of their opinion on the matter, as it was thought that even the local authorities must see the wisdom of acting and the enhanced beauty that would result from the adoption of remedial measures that it was known would preserve throughout the season the leaves upon many fine trees that now are defoliated about mid-summer.

American Seed Trade Association

The fifteenth annual meeting of this association was held in the Ebbitt House, Washington, June 8, 9 and 10.

Resolution.

The association presented the following resolution regarding tariff matters, which was forwarded to the Finance Committee of the Senate.

WHEREAS, The House of Representatives having passed the Tariff bill known as the Dingley Bill, in which the duty on garden seeds is placed at 40 per cent. and.

WHEREAS, The Senate Committee, in its various amendments to that bill, reduced the 40 per cent. duty on garden seeds to 35 per cent. and placed seed of beet, radish and spinach upon the free list.

RESOLVED, That the American Seed Trade Association, assembled in Washington this 8th day of June, 1897, put on record its unqualified condemnation of the report of the Senate Committee reducing the proposed duty on garden seeds as a serious blow to an agricultural interest of most advanced character, garden seed growing, according to the late census, being pursued on 95,000 acres of land, and meeting strong competition every day from cheap labor of Europe.

RESOLVED, That the Association put on record its claim for the protection of the lands, investments and labor of American seed-growing farms to the extent of 40 per cent. on beet, radish and spinach, now recommended on the free list, be made dutiable at 40 per cent. Also that a duty of 40 per cent. be placed upon flower seeds, and a duty of 30 per cent. on flowering bulbs, as provided in the Dingley Bill.

Also that peas and beans remain as provided for in the Dingley Bill, and that the duty on flower seeds take effect in June, 1898.

Election of Officers.

The following officers were elected for the ensuing year: President Jerome B. Rice, of Cambridge, N. Y.; first vice-president, E. B. Clark, Milford, Conn.; second vice-president, J. Boigiano, Baltimore, Md.; secretary and treasurer, S. F. Willard, of Comstock, Ferre & Co., Wethersfield, Conn.; assistant secretary, C. E. Kendall, Cleveland, O.

600 Second Hand BICYCLES

to close out. All makes, GOOD AS NEW, \$5 to \$15. NEW, HIGH GRADE '95 Models, fully guaranteed, \$15 to \$25. '97 Models \$20 to \$30. Shipped anywhere on approval. Special Clearing Sale.

EARN A BICYCLE by helping advertise us. We will give one agent in each town FREE. Use of sample visit to introduce them. Write at once for our Special Offer.

N. M. KEAD CYCLE CO., Wash. Ave., Chicago, Ill.

Mention American Gardening when you write.



ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Pot Antirrhinums.

The magnificent spikes of these seen at an April flower show make one wonder how it was possible for florists to so long ignore the desirable qualities of this handsome flower. To be sure, the highly-colored sorts are not noted for beauty of tint, but the white and the yellow are above criticism in this respect, while free, lasting, satisfactory, and—it is claimed—in some instances, fragrant, also. Spikes of which the floral part alone is a foot or more in length are by no means uncommon, the effort now being to shorten the growth below the flower portion, producing "Tom Thumb" plants in habit. But the beauty of *major alba* is too great to be dwarfed, were it not for the demand of pot culture.

Cheap Grain So-called.

"I think I will try buckwheat this time," said Mrs. Suburban to the "flower and feed" merchant. "Twenty-five cents a bag is worth saving and perhaps the fowls are tired of wheat; they have had it so long." Five days later Mrs. Suburban's brow was puckered into long lines as she bit the stub end of a pencil and scanned the egg record. The drop in number of eggs was exactly one-third, from no other apparent cause than the change of grain. In two days only the difference in value of eggs received would more than balance the saving in cost of feed. The next day Mrs. S. ordered wheat, "to be sent at once." Yet buckwheat is considered an excellent grain for layers.

Mailing Roses in Bud.

The first week in June sees buds on many of the newly-acquired bushes, though all were pruned when received. Indeed, some thrifty dealers took the precaution to prune the new sorts before sending them out! President Carnot, for instance. It is always a question whether or not these young plants should be allowed to bloom early. If not, the season of bloom is, of course, shortened. If they do bloom this checks the best growth of the plant, and injures future bloom to some extent. If received at the beginning of the season, however, say in February or March, and grown under cool conditions with abundant fresh air, plants ought to be ready to bloom a little now without being injured thereby.

Red Roses, and White.

"Select two roses for me that shall be both cheap and good," said an acquaintance a few days ago. "Your first adjective throws out everything new, remember." "Oh, yes; but I haven't much money to put into them and there will be just as much pleasure for me in the older sorts, for all are new to me. Besides, I want something that has been tested." "What is the choice of color?" "Red, I think, and white." Perhaps Marion Dingee would suit you for red. I don't believe you would be pleased with the oft-recommended Queen's Scarlet or Agrippina. Too small. Meteor is grand in appearance, but often sulks, especially with the novice. Madam Hoste will do admirably for the white one, for you will get thrift, freedom, size and great beauty of form, an unusual quadruplet of good qualities. Both will cost but a quarter."

The Bruant Race.

It was once but a Bruant race of Geraniums. It now seems to be a Bruant race for notoriety. Certainly it is right and just that the originator of new things shall have due credit therefor, and one of the easiest ways of aiming to get that credit is to attach his name to his novelties. Sometimes, how-

ever, a name is captured as a mere advertising dodge. We are getting a little mixed just now by the Bruant avalanche. Begonias, Geraniums and Fuchsias alike flaunt the proud Bruant name. Twenty Geraniums of the Bruant race (sun-proof) are now offered in a single list. Only one of these, however, the forerunner of the type, bears the family (?) name. The beautiful novelty, Madame Charles Molin, figures in this list.

Two Choice Geraniums.

The list of plants which have not been over-praised is not so long as one might wish. But prominent on it are the two Geraniums, *Souvenir de Mirande* and *Grand Chancellor Faidherbe*. Both are extra fine sorts as to color, both are excellent bloomers, as well for bedding as indoors. The latter variety, though much older than *Souvenir de Mirande*, is procurable only from a few firms. Its glowing crimson, velvety petals, gorgeously lightened with more brilliant red, approach the favorite old Rose, *Baron de Bonstettin*, in coloring and texture. Among Geraniums they are unexcelled. *Souvenir de Mirande* has become the parent of a type. Perhaps the only point in which these two sorts are excelled is size; but both are good, even in this.

Feeding Onions.

The value of onions as a green food for fowls and chicks is far from being appreciated. Not only do they supply the necessary green ration, but, in many cases, they act as corrective medicine, improving the general condition of the system. A daily ration of chopped onions in the soft feed will aid greatly in warding off the dreaded disease known as "gapes," and will prove a decided help in other ways. The tops also may be used, they being even better than the onions themselves. It is to be noted, however, that strong vegetables affect the flavor of the eggs when fed to laying fowls, unless the precaution be taken to give them as the last feed at night.

Warmth for Newly Hatched Chicks.

It cannot be said too often that warmth is absolutely the only thing that the chick just from the egg needs. This is because the people to whom we say it read and do not believe. Food during the first twenty-four hours is certainly worse than useless to the small organism fully supplied with its own natural nourishment in the yolk. Egg for baby chicks, to be sure, but raw and taken by absorption, not through the mouth! An instance of the reviving effect of warmth was noticed last month. A handful of chicks that had been thrown from the nest by accident was brought in and placed in oven heat. The chicks were apparently dead, the bodies perfectly limp, with extended legs; but close examination showed a slight flutter of the heart. With strong warmth came, after some minutes, gasping and slight movement. Soon weak cries were heard; later eyes were opened, strength came and the chicks sat up and were afterward able to stand. Within an

STATE OF OHIO, CITY OF TOLEDO, ss.
LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of Dec., A.D. 1886.

{ SEAL. } A. W. GLEASON,
Notary Public.
Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O.
Sold by Druggists. 75c.

That Pleasing Paralyzing Pie!

How good it looks! How good it is!..... And how it hurts. Why not look into the question of **Pill after Pie?** Eat your pie and take Ayer's Pills after, and pie will please and not paralyze.

AYER'S
Cathartic Pills
CURE DYSPEPSIA.

hour eyes were bright and chicks able to toddle about. All are now as bright and lively as the rest of the brood, even in spite of the nearly fatal chill. They were not fed for hours afterward; warmth and warmth only supplied all their needs. Indeed, food at this time would probably have induced fatal bowel disturbance.

MYRA V. NORRIS.

Business Cards.

Cards will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance; the address to be counted part of the advertisement.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished. Mention American Gardening when you write.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSBOSCH BROS., bulbs and plants, Englewood, N. J.

CELERY PLANTS. See our ad. in this issue. Kirkwood Celery Co., Kirkwood, Ohio.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER on gentleman's place, thoroughly experienced in greenhouses, lawns, gardening, farming, and stock. English, married, no family; first-class references. E. Green, 1160 Broadway, New York.

GARDENER desires position in private place, thoroughly conversant with gardening and greenhouse work in all its branches, good all-around grower, 4 years reference from present employer. Address, Gardener, 840 Richmond st., Plainfield, N. J.

WANTED

A copy of Sayer's book on the Dahlia (Boston 1896). Address,

Editor AMERICAN GARDENING,
P. O. Box 1697, New York.

Questions Answered.

This is a Bureau of Information, to which subscribers can apply freely for advice on any and all subjects in the field of horticulture.

In order to lessen labor, and that the Editor and his friends may understand each other, the following rules must be observed:

Rules for Correspondents.

Questions must be concise, plainly written on one side of the paper only, and addressed INQUIRY DEPARTMENT, AMERICAN GARDENING, P. O. Box 1697, New York City.

Letters appertaining to subscriptions, or other business matters, should be directed separately; otherwise delay may follow.

The name and address of the sender is required, in addition to a nom de plume. Use a separate sheet of paper, not a scrap, for each question. Questions will be attended to without delay. If by mistake a query fails to be answered, it should be repeated.

Specimens of plants for identification must be ample; mere scraps will not do, and no notice can be taken of such.

Questions relating to insects or diseased plants should always be accompanied by specimens, packed in a tin box, and forwarded at letter postage. Always send a liberal sample.

Conditions and soils vary so infinitely that we would be pleased to have our correspondents describe theirs.

Correspondents referring to articles which have appeared in AMERICAN GARDENING should mention page and date of issue.

• We cannot promise to comply with requests to answer by mail.

• We cannot undertake to reply by mail.

Propagation of Vinca and Ivy.

I want to raise a stock of Vinca variegata and English ivy, to be used in vases next May. Will you please tell me through American Gardening the best way to do it.—C. W.

If large, strong clumps of Vinca be needed it may be better to root a number of cuttings at once; they root easily from the tips of the short growths; in fact, any part of the plump, slightly ripened growth will root. Cut in lengths with two or three eyes each. At this season they would root quite as well in sharp sand in a cold frame as in a greenhouse, for at no season do they require a high temperature. Shade with slats or boards in the frames and with whatever is convenient indoors.

In September and from then on till March propagation must be carried on. Use the cuttings struck now for stock, and also have a few old plants on hand for that purpose.

Ivy will root in pretty much the same temperature and under the same conditions as the first named, except that propagation needs to be carried on all summer, during which period the propagating frame had better be on a north border; otherwise it would be difficult to retain moisture in the sand or keep the tops cool.

Jack Roses Not Opening.

My "Jack" roses came out full of fine, large buds, but seem to be stuck together; cannot open. What shall I do to help them? They are grafted on Manetti stock three or four years old; have done the same for two seasons. Other varieties within three feet open all right.—P. P. HUVELUT.

We are inclined to think that the cause of the trouble lies in the food supply. It has often been pointed out that excess of nitrogen will arrest the proper development of the flower proper, and a very interesting instance of a case analogous to yours is told of in a letter on page 394 (issue May 29). In that case a heavy dressing of wood ashes followed by a thorough watering, so as to get the new food to the roots, gave satisfactory results. The fact that other rose bushes nearby do well may have no bearing on the case, for the various varieties of the rose differ widely as to their requirements; indeed, nearly each one has its cultural individuality.

Insects on Norway Spruce.

I send you sample of insect that is likely to be a pest on Norway spruce. I did not notice it last year when I trimmed the hedge and now they are present by the thousand, mostly in the chrysalis, small and green. What are they? What will kill them and not the hedge?—ADAM DUNN, Ont.

The insect responsible for the injury to the Norway spruce is the young or larva of a beautiful little moth known as *Sericoris abietano*. Its life history

OUR GREATEST 1897 PREMIUM

The Wonderful New Climbing Rose

Yellow Rambler (Aglaia)

A worthy COMPANION to the well-known Crimson Rambler.
The Hardest Yellow Climbing Rose Ever Introduced.

Yellow Rambler bears its flowers in immense clusters, often as many as one hundred and fifty blossoms in a bunch, the trusses being of handsome pyramidal shape.



A CLUSTER OF YELLOW RAMBLER ROSES.

Yellow Rambler holds its blooms from three to four weeks without fading; a large bush in full bloom is one of the most beautiful sights imaginable.

Yellow Rambler is a clear decided yellow, in marked contrast to many roses so described, but which have really only a yellow tinge.

Yellow Rambler is very vigorous; well-established plants often making shoots eight to ten feet in height in a single season.

Yellow Rambler represents the triumph of the century in the hybridizing art, and is the most valuable introduction in recent years.

Yellow Rambler is very sweetly scented.

Yellow Rambler combines the climbing habit and decided yellow color with hardiness.

Yellow Rambler will withstand, without protection, a zero temperature; with protection it will thrive where any other rose will.

Yellow Rambler is thus adapted to successful culture in nearly all of the northern parts of the United States.

Yellow Rambler is absolutely NEW on the market and will prove the sensation of 1897!

One strong plant of Yellow Rambler, from 2¼ inch pot, will be mailed, postpaid, to any address, as a premium for one new subscription to AMERICAN GARDENING.

Special to Regular Subscribers

To those of our readers whose subscription has just expired, or is shortly to expire, who will send us a prompt renewal (adding fifteen cents to pay for packing), we will at once forward one fine plant of **YELLOW RAMBLER** by mail, postpaid. For your own renewal and that of a friend, we will send by mail, postpaid, on receipt of \$2.00, one plant to each address.

This is an offer without parallel, but which if desired, must be applied for within two weeks from this date.

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

was worked out some years ago by Professor C. H. Fernald, of the Massachusetts Agricultural College. It seems quite likely that the insect could be kept in check by the application of arsenicals, while the young are feeding. Four ounces of Paris green in forty gallons of water, thoroughly sprayed over the trees or ledge, should do the work.—W. G. JOHNSON.

Rose Bugs.

Can you kindly tell me if there is any effective poison that will kill the rose beetle and not injure the substance of the flowers? The last two years the bugs have been uncommonly plentiful and the only effective means was hand picking, which, where a large number of roses is grown, requires a man to be gathering them all the time.—L. F. HORNER.

The rose bug is a hard enemy to fight; continual warfare is the only note. Pyrethrum powder dusted on dry tufted the creature, or they may be jarred off, caught and destroyed. The combined kerosene emulsion and pyrethrum powder has been used with success.

Scale on Orange.

I send you herewith a leaf from my Otahelte orange, which is covered with scales or scabs. They grow to be about three or four times the size of these sent you. I picked them all off the plant a short time ago and washed the plant first with soap then with tobacco water, but the treatment did not seem to help it.—N. G. B.

The scale insect upon the orange leaves sent by our correspondent is commonly called the soft scale (*Lecanium hesperidum*). It is a very common insect and has a very wide distribution throughout the country. It can be kept in check by the careful application of kerosene emulsion diluted ten to twelve times with water at the time the young are hatched. This can be easily determined by watching the insects for a short time, the wash being made as soon as the young lice-like creatures appear. They also can be destroyed by thoroughly spraying the plant with whale oil soap, diluted in water at the rate of one pound and a half to the gallon.

Strawberry Worm

My strawberry plants are covered with small, green worms which eat the leaves, leaving them like the enclosed. I first noticed them a few days ago, and if not checked the plants will be skeletons in a few days more. What shall I do to destroy them?—W. M. C.

Your plants are attacked by the strawberry worm, larvae of a small black fly, with two rows of transverse spots on the abdomen. The female deposits her eggs on the leaf stalks. The fully-grown worm descends to the ground and forms a cocoon and remains there till the following spring. The best method of destroying the pest is by dusting on the leaves some such thing as hellebore or using one of the arsenites.

Spent Manure From Mushroom Beds.

Would manure of spent mushroom beds be suitable to fertilize my beds in the greenhouse this fall for lettuce and radishes? It was all fresh-gathered horse manure and none of it leached.—W. R. MESEROLE.

The manure of spent mushroom beds puts soil in fine condition, and for radish it is all that can be desired. But for lettuce growing there is a doubt about its value, not so much as regards its manurial properties, but for its tendency to breed fungi, which are detrimental to the health of the lettuce plant. It thus may become a source of danger, for other diseases may follow. Outside of these possible objections it would do very well. Large growers who depend upon the lettuce crop for a living use fresh manure.

Cucumbers Under Glass.

In growing cucumbers in the greenhouse at this season of the year would you advise shading of the house? If not, how do you prevent them from wilting?—W. R. MESEROLE.

It is getting late for cucumbers under glass now. The glass needs shading with whitening, or better still, naphtha and white lead. This last-named can be mixed to a solution thin enough to apply to the glass through a garden syringe on the outside. As it wears down apply again in the same way.

Propagating Phlox Subulata.

How and when is Phlox subulata increased?—P. F.

Phlox subulata can be divided now and by watering in as planting it is really the best time.

Diplomas and Certificates

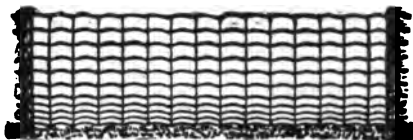


HORTICULTURAL SOCIETIES,
FOR FAIRS, INSTITUTES, : :
GARDENERS' CLUBS, ETC.

These should be selected well in advance of the date needed, and secretaries of above should send now for our set of samples, all of which have been especially designed by first-class artists and engravers for the purpose. Owing to the wide demand for these samples and their expensiveness, we will mail the set of five, postpaid, for \$1.00; money refunded on return of samples, or placed to credit of order, as directed. One single sample sent free on application if the writer will explain the exact purpose for which it is wanted.

A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.

HEADQUARTERS FOR ALL PRINTED SUPPLIES.



Irresponsible Agents.

They are always ready to guarantee you against all claims for infringement. Fence buyers should remember that other gentlemen (?) who was ready to give a warrant deed of the whole earth, and buy the Colled Spring article, of the absolute owners, the

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write.

INCUBATORS. Self-regulating. Catalogue free G. S. SINGER, Cardington, O.
Mention American Gardening when you write.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 665, ALBANY, N. Y.

Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 20 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America.

A printed list sent on application. Sales made at reasonable prices.

E. CORNING.

Mention American Gardening when you write.

"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address THE AMERICAN JADOO CO.

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

HOUSE PLANTS

AND HOW TO SUCCEED WITH THEM.

By LIZZIE PAGE HILLHOUSE.

This work has been written by a woman for women. Recognizing the fact that no practical and easily understood guide covering the subject has ever been published, Mrs. Hillhouse has undertaken to fill the deficiency, and most ably and effectively has she accomplished the task. The result is a book of information and instruction, written in simple, easily understood language, which will be prized and consulted by every woman fortunate to become its possessor. Of all books of reference issued for women, "HOUSE PLANTS" will take its position second only to the much prized and ever needed family cook book.

"HOUSE PLANTS" will be issued from our press, June 24. It is handsomely bound in cloth, beautifully illustrated, and will be mailed, postpaid, to any address on receipt of \$1.00.

AGENTS WANTED.—This meritorious work will be sold exclusively through our agents, and application for terms and territory should be made at once. We are in a position to offer large discounts, and so universal will be the demand for the book, every lady at all interested in plants being sure to need one, that agents will easily make from \$4.00 a day and upward. Send us \$1.00 for your first copy, terms, etc., the discount will be allowed on this copy when your second order reaches us.

For full particulars, apply to

A. T. DE LA MARE PTG. & PUB. CO. Ltd., P. O. Box 1697, New York.

WHOLESALE MARKETS.

New York.

The market is very full of stock and lacks vim all around. Prices are ruling low, with but little prospect of a rise, unless the warmer weather will create sea-side trade; so far this has been dead, and it may be expected that local supplies will now be ready everywhere. If this source should prove equal to the demand New York will suffer considerably this season from the late start.

Hothouse grapes are in excess of the demand and the top price is down to a dollar per pound.

Hothouse peaches are down to a dollar per dozen.

Hothouse tomatoes move slowly; a few reach 10c. per pound.

Hothouse cucumbers are selling from \$3.00 to \$4.00 per box.

Outdoor grapes from Florida are now on the market and are making about 10c. per pound.

Botan plums are plentiful, but the price is hardly more than the half of what it was a year ago.

Le Conte pears, from Florida, are in the market.

Local cherries are in poor shape; the recent heavy rains have effected them and they market badly.

Strawberries were falling rapidly the early part of the week. Hilton (N. J.) berries are leading and a few fancy reached 25c. per quart. Hudson River berries are following closely in quality.

Asparagus has lost the grip of the phenomenal high price which has been obtainable so long. On Tuesday morning there was a very heavy drop in prices. Some dealers are sanguine enough to expect a rise again soon; but that is doubtful.

Apples—Ben Davis, State, prime to choice, \$3.00 to \$3.50; Northern Spy, State, prime to choice, \$3.00 to \$3.50; Baldwin, W. N. Y., choice, \$3.00 to \$3.50; Russet, Roxbury, State, per barrel, \$2.75 to \$3.25; Russet, Golden, per barrel, \$2.25 to \$2.75; inferior, per barrel, \$1.75 to \$2.25.

Strawberries—Hilton & Irvington, ex. fcy. varieties, quart, 80¢ to 90¢; Staten Island, per quart, 80¢ to 12c.; up-river, upper stations, per quart, 80¢ to 10c.; up-river, lower stations, per quart, 70¢ to 9c.; Jersey and Delaware, Gandy's Prize, per quart, 70¢ to 9c.; Jersey, Monmouth County, usual sorts, per quart, 40¢ to 6c.; lower Jersey and Delaware, usual sorts, per quart, 40¢ to 6c.; Maryland, usual sorts, per quart, 40¢ to 6c.

Gooseberries—Extra large, English, per quart, 80¢ to 12c.; small, green, per quart, 30¢ to 4c. Huckleberries—North Carolina, large, blue, per quart, 12¢ to 14c.; North Carolina, poor to good, per quart, 8¢ to 12c.

Blackberries—North Carolina, cultivated, per quart, 10¢ to 11c.

Cherries—Large, red and black, per pound, 80¢ to 8c.; large, white, per pound, 40¢ to 5c.; small to medium, sweet, per pound, 20¢ to 4c.; sour, per pound, 20¢ to 5c.

Pineapples—Indian River, reds, standard crates, 4s., \$2.75 to \$3.25; Indian River, reds, standard crates, 30s., \$2.50; Indian River, reds, standard crates, 36s., \$2.00 to \$2.25; other sections, per 100, \$4.00 to \$5.00; Porto Ricos, each, 25¢ to 50c.

Melons—Watermelons, Florida, good to choice, per car, \$175 to \$225; muskmelons, Florida, per barrel crate, \$1.50 to \$3.50; muskmelons, Florida, per basket, \$1.00 to \$2.00.

Peaches—Florida, choice, per carrier, \$2.50 to \$3.00.

Georgia, early sorts, per carrier, \$1.50 to \$2.50.

Plums—Botan, usual quality, per carrier, \$1.50 to \$2.25; Wild Goose, per carrier, \$1.75 to \$2.25; Chickasaw, per four-till case, \$1.00 to \$1.25; Chickasaw, per carrier, \$1.50 to \$2.00.

Pears—Le Conte, Florida, small to medium, per barrel, \$2.50 to \$4.00.

Asparagus—Near-by, large, per dozen, \$1.75 to \$2.25; near-by, average prime, per dozen, \$1.00 to \$1.50; Maryland and Delaware, per dozen, \$1.00 to \$1.25; inferior, 75¢ to \$1.00.

Cauliflowers, per barrel, \$1.50 to \$3.00.

Cabbages—Jersey and Long Island, per 100, \$3; Baltimore, per barrel, 75¢ to \$1; Norfolk, Flat Dutch, per barrel crate, \$1.00 to \$1.12; Norfolk, Flat Dutch, per barrel, 90¢ to \$1; Norfolk, Wakefield, barrel crate, 75¢ to \$1; Norfolk, Wakefield, per barrel, 75¢ to \$1.

Cucumbers—Charleston, per basket, 75¢ to \$1.25; Savannah, per basket, 75¢ to \$1; Florida, per crate, 50¢ to 75¢.

Egg plants—Florida, per one-half-barrel box, \$2.00 to \$2.50.

Garlic—New Orleans, per pound, 50¢ to 60¢.

Onions—Eastern Shore, per one-half-barrel basket, \$1.00 to \$1.25; New Orleans, per barrel, \$2.50 to \$3.50; New Orleans, per bag, \$1.25 to \$1.50; Egyptian, per sack, \$2.25 to \$2.40.

Peas—Maryland, per one-half-barrel basket, 50¢ to 75¢; Jersey, per one-half-barrel basket, 50¢ to 75¢; Long Island, per bag, 90¢ to \$1.

String beans—Norfolk, green, one-half-barrel basket, \$2.25 to \$2.50; Norfolk, wax, one-half-barrel basket, \$1.75 to \$2.25; North Carolina, wax, per basket, 75¢ to \$1.25; North Carolina, green, per basket, 75¢ to \$1.50.

Squash—Florida, marrow, per barrel crate, \$1.25 to \$1.50.

Tomatoes—Mississippi, per flat case, 65¢ to 75¢; Florida, fancy, per carrier, \$1.00 to \$1.12; Florida, fair to good, per carrier, 75¢ to 87c.

Philadelphia.

Business has been very good in this market during the past week, although shipments have been heavier; yet the market has been well cleaned up.

Strawberries—At the present time the Pennsylvania berries are coming in and are of the best quality seen here this season; they are selling at from 12¢ to 15¢. Jersey berries are very plentiful, although a decline is now noticed and a great falling off is expected in shipments in the next week; prices for this past week have been from 40¢ to 7c.; the market has been well cleaned out at these figures.

Hothouse tomatoes are falling off in quality; the best price obtained is 7¢ to 8c.

Asparagus—Choice Pennsylvania, \$3.00 to \$3.50 per dozen bunches; Jersey, choice, \$1.50 to \$1.75; fair to good, \$1.00 to \$1.20.

Beets—Charleston, per 100 bunches, \$1.50 to \$2.00; a few near-by grown have come in; these have sold at \$2.50 per 100 bunches.

Cabbage—Norfolk, per barrel, \$1.25 to \$1.40.

Cucumbers—Charleston, per basket, \$1.50 to \$1.65.

Egg plant, per crate, \$1.75 to \$2.00.

Onions—New Orleans, per barrel, \$2.00 to \$2.25; Egyptian, per sack, \$1.75 to \$2.25; Southern Jersey, per basket, \$1.00 to \$1.50.

Lettuce—Pennsylvania, per barrel, 75¢ to \$1.25.

Peas—Jersey, per one-half-barrel basket, 40¢ to 60c.; Maryland, per barrel, \$1.00 to \$1.25; Norfolk, one-half-barrel box, 30¢ to 60c.

String Beans—Norfolk, one-half-barrel basket, \$1.50 to \$1.75; Charleston, wax, per basket, 75¢ to \$1.25; green, 50¢ to \$1.

Tomatoes—Florida, per carrier, \$1.00 to \$1.25; Mississippi, per crate, four baskets, 55¢ to \$1. These are arriving in splendid condition and sell well; in fact, Florida will not sell until these are sold out.

Potatoes—Choice Rose, \$3.75 to \$4.00 per barrel; Reds, \$3.25 to \$3.50 per barrel. There is a large quantity of seconds arriving which sell from \$2.00 to \$2.75 per barrel.

Watermelons—Florida are arriving in larger quantities and are selling at from \$2.00 to \$3.00 per 100.

Muskmelons—Florida, per basket, are overplentiful and are bringing only 50¢ to 75¢ per basket.

Mushrooms are very scarce on the market; growers are supplying hotels direct at 50¢ per pound.

Hothouse grapes are very scarce on the market dealers getting their supply mostly from New York.

N. Y. Gardeners' Society.

The exhibition to be held at the City Hall to-day (Saturday), promises to be very successful. It is expected that the Mayor will open the exhibition at one o'clock, or in his absence, Alderman Jeroloman. The exhibits will be distributed among the inmates of the city hospitals. After the show, the Society will hold a reception at its rooms in the Mott Memorial Hall.

To Employers of Gardeners.—The publishers of American Gardening are at the present time in a position to recommend several very capable gardeners to those requiring the services of such.

A Sufferer Relieved. A Tale of Suffering and Subsequent Relief.

From the Press, Columbus, Ohio.

One of the many persons in Columbus, Ohio, who have been benefited by the use of Dr. Williams' Pink Pills for Pale People is Miss Jerusha McKinney, of 50 South Centre Street. Miss McKinney is well and favorably known, especially in educational circles, as she has been for a number of years, a faithful and progressive school teacher.

For some time she has been very ill, and the sufferings and tortures endured by her for months have been unusually severe.

The tale of her sufferings and the subsequent relief and final cure which she derived from the use of Dr. Williams' Pink Pills for Pale People, aroused considerable agitation among her many friends and others.

A reporter was detailed to obtain a reliable account of this marvelous case, and when he called he found Miss McKinney at her comfortable and cozy home where she cheerfully complied with his request. She said:

"The first indication that I had that anything was radically wrong with me was about three years ago. I suffered the most excruciating pains in different parts of my body and was almost crazed at times. My sleep was disturbed by horrible dreams and I had begun to waste away to almost a shadow. To add to my other afflictions the malady assumed a catarrhal turn and I was soon a victim to that horrible as well as disgusting disease. I consulted the family physician who gave me some kind of a nostrum and I was foolish enough to imagine that it benefited me. I followed the advice of the physicians but noticed no perceptible improvement in my condition and was about to despair of ever becoming a strong and well woman again.

"Some of my lady friends were calling on me one afternoon and before them I hap-

pened to mention my troubles, when one of them recommended that I try Dr. Williams' Pink Pills for Pale People. I had never had any faith in medicines of that kind and paid but little attention to the suggestion. It was not long after this, however, that I again heard the pills highly recommended by several persons, and then it was that I decided to give them a trial and purchased one box of the pills. I soon began to notice an improvement in my condition and before the whole box had been taken my health was so much improved, that I was about ready to begin singing the praises of Dr. Williams' Pink Pills for Pale People.

"I was not yet thoroughly convinced and decided to wait a while before growing enthusiastic over the results, and had begun on the second box before I was confident that I had at last found a medicine to meet the requirements of my case. I discontinued my calls to the physicians and have left them alone since. I am now as well and strong as I ever was in my life; am entirely free from all pains and never felt better in my life. I eat regularly and sleep like a babe. No more are my slumbers haunted with fearful dreams and when I retire at night I go to sleep at once. I regard Dr. Williams' Pink Pills for Pale People as my salvation, and would recommend them to all ladies troubled as I was. The pills are more than what is claimed for them and anyone giving them a trial will soon come to the same conclusion regarding their merits that I have."

Dr. Williams' Pink Pills for Pale People contain all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are for sale by all druggists, or may be had by mail from Dr. Williams' Medicine Co., Schenectady, N. Y., for 50c. per box, or six boxes for \$2.50.

Almost an Out and Out Present to You.

The Three Best Known Cannas are

Austria, Italia and Mrs. Fairman Rogers

OFFER

No. 66.

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed Madam Crozy type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of Mme. Crozy, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{4} \times 1\frac{1}{4}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.

ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. Austria is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. Italia has flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the *Gladiolus*, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of Austria with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 88 growths, and attained a height of 42 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and Italia were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.

One Plant for One new subscription; the set of Three Plants for Two new subscriptions.

SPECIAL TO OUR REGULAR SUBSCRIBERS.

To those of our readers whose subscription has just expired, or is about to expire, who will send us a prompt renewal (adding fifteen cents to pay for packing), we will at once forward one Canna, their choice of either AUSTRIA, ITALIA, or MRS. FAIRMAN ROGERS, the three great Canna novelties of the season.

This is an offer without parallel, but which, if desired, must be applied for within two weeks of this date.

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.



CANNA
ITALIA.

Every Lady is Interested in the AMERICAN KITCHEN MAGAZINE

The title tells the story, and although the Magazine is One Dollar a year, we will send it, in club with AMERICAN GARDENING, for only \$1.50. Or will send it free one year for two new subscriptions to A. G. at One Dollar each.

AMERICAN GARDENING, P. O. Box 1697, New York.



Steel Wheels

Staggered Oval Spokes.
BUY A SET TO FIT YOUR NEW OR OLD WAGON
CHEAPEST AND BEST
way to get a low wagon. Any size wheel, any width tire. Catal. FREE.
ELECTRIC WHEEL CO., Quincy, Ill.

Mention American Gardening when you write.



UNIVERSAL INSECTICIDE

For Flowers, Trees and Animals.
Recommended and in use by the foremost Florists and Nurserymen in the land. Sample 6 oz. packages sent by mail upon receipt of 25c.
Rose Manufacturing Co.,
Niagara Falls, N. Y.

Mention American Gardening when you write.



SOLD BY THE SEED DEALERS OF AMERICA.
For pamphlet address, **B. HAMMOND,**
Fishkill-on-Hudson, N. Y.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

Built to Sit On, Not to Straddle.



THE WHEELER BICYCLE SADDLE.
Every rider who has given the WHEELER REFORM a trial prefers it to all other saddles. Endorsed by physicians. Especially recommended for ladies. Our free catalogue tells all about it. Insist on having it from your dealer, or write

THE WHEELER SADDLE CO.,
189-191 Larned St., West,
DETROIT, MICH.

A special discount for all orders through this medium.

Mention American Gardening when you write.

THREE NEW CANNAS. 40 NEW IRIS.

SIEBRECHT & SON, 409 5th Ave., New York.

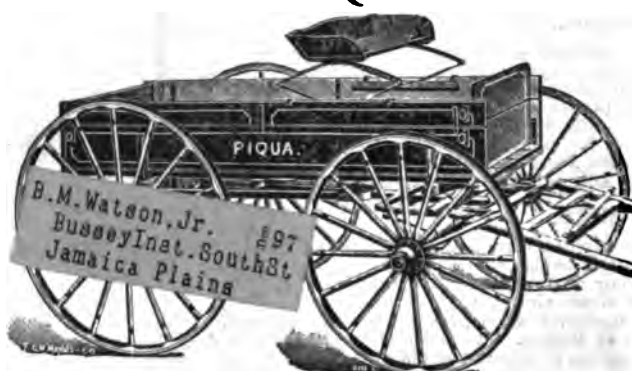
Mention American Gardening when you write



The **TWIN COMET** (Stationary) \$8.00
The **LITTLE GIANT** (Traveler) 15.00
LAWN SPRINKLERS.
Best Sprinklers made for Florists and Nurserymen's use. Will save labor of one man, for they sprinkle 4 times greater area than any other sprinkler.
E. STEBBINS MFG. CO.
Made for J. B. FELLOWS & CO., SPRINGFIELD, MASS.
40 Warren St., N. Y. City. Will send on 5 days' trial Agents Wanted. Can make big money.

Mention American Gardening when you write.

A One-Horse Farm Wagon Horse Owner Needs. The "PIQUA" is the Best.



IS SOMETHING EVERY
Horse Owner Needs.
Hollow Steel Axle,
Double Box, Spring
Seat, Easy Riding
and Light Running,
and needs only ONE
Horse to Pull it. . .

Made in Two Sizes,
1200 Pounds and .
2000 Pounds . . .
Capacity. . . .

WRITE FOR PRICES.

Specially Adapted for use on a Small Farm, in the Garden, or about a Country Place.

PIQUA WAGON CO., PIQUA, OHIO.

Mention American Gardening when you write.

Offer No. 81.
FOR TWO NEW SUBSCRIPTIONS We will send, postpaid, this wonderful Combination Tool needed in every garden and by every Gardener and Fruit Grower.



KELLY'S PRUNING SHEAR AND GRAPE PICKER

A NEW DEPARTURE IN
PRUNING AND GRAPE
SHEARS.
A COMBINATION SHEAR AND
HOLDER WORKING WITH ONE MOVEMENT
OF THE HAND. IN TRIMMING ROSE OR PICKING GRAPES THE
HAND DOES NOT COME IN CONTACT WITH THEM.

THEY ARE ALWAYS
READY FOR USE.
JUST FITS THE HAND.
MADE OF SOLID STEEL.
FULLY WARRANTED.

THEY WORK
WITH THE GREAT-
EST EASE. A CHILD
CAN USE THEM. HOLDS
FIRMLY ANYTHING CUT
OFF UNTIL RELEASED
BY THE OPERATOR.

A PRUNING SHEARS, FLOWER GATHERER and GRAPE PICKER ALL THREE IN ONE.

AS A FLOWER GATHERER.—In picking flowers or removing dead leaves they are held firmly by the shears until released by the operator.

AS A GRAPE PICKER.—In picking Grapes the bunch cut off is firmly held by the shears and placed in the basket without touching them with the hands, preserves the bloom on the grapes; leaves left hand free to hold up the vines or basket.

IN ADDITION.—The holders do not extend to the point of the shears, thereby facilitating the trimming off of small branches, leaves and defective grapes.

Every one who gathers flowers or fruit has been annoyed by the difficulty in catching the fruit or bloom after it was severed from the parent stem. With this instrument there is no danger of fruit or flower dropping to ground, or of spoiling trees, vines or plants when clipped from high places.

Every pair of Shears mailed out by us is made from High Grade cutlery steel and fully warranted, and should one be found defective, when used for the purposes advertised, we will replace. Patented March 16, 1897. When not wanted as a premium these shears can be obtained from the publishers of AMERICAN GARDENING, postpaid, for \$1.00.

AMERICAN GARDENING, P. O. Box, 1697, NEW YORK.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 131.
COMBINED SERIES VOL. LI.

NEW YORK, JUNE 26, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Amateur and his Berries.....	459	Fruit Garden.....	456	Obituary: Fay, Hon. J. S.....	466	Raspberries.....	456	Trees, Seaside.....	462
Am. Nurserymen's Association.....	454	Geraniums for Winter..	464	Onions.....	454	Readers' Notes.....	459	Vegetable Garden.....	454
Beans.....	454	Home Plot, The.....	463	Pæony, The Herbaceous.....	457	Roses Under Glass.....	456	Willow Cultivation.....	457
Corn.....	454	Hydrangeas.....	464	Peas.....	454	Shaw Banquet, The.....	456		
Cottage Garden, An English.....	457	Insects, Destructive.....	455	Peach Trees.....	456	Strawberry Notes.....	459	Illustrations.....	
Exhibitions Reported..	460	Leaves Dying.....	463, 464	Plums.....	456	Strawberries.....	456	Berberis Hakodatii.....	453
Fruit Drying.....	459	Lilies, Diseased.....	463	Plant Lice, The.....	455	Strawberries Under Glass.....	455	Pæonies, Group of Herbaceous.....	457
		Market Reports: N. Y., Phila., Boston.....	465, 466	Planting for Profit.....	453	Tariff Changes.....	459	Plant Louse.....	455
		N. Y. Botanical Garden.	458	Private Gardeners.....	460	Toad, The American ..	458	Viburnum lantanoides.	453
				Questions Answered ..	463				

Planting for Pleasure and Profit.

Replying to "Subscriber," page 396 who asks for advice under "Help wanted," I would say if eight acres were near a city and anywhere in this locality, I would plant for pleasure and profit about as follows. His conditions will no doubt make a change as to varieties or marketing of same; also in convenience to market, soil, climate, and other contingencies that may arise, there may be differences. First: I would leave one acre for house, buildings, lawn and vegetable garden. I would plant two acres in peaches, setting trees 20 feet apart each

Reeves, Mt. Rareripe, Elberta, Chair's Choice, and Couper. These ripen about in succession, and will last from six to seven weeks. To them for family use, I would add a tree or so of each of the following kinds to prolong the season at each end: Sneed, Japan Dwarf, Triumph, Bishop, Mamie Ross, Wheatland, Globe, Brandywine, Stump, Emma, Garey's, Heath Cling, and Bilyeaus.

I would plant an acre of apples 30 feet each way, taking 48 trees as follows: Early Harvest, Red June, Fanny, Summer King, Summer Pearmain, Beltzheimer, and Williams' Early; a tree each. Smokehouse, Fallawater, Fall Pippin, a tree



FIG. 128.—SOME ORNAMENTAL SHRUBS.

Viburnum Lantanoides.

Berberis Hakodatii.

way and between every four trees another peach tree in center of each of the four trees thus set. I would cut back well, and when they begin to crowd, would take out one-half, leaving the remainder at 20 feet apart. This method of planting would give 216 trees to the acre, and leave 108 when half were cut out, in say ten years.

I would select for 432 trees, varieties as follows: I take it for granted that subscriber wants fruit the entire season so I would plant a good many kinds and a few kinds more largely for market, as many of these would hardly be profitable. For market: Connet, Lady Ingold, Mt. Rose, Foster,

each for fall; Grimes' Golden, York Imperial, Stayman, Paragon, Winesap for winter use and market.

Between these, in center I would set 48 standard pear trees as follows: Lawson, Koonce, Manning, Clapp's Favorite, Bartlett, Seckel, Howell, Duchess, Sheldon, Pres. Druand, a tree each. The balance would be Kelfer for market. Between these I would set dwarf trees of Duchesse, Louis Bonne, Beurre d'Anjou, and perhaps some others.

An acre of plums set 20 feet apart, and holding 108 trees of Milton, Wild Goose, 20 each; 2 each Moreman, Wayland, Prairie Flower, Golden Beauty, Pool's Pride, and Sophie, all native;

Yosibe, Red June, Abundance, Burbank and Ogon, ten each; two each, Kelsey, Satsuma and Chabot—all Japanese.

Then I would leave three acres for small fruits. Here strawberries and raspberries would predominate; the varieties of strawberries being Tennessee, Bubach, Brandywine and Enormous, mostly, with a few each of Tubb's, Michel's Early, Glen Mary, Wm. Belt, Dew, Gandy, Edith and Ideal to fill in and to give extra fine fruit both early and late.

Miller would be the main red raspberry, with a few Loudon and Cuthbert.

For black-caps, Mills and Kansas would fill the bill. A fair share of Logan berry, Lucretia Dewberry, Early Harvest and Wilson blackberries should be planted; also currants and gooseberries.

Around the farm in convenient situations trees of cherry, chestnut, walnut, pecan and shell-bark would be planted, not forgetting quinces, apricots or other fruits needed for family use.

Grape vines may be trained to wires used to separate fields if need be.

It would be my intention to grow the most desirable flowers and ornamental trees and plants in the lawn and have an ideal house.

Small fruits may be planted in the orchards for a few years and will give quite a good profit. Later, as the trees grow, they may be removed and replanted elsewhere.

Some kind of vegetable may most always be grown in the orchards.

CHAS. WRIGHT, Del.

The Vegetable Garden.

Peas.—After this date we prefer to sow only the dwarf varieties. American Wonder and Nott's Excelsior will give excellent results, and as all late plantings are subject to mildew, the dwarf sorts can readily be dusted with flower of sulphur or sprayed with the Bordeaux mixture to prevent the spread of the disease. Quite late pickings may thus be enjoyed and are always appreciated.

Beans.—All dwarf sorts should be sown for successional crops. The Refugee wax and Valentine wax, together with the dwarf limas, are excellent for summer planting.

Corn.—Stowell's Evergreen is an old-time favorite for late crops and for this purpose the last sowing should be made at once. The earlier varieties can be sown until July 10.

Lettuce.—Sow Trianon Cos, Big Boston or Golden Queen, where they are to remain, for late summer use. They will withstand the heat better without transplanting at this season of the year.

Endive.—Make successional sowings. It is very useful for salad during the fall months and very easily grown.

Beets sown now will give nice young, tender roots for late summer use.

Onions for use in the young state can still be sown. Any seeds that may be left over may be sown thickly for sets for the early planting out in the following spring. For this purpose the bed should be excavated about one and a half inches, the seeds to be sown quite thickly, and covered with clean, sandy loam or sand, that does not contain weed seeds.

Carrots.—It is often desired to have a supply of young carrots in the fall; if seeds of the early short-horn varieties are sown now a nice crop of young carrots will be secured in the fall.

Radishes.—The yellow summer does very well if planted in rich, cool soil, even in the hot months.

All seeds that are sown at this time should be carefully compacted by the use of the feet or a suitable roller, as otherwise many will fail to germinate.

W. M. EDWARDS, Conn.

American Association of Nurserymen.

(Continued from page 441.)

In view of the fact that much dissatisfaction had been expressed by Eastern members on account of the place of meeting of the association having been located so far west, the following resolution was introduced by Mr. Brooke, of Kansas, and adopted:

"Resolved, That the places of the meetings of this association shall not be located either East or West of a line of the meridian of the city of Chicago for more than two years in succession."

Hydrocyanic Acid Gas.

Professor W. B. Alwood gave a short talk on "Treatment of Nursery Stock by Hydrocyanic Acid Gas Process," saying that this treatment was only used as a precautionary measure within infected districts; treating stock not yet infested, but destroying that which had become infested. The method of treatment prescribed by him is briefly as follows: A small building about 10 feet square, from 7½ to 10½ feet high, is closely packed with nursery stock. The building is provided with a door 3 feet wide, a partition running through the centre and a trap door at the top for the purpose of ventilation. An earthenware or porcelain fumigating pot is placed inside the door, cyanide of potash is placed in the vessel, water poured over the same and then to this is added the sulphuric acid, which generates the gas by decomposing the cyanide of potash. The door is immediately closed and remains closed for thirty or forty minutes, after which the trap door is pulled down and the air permitted to go through the room for at least ten minutes before a man may venture into the room. This process has been highly recommended by good authority from the Pacific coast, and so far as used in the East has protected stock from infection.

Wholesale Prices to Planters.

Colonel C. L. Watrous, of Des Moines, Ia., read a paper entitled, "Should Wholesale Lists Be Sent to Planters?" He said, in part: Every wholesale grower who is tempted to send his trade and surplus lists to planters, ought to buy a copy of the old book and commit to memory the fable of the avaricious man who killed the goose which laid for him a golden egg every day. When the wholesaler sends his prices to planters in hopes of selling more stock, he kills the business of the retailer, who, by himself or his agents, through heat and cold and hunger and discomfort, visits the scattered homesteads and urges sales to planters. It would be a public calamity of serious proportions if you could starve out of business the host of small nurserymen and dealers who grow some stock, push sales to planters and buy at wholesale whatever they lack. One wholesale list will spoil the salesman's work in a neighborhood, probably only one man will buy and he is liable to delay action till the season is past. If he buys the wholesaler has gained one sale, but he has done what he could to kill the goose which has brought him golden eggs, and would have continued to do so if the knife had been kept out of its vitals. The wholesale trade cannot prosper unless the retailer is allowed to make a living. The retailer can make sales among his friends and neighbors which the distant wholesaler cannot, and the community is vastly benefited in the long run by their missionary efforts in procuring the sale and planting of wholesome fruits and stately trees and beautiful flowers. We shall never have too much of this work, but may easily have too little of it, and, in spite of all his sins, the tree missionary has done a mighty work in turning the wilderness of our vast country into fruitful and smiling homes, fit for the health,

the comfort and the pleasure of the most luxurious people on earth. It takes a vast expenditure of energy and personal magnetism to persuade men to pay money for trees and plants which will bring no profit for several years; but the country needs the planting. Homes adorned and enriched with abundant fruits and trees and flowers are the hope and the best heritage of the nation, and the good that the tree missionary does in making them what they are will live and bless the land long after his sins are forgotten.

After a brief discussion, in which several members complained of the injuries wrought by the pernicious practice of sending trade lists broadcast throughout the land, a motion was made that the convention heartily endorse the sentiments expressed by Colonel Watrous in his paper, which motion was unanimously adopted by a rising vote.

The Nurserymen.

Professor Fred W. Card, of the University of Nebraska, read a paper entitled, "The Nurseryman as an Educator," in which he said: The watchword of modern times is "education," and education is as much needed in building a home as in constructing an engine. Too often education in matters of tree planting has been received at the hands of the tree agent with a result which has been unsatisfactory to nurseryman and planter alike. At first thought it might seem to be to the nurseryman's interest to have trees fail in order that he might have the opportunity of selling the same bill over again; but this is evidently a very narrow and short-sighted view; for, if I mistake not, the man who is most ready to buy trees is not the man who has fewest, but the man who has most. If this be true no one is more interested than the nurseryman in seeing the greatest possible success on the part of the planter. The man who succeeds with grapes this year may try cherries next year, peaches the third and at last may be induced over into the field of ornamentals, where the limit will never be reached. The nurseryman may have no use whatever for theories and idealizations, but upon what does the business of the nurseryman depend? Upon aspirations after the ideal. Were there no idealists, the nurseryman would be in some other business, for there would be no market for his goods. You say that fruit forms a most important article of diet, which is true, but why? Because we are searching after the ideal in food as in everything else. The production of ornamentals, which caters only to a love for the beautiful is another form of aspiration for the ideal. The more the love of the beautiful is cultivated the greater will be the demand for trees and plants to make green the face of the earth.

An invitation was extended to the members of the convention by Stark Bros., of Louisiana, Mo., to visit their nurseries at that point, they having chartered the new Mississippi River steamboat "Dubuque" for the purpose of conveying their guests up the river to the place to be visited. Many of the members, with the ladies accompanying them, availed themselves of this kind invitation.

Are You Renewing?

To those of our readers whose subscription has expired, or is to expire with the close of this month, and who will send us a prompt renewal (adding fifteen cents to pay for packing and delivery), we will at once forward one canna, well established, their choice of either Austria or Italia, the two great novelties of the season. This is an offer without parallel, but which, if desired, must be applied for at once.

Our publishers will supply any book wanted. Send your orders.

Destructive Insects and Methods for Controlling Them.—VII.

The Plant Lice.

PROF. W. G. JOHNSON.

The aphids, better known, perhaps, as plant lice, are small, greenish, brownish, or blackish insects, scarcely larger than a pin's head, which live in colonies or clusters upon the roots, stems or leaves of plants. Although minute, they are very destructive creatures, and what they lack in size is made up for in numbers. They are prolific breeders and ravenous feeders. In fact, they are suckers, taking their food through a long lance-like beak, which they insert into the plant.

Life History.

It will not be possible to give more than a generalized statement of the life history of these insects in this article. Unlike most insects, these lice are not usually produced from eggs. The young are born alive and are produced without the intervention of the male. They, therefore, represent an excellent example of parthenogenesis or reproduction from virgins. They usually appear on various plants in the spring and are winged (see figure). They start a colony by depositing the young upon the plant, which at once begin feeding, and feed continuously during their life, as there is no dormant or resting stage except during winter. The young mature in a few days, are wingless and begin to reproduce. These

crop early and multiplies very rapidly; but when the hops are ripe the vines die and do not furnish a sufficient food supply for the creatures. They then migrate to an entirely different plant, the plum. On this plant the sexes are developed late in the fall and the eggs are laid which survive the winter and produce the parent the following spring. They remain on the plum for a few generations early in the spring and then transfer their attack to the hop yards.

Other species, as the peach louse and wheat louse, spend part of their time upon the roots of the same plant. There is scarcely a plant in the greenhouse or in the field that does not have some species of plant louse attacking it at some season of the year.

This spring has been a particularly favorable one for plant lice in Maryland. Many queries have been made regarding them, especially upon plants in the greenhouse. The peach louse and the melon plant louse are also both very abundant this spring. Lettuce, egg plants, cucumbers and roses have been most attacked under glass.

Remedies.

In combating these creatures it must be born in mind that the brown or black species are very much more resistant to sprays than the green ones. For instance, the peach louse, which is brownish, would be little affected, if affected at all, with kerosene emulsion diluted with fifteen parts of water; on the other hand, this dilution would be sufficient for the melon louse, a green

constant use as oil. Burning tobacco in a tight room or greenhouse is very effective.

Bisulphide of carbon can also be used, but care must be taken when using this chemical lest too much be used and destroy the plants also. One ounce for ten cubic feet of air space is all that is needed, and some plants will not stand this any very great length of time.

Hellebore, pyrethrum or insect powder, ashes, dust, etc., have also been used with some degree of success.

Strawberries Under Glass.

The latest bulletin issued by the Horticultural Division of Cornell University is devoted to this subject. As the readers of American Gardening have so recently had placed before them full details of the methods of various successful operators in this line, they will be interested in knowing what Professor Bailey, with the assistance of C. E. Hunn, have concluded from their trials:

"The plants were allowed to remain out of doors until nearly mid-winter, with no more protection than a covering of glass during the very coldest times. It was the desire to give them a very thorough rest by allowing them to freeze perfectly solid. We are not at all sure that this freezing is essential. In fact, the probability is that berries can be raised about as well without it; but it is very probable that a decided check or rest to the plants before they are taken to the houses will add greatly to their productiveness and strength, and freezing may be expected to destroy red spider and other pests.

"On the 28th of December 450 pots of the first lot were brought into a house which had a temperature of 40 to 45 degrees at night. All dead and diseased leaves were trimmed away. On the 6th of January the young leaves had begun to appear freely and now and then there appeared a spot of the rust. They were then thoroughly sprayed with the ammoniacal carbonate of copper and after that time the disease made no trouble. The house was vaporized at frequent intervals with the rose leaf extract of tobacco in order to keep down insects.

"Many flowers were open on the first of February. On the 9th the pots were transferred to a warm house (temperature of 65 degrees at night), and the plants were staged near the glass and were allowed to remain until the fruit was off.

"Upon the 6th of March the berries were well colored and the first picking was made on the 11th, when they sold in Ithaca for \$2 per quart. The crop continued for about ten days.

"The Beder Wood comprised the greater part of the pots of this first lot. They came into bloom when the foliage was still very small and scant, and we were fearful that there would not be foliage enough to carry the plants to maturity; but this fear proved to be groundless. It was observed that when the weather was very cloudy and damp the stamens did not develop strongly and there was much difficulty in getting sufficient pollen to pollinate the flowers. The Beder Wood is a perfect-flowered berry, but we found that it produced only sufficient pollen for itself. This pollen was transferred upon every bright day by means of a brush. A soft brush was rubbed over the anthers and the pollen thereby taken off, and then the brush was rubbed over the pistils (or the centre of the flower). The operator always carried with him a little spoon-like implement, which is made by gluing a watch crystal upon the end of a small ladle, and whenever any flower contained a superabundance of pollen, the dust was shaken into this receptacle and used for those flowers in which the pollen was deficient. A common spoon would answer this purpose very well. It is necessary to repeat the pollinating every pleasant day. As in the case of tomatoes and

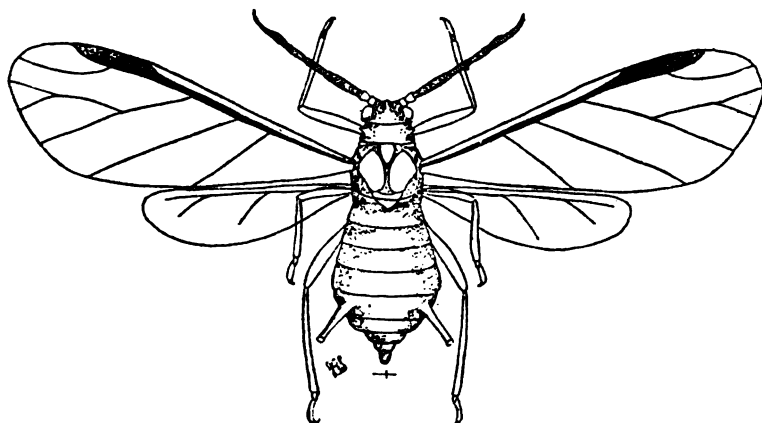


FIG. 129.—PLANT LOUSE, (APHIS), STEM-MOTHER (GREATLY MAGNIFIED).

wingless lice are all females and no males at all are produced. It is not an uncommon thing to see several hundred young lice grouped round an old female, known as the stem-mother. In some species a few winged forms are appearing constantly, which take flight and form new colonies. Generation after generation thus mature during the summer without the appearance of the male.

Late in the fall, in some species, both sexes are developed. They pair and eggs are produced in the usual way. They remain over winter and the stem-mother is hatched from them the following spring. Some pass the winter in the adult stage and sometimes the life history is less simple.

Food Plants.

Their food plants vary. Some species confine their attacks to specific plants, while others have a large range or feed upon one plant during one part of the season and on another for the rest of the time. In the case of the melon plant louse, Mr. Theo. Pergande, of the United States Department of Agriculture, has found it feeding upon no less than twenty-six varieties of plants, including fruits, cotton, strawberry, purslane, shepherd's purse, peppergrass, dock, burdock, dandelion, pigweed, plantain, chickweed, red clover and others.

Another good example in which the food plant is changed is seen in the hop louse. It begins its work upon the hop

species. In my experimental work I have found kerosene emulsion the most satisfactory material for the destruction of these pests. For lice on roses, egg plants, cucumbers, melons, etc., I use one part of emulsion to fifteen parts of water. For the dark species I dilute from eight to ten times.

In treating plants infested with lice care should be taken to see that the emulsion is properly made. My plan is as follows:

Soap (hard or soft).....½ pound
Water (rainwater preferable).....1 gallon
Kerosene (coal oil).....2 gallons

Place the water and soap in a vessel holding four or five gallons and heat to boiling point; then remove to the yard or some convenient place and add the oil; now force this material in and out of the vessel with a good force pump or syringe for from five to ten minutes. If the emulsion forms properly it will look something like thick buttermilk, and no oil will rise to the top when left standing. This is then ready for use any time, by properly diluting with water.

There is now upon the market a device made by the Deming Co., Salem, O., by which the oil and water can be sprayed at the strength desired without the troublesome method of making the emulsion. I am using these combination kerosene sprayers in my experimental work and find them very convenient and useful.

Tobacco infusion can also be used against these lice, but it is not in such

other hothouse plants, the pollen is discharged most freely when the sun is warm and bright and when the house is dry. It is very essential that pains be taken to completely pollinate every flower, for if one side of the head of pistils is left unfertilized that side of the berry will fail to develop and a nubbin will be the result.

"Upon the 19th of February, when the berries were well set, liquid manure was first given to the plants; and the application was repeated twice a week until the berries were about full grown.

"In the second and third lots were a number of other varieties, of which the Sharpless and Van Deman were the most prominent. There were also a few Hunn. The best results were obtained with the Beder Wood. One of its strong peculiarities is the comparatively small amount of foliage which it bears and the consequent greater prominence of the fruit. Its chief drawback is the light color of the berries. In respect to color, the Van Deman is somewhat better, but the habit of the plant is more tall and less attractive; and, although it is a perfect-flowered berry, we had difficulty in securing enough pollen to fertilize it. Its great merit for a forcing berry is its earliness. Sharpless is about ten days later than Van Deman and Hunn is at least two weeks later. This last is the handsomest berry which we have had in the house, being very large and exceedingly dark-colored; but it is much too late to be profitable for forcing.

"The first crop of Beder Wood averaged six first-class and uniform fruits to a plant in the whole lot of over four hundred pots. The plants set from eight to twelve berries each, but the small and imperfect ones were cut off and the limit was fixed at about eight fruits. We are convinced that if we could have had stronger plants to start with, and with the experience of the present winter, we could average eight fruits to the plant.

"Because the pots are set so close together in the house, it is possible to secure a larger yield per square foot under glass than is obtained in the field. In our experience, eight to twelve pots give a quart of berries. That is, a quart is obtained from two to three square feet of floor space. Allowing for walks and unavoidable waste space, the yield would still figure up fully 400 bushels to the acre.

Conclusions.

"Some of the points in the cultivation of strawberries under glass which appeal to us with especial force are these:

"1. Very strong plants to begin with, which have been kept in vigorous growth, and not allowed to become pot-bound until they have reached six-inch pots.

"2. Varieties which are early, or at least not later than mid-season, and preferably those which themselves produce an abundance of pollen.

"3. The exercise of great care to have the plants free of fungus diseases and insects before they are put upon the benches.

"4. The devoting of an entire house to the crop. If two or three different crops are grown in the same house none of them can receive the very best treatment which they demand; and if there are other plants in the house which are infested with red spider the pests will spread to the strawberries, and it is very difficult to dislodge them without keeping the plants so wet that pollination is interfered with and rot threatened.

"5. Growing the plants as close to the glass as possible.

"6. In the dull months constant and careful attention to hand pollination.

"7. Liberal applications of liquid manure two or three times a week after the fruits have begun to swell.

"8. Exercise of care that the berries do not lie directly upon the soil or upon a wet surface."

Roses Under Glass.

Success in growing roses depends in a great measure on how they are watered. Although I have watered plants for more than twenty years, almost daily, my conviction is that I still have much to learn about the work. This may seem a strange statement to those who water a plant indiscriminately, or on a Saturday, if it be wet or dry, give it a dose in the afternoon to tide it over Sunday.

Roses, when overwatered, most generally show it by a soft growth with yellow, mottled foliage, and when not enough water has been given them they assume a grayish color, with small foliage and corresponding thickness of stem.

It is not a hard matter to keep between these bounds, however, but how much water should be given to derive the best results from the different varieties is where the art comes in; and it is only by exercising the utmost care that we can, to a degree, come near to it. We should always have an object in view in regard to watering, its beneficial or detrimental results—not today, but in the future. Going to nature we find roses growing in the open ground very luxuriantly, when the season has been favorable to them. True outside conditions are far from those which we can maintain with impunity inside, still, much can be learned therefrom. I believe there are as many roses not brought to their fullest perfection by insufficient watering, as there are others injured by overwatering. As our soils differ very materially as regards evaporation, the best course to pursue is to make careful trials, allowing a part of a bench to get on the dry side, then giving it a thorough watering, keeping another part moist all the time, and so on. This can be done on a small scale and the best method will manifest itself in a very short time.

With me such varieties as Niphetos, Gontier and Meteor will take quantities of water that have proved harmful to Morgan and the Mermet family.

Sun-scall or scorching of the tender foliage in summer (providing the glass is of good quality), is often the result of improper watering. On dull days, although the temperature runs high, water should be used sparingly; as when the plants are growing very fast, if the air becomes charged with too much moisture and the plants are a little on the wet side at the root, they quickly become too soft to endure the scorching sun when it pops out again. For watering the beds before the soil has settled down firmly, a coarse rose, with the screw part of a hose coupling soldered on to it, is very desirable, being easily attached to the hose. This method obviates the plastering and washing down of the surface soil. Syringing plays a very important part also; how, when and where to do it and why is what we should all strive to make ourselves masters of.

I never shade young roses, except during planting time, for a week or so. Now, with the fine houses that we have to-day, built for light, etc., during the months of June, July and August, the hose must be freely used on all bright days if we want to get that large, leathery foliage which is disease-resisting.

We must take into consideration the immense amount of evaporation that is going on through the foliage during bright sunshine. We often see the shoots drooping during a hot sun; this is the cause of the foliage giving off more moisture than the roots take up to sustain the strength of the plant at the same time; hence the necessity of spraying the plants overhead four or five times during the day, at the same time wetting down the walks and sides of tables. By so doing the extra quantity of moisture needed is supplied, and, instead of the plants becoming hard, with small foliage and thin, wiry wood, as would otherwise be the case, it al-

lows the absorption by the roots to be utilized in building up a strong plant.

One of the worst enemies of a rose house is red spider; its best preventive is a sharp, fine spray directed upwards from underneath the foliage. If properly done the first syringing in the morning will be sufficient to prevent the spider putting in an appearance. The inside rows and corners of the houses should be carefully watched for this pest. If once it gets a start it very rapidly infests all the plants in the house. By keeping our plants perfectly free from spider during summer, when the dull days come in the fall it will be found a great help to us when we are carefully guarding against black spot and other kindred diseases by not having to syringe. For syringing I find the Boss nozzle to be the most practicable, as any force and fineness of spray can be maintained by turning the key. Where a nozzle is used thumb or finger ache is unknown. H. H.

The Fruit Garden.

Peach Trees.—These have been looked over for borers. Where necessary the thinning of the fruit should be done. This is unwilling work to the amateur, and as a general rule there is removed only about half of what is necessary for the trees to finish up a crop of satisfactory fruit and to enable the trees to produce twice as much wood as is required for next year.

Raspberries.—If these can be managed it will help the plants for the next three months and prolong the fruiting season. The new Raspberry Superb looks now as if it will stand well before as a hardy, vigorous variety as both size and earliness.

Cherries.—Ripe Black Tartarian and Elton are on hand, so are rose hips, robins and catbirds.

Plums and Quinces.—Spray with Bordeaux and an insecticide. On the plum the leaf spot or shot hole disease should be looked for and stopped with Bordeaux before it gets heavy enough to make the foliage drop.

Strawberries are now at their best. The early ones, such as Crescent and Michel's Early, are past; such kinds, if to be kept over for another season, and from which no runners are needed, should have the mulching removed and rotted manure dug in; another way to cut off all the growth, let it dry on the ground and then burn.

J. HOLLOWAY, N. Y.

The Shaw Banquet, St. Louis, Mo.

About 200 nurserymen, gardeners and florists met at the Mercantile Club Thursday, June 10, to enjoy the eighth annual banquet, provided for by the will of the late Henry Shaw.

Professor Trelease officiated as toast-master at the feast. His introductions were very clever. He was followed by Mr. Rouse, the president-elect of the Nurserymen's Association, who appointed Hon. H. N. Albaugh to respond on behalf of the nurserymen. Mr. Albaugh covered himself with glory by his happy response. Mr. James Gurney, head gardener at Shaw's Garden, responded to the toast, "The Gardeners of the Institution." Ex-Secretary of the Interior David R. Francis's speech on "America's Duty by Her Forests" was a forcible one, which will be heard from in print later on and will be read with much interest. President J. W. Kuntz, of the St. Louis Florists' Club, responded to the toast, "The Florist." Captain Loyd G. Harris spoke on "Gardening in Literature." His speech was a gem of first water. Rev. C. M. Murtfeld, of Kirkwood, addressed the gathering on the subject of "The Gift of Henry Shaw to the Horticulturist."

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

The Herbaceous Pæony.

There are fancies and fashions in the world of gardening as well as in social circles; in succession one flower or another is taken up to be dropped and its place in popular estimation occupied by another, and thus the world wags on. It is true, indeed, that while there is this vagary of fashion, still some, as the Rose, for instance, seem not to be allowed to fall behind. To-day those who watch closely the signs of the horticultural times see a decided and growing revival of interest in the herbaceous garden pæony. Few plants, if any, indeed, are better suited for a somewhat shady spot, though they answer equally well if fully exposed.

The varieties now obtainable are so numerous that it is not possible to give a selection, but some idea of the range of form is to be had from the accompanying portrait. The various species have been so crossed that it is often a very difficult matter for one to decide just to which one a given variety belongs; generally speaking, the herbaceous pæonias may be divided into two groups—the European (*P. officinalis*) and the Chinese (*P. aliflora*). These two groups flower respectively early and late, in compari-

Willow Cultivation.

On page 396 of American Gardening John Nemeth, Pa., tells us there is a demand for willows from which to make baskets, and would like to know where to obtain them. Now here is something for our farmers to take up that will pay them better than almost any other crop they can grow. The cultivation of the willow is simple; the only thing required is to keep the plants clean the early part of the season and by the end of June they will need no care at all, except the new plantations, and these should be kept well cultivated till the rows meet. We have begun the cultivation of willows on a large scale, using up all the waste wet land where scarcely any other crop will grow, and it is in just such land that willows flourish. Our mode of cultivation is as follows:

In the early fall the ground is prepared; all rough grass is removed; in fact, it is best to skin the piece of land that is to be planted, as when ploughed it will then be more compact and the plants root better in it. It should then be manured and ploughed to the depth of fourteen inches and then well harrowed to break up the soil; it is then ready for the cuttings. If the ground

about nine feet high, the second and following years from fifteen to twenty feet, and finish their growth about the middle of September. They can then be cut and all through the winter until the sap begins to rise. They should be cut every year, and care should be taken in the operation so as not to split the stock; a good, sharp hook is what is used here and it does the work well.

The best willow to grow for basket making is *Salix viminalis*, although we grow for the same purpose *S. amygdalina*, *S. purpurea* and *S. triandra*. The price of willows varies from two to four cents a pound for willows as cut from the field, while dressed willows (that is, with the skin off), will bring five to seven cents a pound. Willow-growing is, I think, a good investment for some of our farmers.

DAVID FRASER, Mountain Side Farm, Mahwah, N. J.

An English Cottage Garden.

In imagining an English cottage garden an American must begin by utterly abandoning all pictures of trimly-divided plots, and of those "intervals of earth between the mowers," which, says a writer in Harper's Bazar, "a lady of my acquaintance at home tried so vainly to extinguish in her beautiful domain that she finally abandoned the garden itself in despair. Here around the cottage there are trimness and well-ordered earth intervals in the vegetable garden, but the flowers grow less in beds than in blazing masses, crowding upon one another in every nook and corner, and filling every bit of their allotted space; gazing in at the windows of the house also, and eagerly presenting themselves to you when you open the house door in the morning, like excluded kittens or dogs anxious for a breakfast. "Far up the porch there grows a climbing rose," as in Tennyson's "Gardener's Daughter;" beyond the rose are tossing clusters of lilac and laurel, and behind that a tree of pink hawthorn, just coming into bloom. In the tangled beds and borders—tangled, that is, by the flowers themselves, never by weeds or grass—there grows a mass of blue hyacinths, crimson tulips, yellow zinnias and mountain fringe, white narcissi, blue and white "old-men's-beards," mammoth bachelors'-buttons, pansies, forget-me-nots, wall-flowers, stock-gilly-flowers, and a host besides. Flights of rough stone steps lead downward, hedged by little rockeries with various ferns, and above these rise rough and even crumbling walls, covered densely with ivies of different species, including the little blossoming vine known in America as "coliseum ivy," and here growing wild. In the middle there is a lawn, set closely with the little English daisies, and with buttercups larger than ours. Behind the walls and beyond the irregular neighboring enclosures rise steep wooded hills; for this is what Jean Ingelow would call "a cottage in a chine"—that is, a ravine which is connected with the world only by a flowing brook, and by one of those perfect and immaculate English roads which are the wonder and despair of every traveling American, so hard and smooth is their surface.

The woods and hedges and all the slopes are more crowded with wild flowers than any corresponding region in America, unless it be Colorado; and the wonder is that while the more delicate flowers of our own country are apt to die out before cultivation, the native blooms still hold their own here; and the cowslips, primroses, wall-flowers, gorses, brooms and blue-bells keep their place unflinchingly in the most cultivated regions.

Late Frosts.—There was a heavy frost in Sullivan County, N. Y., on the night of June 20; from Essex County, N. J., we are advised of the same conditions. A few days previously corn in Connecticut, about a foot or more high, was frozen stiff.



FIG. 130.—A GROUP OF GARDEN PÆONIES.

on with each other, and the finest forms are found in the Chinese; and they also often have a branched flowering stem bearing four or five flowers; whereas the true European type has single-flowered stems.

The herbaceous pæonia being an early flower is not always a satisfactory garden plant if set alone; its proper place is undoubtedly towards the rear of the mixed border, or as a flanking to shrubby clumps. It likes a moderately moist soil and a rich one.

Planting can be done in either early spring or fall and the best results are not seen until the plants have become established; then the wealth of bloom cannot fail to give satisfaction to all.

The range of color in pæonias is from pure white through a multitude of delicate pinks to deep maroon red.

Crops in Texas.—The season here has been and is the best for years—plenty of rain, crops growing sky high; weeds, ditto. Spring cabbage is a glut on the market. Raspberries and blackberries, grown here, ripe since middle of May; one new early kind, since first week of May; tomatoes nearly ripe.—W. LOMAS, Texas.

is too wet ditching will have to be done.

The best time to plant is in early fall or early spring; for beginners it is well to buy some stock plants and grow them on for a year; from these the cuttings can be taken and nearly every cutting will grow.

The cuttings should be made about twelve inches long and cut from wood of one or two years' growth. The handiest and quickest way to make them is with a pair of pruning shears, making them up in little bundles, which are handy to carry under the arm when planting.

The distance between the rows should be almost eighteen inches, and in the row about six inches. In planting a line is set and the cuttings put in, the whole length being in the ground. Two men can plant a great many in a day and all that will have to be done after planting will be to keep clean. We put out about two acres this spring and while looking over them the other day I could not find one cutting but what was growing. The plants are now about nine inches high, while the ones that were set out a year ago are over five feet high.

The first season the plants grow

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1897.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1897.

REGISTERED CABLE ADDRESS

Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per agate line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

The American **TO**AD. THE toad has been very appropriately named the "gardener's friend;" and while many gardeners are cognizant of the aid he renders in the extermination of noxious insects, but few are aware of the extent of his voraciousness in this direction. A most interesting bulletin (No. 46 of the Hatch Experiment Station of the Massachusetts Agricultural College at Amherst, Mass.), prepared by Professor A. H. Kirkland, assistant entomologist to the Gypsy Moth committee, has just been issued, in which the habits, food and economic value of this batrachian are treated upon.

Particular attention has been given to the nature of the food of the toad; and an examination made of the contents of the stomachs of several revealed the fact that though the animal does devour some insects that are useful to man, this depredation is greatly offset by the number and variety of those that are harmful to vegetation, of which the toad also makes a meal. The following summary shows the toad's predilection in the matter of diet:

Of the beneficial insects (1) it destroys carabid beetles, insects of a highly beneficial character; (2) it devours an occasional ichneumon fly and "lady bird"; (3) it feeds to a small extent on spiders, generally considered to be valuable as insect destroyers; (4) it devours carrion beetles, insects indirectly helpful to man.

Of injurious insects (1) it feeds on worms, snails and sow bugs, common greenhouse pests; (2) it devours a large number of myriapods which damage greenhouse and garden plants; (3) it feeds to some extent on grasshoppers and crickets; (4) it destroys large quantities of ants, insects often injurious and usually obnoxious; (5) it consumes a considerable quantity of May beetles, rose chafers, "click beetles," potato beetles, cucumber beetles and weevils, all more or less injurious to crops of various kinds; (6) it feeds on tent caterpillars, gypsy moths and other fruit tree pests, and (7) it is a prime destroyer of cut worms and army worms, common pests which often cause great damage.

To recapitulate, eleven per cent. of the toad's food is composed of insects and spiders beneficial or indirectly helpful to man; eighty per cent. of insects and other animals directly injurious to cultivated crops or in other ways obnoxious to man. Further comment upon the valuable services of the toad would seem unnecessary.

As demonstrating the variety and quantity of food elements found in the stomach of a toad which was killed at 9 P. M. on May 11, 1896, the following is interesting. In the stomach's contents were recognized: Nine ants (*Camponotus pennsylvanicus*); six cutworms; five myriapods (*Julus* sp.); six sow bugs (*Porcellio* sp.); one weevil (*Hylobius pales*); one carabid beetle (*Pterostichus* sp.).

In twenty four hours the toad consumes an amount of food equal to that required to fill the stomach four times. A toad feeding at this rate upon the same kinds of food and in the same proportions as in the case cited, would devour in the three months of May, June and July the following quantities of food: 3312 ants, 2208 cut worms, 1840 myriapods, 2208 sow bugs, 368 weevils and 368 carabids. Or in other words, in the three months a toad would consume 368 beneficial insects and 9986 injurious insects, myriapods, etc.

To properly estimate the financial equivalent of the damage and annoyance that might be caused by these insects would be a difficult and unsatisfactory task, since data for the calculation must be of an arbitrary nature. If we confine our attention to but one element of the food, the cutworms, we reach some very interesting results. If we assume that ten per cent. of these insects, eaten by a toad feeding under the given conditions, would have been killed by the carabid beetle which the toad also devours, we still have the destruction of 1988 cutworms to place to the toad's credit. If the damage the cut worms would have caused be estimated at one cent per worm, a figure which gardeners and tobacco growers will probably consider ridiculously low, we find that in one season a toad might destroy cutworms which otherwise would have damaged crops to the extent of \$19.88.

Gardeners and greenhouse owners may make this animal of especial value. Every gardener should aim to keep a colony of toads among his growing crops, and the practice of collecting and transferring them

to the gardens is a commendable one. While the sense of locality is strong in this batrachian and it will often return over considerable distances to its original haunts, yet it may be induced to remain in new quarters if there is a sufficient food supply. Many provide toads with artificial shelters made by digging shallow holes in the ground and partially covering them with a bit of board or flat stone. In such places toads will often remain for many days, sallying forth at night to seek food.

In greenhouses the toad may be made of particular value as a destroyer of mites, sow bugs, myriapods, cutworms and weevils. According to Dr. Ritzema Bos, "in the research garden attached to the Rouen entomological laboratory, the snails were entirely exterminated in 1891 as a result of introducing 100 toads and ninety frogs." In a greenhouse at Malden, Massachusetts, a number of valuable orchids were nearly ruined through the attacks of myriapods and sow bugs. The gardener introduced a number of toads, and in a few weeks the pests had nearly disappeared and all damage from that source ceased. A common pest in rosehouses and one that is increasing in spread and damage, is Fuller's rose beetle (*Aramigus Fulleri*). While this species has never been identified in the stomachs examined, yet from the common occurrence of other weevils in the stomachs there can be no doubt but that toads confined in rosehouses would render material aid in destroying this insect. It would be necessary to jar the beetles from the bushes at intervals when the toads would doubtless devour the greater part of the weevils falling to the ground.

The bulletin is profusely illustrated, showing specimens of the insects upon which the toad delights to feed.

There seems at last to be some actual prospect of real work being commenced upon the Botanical Garden.

At a meeting of the Park Board held last Monday the plans as proposed by the Garden's Board of Directors were, with one or two minor alterations, passed upon the motion of the President of the Board, Col. Krug. Ever since the plans were finished—now some months ago—the garden authorities have been waiting for the Park Board to move. As the site of the garden is in Bronx Park the Park Board claimed the power of supervision of the plans. Some time back, after a red tape deadlock, the Park Board referred the plans to the consideration of a special committee composed as follows: Prof. Sargent, of the Arnold Arboretum, and conductor of the Garden and Forest; W. Eliot, of the Olmsted firm of landscape architects; S. B. Parsons, Supt. of City Parks, N. Y. City, and an architect, Thos. Hastings. On the death of W. Eliot, his place was filled by a son of F. L. Olmsted.

This committee, after some time, advised the rejection of the plans on grounds of aesthetics, and desire to retain the natural landscape intact. The report especially objected to the glass houses having any prominence, and to the director's house being in a decent place. While a botanical garden can in some way be a park, the demands of education must sometimes cause the purely æsthetic to give way to the utilitarian. If we are to have an educational establishment why bury it? The

demands of a botanical garden for purposes of study are not the same as those of a pleasure park. It is significant that at last Monday's meeting of the Board, Commissioner Stiles, editor of Garden and Forest, was alone in voting against the plans. He is reported as having said: "The whole plan is faulty, and I don't propose to vote for it. The plan ought to have been made by men who know something about parks." We rather imagine that a plan for a botanical garden should be made by men who know something about botanical gardens.

The Tariff Changes.

The tariff, so far as it affects the interests of the gardener, nurseryman and fruit grower, was discussed in the Senate on Wednesday last, and the following changes made:

A new paragraph was inserted, covering plants as under:

"Orchids, palms, dracenas, crotons, and azaleas, 30 per cent. ad valorem. Tulips, hyacinths, narcissi, jonquils, lilies, lilies of the valley and all bulbs, bulbous roots, or corms, which are cultivated for their flowers, 30 per cent. ad valorem. Natural flowers of all kinds, preserved or fresh, suitable for decorative purposes, 30 per cent. ad valorem.

On stocks, seedlings, etc., Mr. Allison for the committee proposed several changes, making the rate on stocks, cuttings, etc., of Myrobalan plum or Mahaleb or Mazzard cherry 50 cents and 15 per cent. ad valorem per 1000 plants; stocks, etc., of pear, apple, quince or St. Julien plum, \$1 and 15 per cent. ad valorem per 1000 plants; rose plants, 2½ cents each. The paragraph with the proposed changes was agreed to, and now reads:

240. Stocks, cuttings, or seedlings of Myrobalan plum, Mahaleb or Mazzard cherry, three years old or less, 50 cents per thousand plants and 15 per cent. ad valorem; stocks, cuttings, or seedlings of pear, apple, quince, and the St. Julien plum, three years old or less, and evergreen seedlings, \$1 per thousand plants and 15 per cent. ad valorem; rose plants, budded, grafted, or grown on their own roots, 2½ cents each; stocks, cuttings and seedlings of all fruit and ornamental trees, deciduous and evergreen, shrubs and vines, manetti, multiflora, and briar rose, and all trees, shrubs, plants and vines, commonly known as nursery stock, not specially provided for in this act, 25 per cent. ad valorem.

On onions Mr. Vest moved to reduce the rate from 40 to 20 cents a bushel. He said the Bermuda onion came here in the Winter months and did not come into competition with the home crop of onions. The effect, therefore, was to raise the price of this vegetable, one of the most whole some grown, without affording any protection. The amendment was rejected.

On motion of Mr. Allison, the House provision on garlic was restored and the rate changed to three-fourths cent per pound.

On peas Mr. Allison proposed a committee modification, making the rate on peas, green in bulk, etc., 30 cents per bushel; dried peas, 30 cents; split peas, 40 cents. Agreed to.

On seeds Mr. Hawley said he would address a few remarks to the Finance Committee against the committee change reducing the House rate on seeds not specially provided for from 40 to 25 per cent. ad valorem.

Mr. Lindsay pointed out that "blue grass seed" was on the free list, so that New England ought to be satisfied with 25 per cent. on their seeds.

The seed paragraph finally went over.

On potatoes Mr. Allison withdrew the committee amendment of 20 cents per bushel, leaving the House rate of 25 cents per bushel. This was agreed to.

Fruits and nuts were then taken up. On paragraph No. 261, Mr. Allison proposed changes, including peaches, currants, quinces, cherries and plums, with green or ripe apples and pears at 25 cents per bushel, and adding cranberries at 25 per cent. ad valorem. These were agreed to, and a motion by Mr. Vest to make the rate on fruit 20 per cent. was rejected.

The committee amendment to paragraph No. 262, relating to comfits, preserved fruits, etc., was agreed to with minor modification as to the amount of alcohol.

Paragraph No. 263, figs, etc., was changed on motion of Mr. Allison, so that the rate on figs, plums, prunes and prunelles is 2 cents per pound; raisins and other dried grapes 2½ cents per pound; olives 25 cents per gallon. In this paragraph the item of Zante currants, 2 cents per pound occasioned a lengthy discussion. Mr. Mills (Texas) maintained that these currants came exclusively from the Island of Zante, while the California Senators—White and Perkins—insisted that these currants were a leading product of California. Mr. White reinforced his assertion by a box of Zante currants from California and a currant bush in bloom.

On paragraph No. 266 orange peel or lemon peel, preserved, etc., and cocoanut meat, the committee rate was changed on motion of Mr. Allison to 2½ cents per pound, the remainder of the paragraph being agreed to.

On almonds the rates were changed on motion of Mr. Allison to 3 cents per pound on unshelled almonds and 6 cents on shelled almonds.

Filberts and walnuts were agreed to as reported; also peanuts and nuts of all kinds not specially provided for.

Paragraph No. 264 (grapes in barrels, etc.) was agreed to as reported, at 20 cents per cubic foot.

On oranges, lemons, limes, grape fruit and pome on the committee had substituted the rate of 1 cent per pound for the House rate of ¾ cent on the fruit and 30 per cent.

Notes in the Strawberry Patch.

Michel's Early has come to stay.

Mary has done well, coming in directly after Michel's Early. The plants are very poor growers, making very few runners, which, however, is not altogether a bad habit.

Timbrel, next to Mary, is fine, plenty of large berries and first-class foliage; this will stay.

Greenville, somewhat after the style of Mary in fruit and vigor, has in productiveness fallen behind that variety this year.

Marshall and Brandywine are about equal in time of ripening and productiveness, with Brandywine far in advance in luxuriance of growth, the stout flower stem carrying the berries well up and out. The one weak point is the poor shape of the berries; this may also be said of Marshall, for here it has many immense deformed berries; which of the two will finish best I will note later, both, at this date (June 17), being laden with green berries.

Hunn is a very noticeable, dark green, solid-leaved variety, with extra thick fruit stalks, but rather few large, fine berries. It is much after the style of Jersey Queen in texture of foliage, appearance of fruit and season. The fruit, however, lacks the luscious quality of the Queen.

From present notes my planting for next year will be somewhat in this line: Michel's Early, Mary, Sharpless, Timbrel, Brandywine and Jersey Queen. Gandy would make a good substitute for Jersey Queen where the soil is not of the best. JAS. HOLLOWAY, L. I.

Are You Renewing.

To those of our readers whose subscription has expired, or is to expire with the close of this month, and who will send us a prompt renewal (adding fifteen cents to pay for packing and delivery), we will at once forward one canna, well established, their choice of either Austria or Italia, the two great novelties of the season. This is an offer without parallel, but which, if desired, must be applied for at once.

A letter addressed to Mr. S. Henshaw has been received at this office. That gentleman is at present in Europe and will not be back for some few weeks. The letter will be held until his return.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Fruit Drying.—Please can some other readers give directions for home drying of fruits? Four or five years ago there was advertised a dryer for kitchen use, but I do not see it now. Can any one assist me?—MRS. A. O. GRANGER, Ga.

Information Given and Wanted.—Your inquirer for Alpine strawberry plants can get them of J. J. H. Gregory & Son, Marblehead, Mass. Your Philadelphia "Subscriber" can get peat in any quantity from W. W. Rawson & Co., 34 South Market Street, Boston, Mass. I, in turn, would like to know where to get some American cowslip plants (Dodecatheon Meadia).—C. S. DOGGETT, Mass.

Canna Iridiflora.—Will some one kindly inform me through your columns where I can obtain this plant?—SID. J. YANCEY.

To Keep Water Fresh in Fountain.—Is there anything to put in basin of a fountain to keep water from turning green and becoming stagnant when the flow is not continuous? Basin, 20 feet diameter and feed pipe ¼ inch; overflow, 1¼ inch; depth of basin, 30 inches.—J. L. HART, Iowa.

Ants on Lawns.—The lawn at my lake cottage is being destroyed by ants this summer; have tried slugshot and red pepper, but without effect. Is there any way to get rid of the pests?—T. C. LUND, Wis.

An Amateur and His Berries.—Having read with much interest American Gardening for the past year, I would like to give my experience, as an amateur, in raising strawberries. On the 8th day of last July I got twenty-five plants (Belmont) from a friend and planted them in a piece of land I just turned from sod, which I have since found is a mistake; but I had to do that or nothing. I carefully watched the plants, and as they made runners I spread them out until I got two plats of about twenty feet long and four feet wide with a walk between them. I kept all weeds down, cultivated every week, kept well watered and in fact watched them as a father would his children. In the fall I gave a good coat of stable manure, then a coat of leaves from the forest and on top of that placed some spruce boughs and waited patiently for spring. As soon as the frost had left the ground I gradually uncovered the plants. I don't believe they froze all winter, as the leaves were green when I uncovered them. I have kept the weeds pulled out this spring, and to-day (June 13) I picked my first quart of berries, and such beauties—from 1 to 1½ inches in diameter—and the vines are fairly loaded! I did not know the first thing about strawberries except what I learned from American Gardening. This summer I ventured to do a little experimenting. I got a few plants of James Vick and Colonel Cheaney and intend to keep all runners off a bed and see results. How long should I fruit the old bed? [Three or four years.—Ed.] Am much interested in gardening; have not much time, as I leave home at 6:15 A. M. and return at 6:45 P. M., so I have to work early and late; but I am amply repaid for my labor; have gained ten pounds this last year on working in the garden.—R. C. P., Dorchester, Mass.

For Present Sowing.

TURNIP SEED. We have all the best varieties.

CUCUMBER SEED FOR PICKLES. Our STOCKS are the Finest.

The first Consignment of our **SURE CROP, Mushroom Spawn,** just arrived.

Quality! BETTER!! than ever!!!

Descriptive Catalogue Free, by mail.

WEBER & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

CELERY PLANTS

We are growing celery plants by the million on ground specially adapted. The roots are long and heavy. **White Plume, Golden St. B., Giant Pascal,** and all popular sorts. Evenly sorted and safely packed at \$1.25 per 1000; 5,000, \$5.00.

KIRKWOOD CELERY CO., Kirkwood, Ohio.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

Celery and Cabbage Plants.

Celery—Giant Pascal, White Plume, New Rose, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000.
Cabbage—Succession, Flat Dutch, Drumhead, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000.

For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

Fresh imported well leaved plants of

CATTLEYA TRIANÆ

at \$15 per doz. or \$100 per hundred.

All other Cattleyas at reasonable prices.

Lager & Hurrell,

Orehid Growers and Importers,

SUMMIT, N. J.

Mention American Gardening when you write.

Offer No. 80.

FOR ONE NEW SUBSCRIPTION

200 CELERY PLANTS

AS FOLLOWS:

50 Plants
White Plume.

50 Plants
New Rose.

50 Plants
Golden Self-Blanching.

50 Plants
Giant Pascal.

This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to **AMERICAN GARDENING.** Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

A. Robble, formerly foreman at Rockwood, Tarrytown, N. Y., has been appointed to take charge of the gardens and grounds of C. E. Macy, Esq., Sing Sing, N. Y.

James Downing, formerly of Danville, Pa. (where he was for eleven years), is now in town seeking another engagement.

Meetings.

Friday, July 2.—Monmouth Co., N. J. Horticultural Society at Oceanic.

Saturday, July 3.—Lenox, Mass. Horticultural Society.

Massachusetts Horticultural Society, Boston, prize exhibition.

New York.

The exhibition of the New York Gardeners' Society, which was held on Saturday last in the Aldermanic Chamber, City Hall, was a remarkable one. Great credit is due the members that they carried their scheme to so successful an issue, giving a first-rate free show, and further, that at the close the exhibits were distributed among the inmates of the charity hospitals of Greater New York. Our congratulations to the society as a whole and to all the exhibitors individually.

Mayor Strong, after viewing the exhibits, spoke of the pleasure such a beautiful display had afforded him. He hoped the show would be an annual and suggested that the lower corridor of the City Hall be utilized for the purpose next year. He doubted whether the Aldermanic Chamber had ever before had an exhibition of as many beautiful things and commended the spirit which prompted the gardeners to make the display and to distribute the flowers among the charity hospitals of Greater New York for the delectation of those prevented by sickness from enjoying the beauty and freshness of flowers in the open air at this season. He thanked the gardeners for having given him an invitation to be present.

President Shore, of the Gardeners' Society, told of the effort put forth by the members at this busy time to make such an exhibition; that the gardeners were generous-hearted, and sympathizing with the sick, had decided on the disposal of the flowers in the manner stated by the Mayor, whom he thanked for the privilege of the Aldermanic Chamber wherein to make the display. He characterized the Mayor as a man of refinement, one who had the interest of the people of New York at heart. This was exemplified in the ready manner in which his Honor had sent his representative to confer with the gardeners regarding the planting of the streets with trees; and the enthusiasm he had shown in the present exhibition.

Secretary Hunter also thanked the Mayor and Board of Aldermen and stated that the suggestion to have a larger display next year would be acted upon. He hoped to see the public departments of New York City, so far as they related to horticulture, in the hands of practical men. He believed the gardeners had advanced a step in the direction of elevating horticulture in New York City, a fact which was extremely gratifying.

Park Commissioner William A. Stiles being called on, said: "I am not used to public speaking, but I think the man would be dull indeed if he could not find a few words to express the gratification that this exhibition must give to the spectators here. I have been at a great many shows in New York City, in Madison Square Garden and other places, where all the commercial florists and the private gardeners had combined to give the exhibitions, and I have seen many a one at which fifty,

cents and a dollar was charged for admission which did not have nearly as fine a display of flowers as is here this afternoon. The range of character and quality is extensive; commencing with the old-fashioned *Pæonias*, *Iris* and *Sweet Williams* and coming all through the importations from Europe and Japan to the most recent creations of those that belong to your society, as, for example, the new *Roses* of Mr. Manda. I think this is a remarkable exhibition of flowers; it does credit—infinite credit—to the skill of the gardeners who have brought these attractions; and what, to my mind, is much better, it does credit to their hearts, that at this busy season they have taken so much time, without compensation or reward, to bring these beautiful things here for the people who will appreciate them most." The speaker closed by commending the noble use to which the flowers were to be put.

Owing to the vastness of the display we are not able to do more than summarize it in the following remarks:

The Roses.

Roses were shown in profusion, the date and the season having made it possible to get together a very representative display from the gardens. The general absence of flowers which had been grown under glass was a noticeable and worthy feature of the whole display.

Mr. W. H. Harvey, gardener to Overt Park, Esq., Rye, N. Y., to whom the Kennedy Silver Cup was awarded, had in his display of H. P.'s as many as thirty-five varieties, represented by a ground lot of several hundred blooms, winning in a very close competition with John Ash, gardener to Miss E. J. Clark, Pomfret Centre, Conn. This exhibition had 700 blooms in forty-eight varieties. The award was made to the smaller collection on points of freshness and color; however, the second collection was of such merit as to be awarded a special prize. The best blooms shown by Mr. Harvey were Captain Hayward, Mme. Gabriel Luizet, Duke of Edinburgh, Baroness Rothschild, Mabel Morrison and General Jacqueminot. Mr. Ash was strong in Louis van Houtte, Marchioness of Lorne, Charles Lefebvre, Mavourneen, Gustav Pigneau and Moser, a grand dark rose; Captain Hayward, Alphonse Souper and Dr. André.

The largest number of exhibition varieties of rose came from F. Boulon, who had sixty represented. Mr. A. Grierson, gardener to Hicks-Arnold, Esq., Rye, N. Y., made a marvelous representative display of *Roses*, embracing all sections, in which as many as 145 distinct varieties were noticed. Teas and hybrid briars were specially good. Some of the best blooms shown were Xavier Olibo, Gloire Lyonaise, Marchioness of Londonderry (new), Carmine Pillar and Bardou Job. These two latter varieties are what are known as decorative, the first named is clear carmine, single and flowers in clusters, the individual blooms being about four inches in diameter. Bardou Job created quite a sensation; this is a H. P. practically a single, that is, it has but two series of petals; the coloring defies description in its fiery intensity of glowing crimson, added to this are its regularity of outline and the touch of golden yellow given by its anthers and stigma.

Another attractive *Rose*, which fully merits the high praise already bestowed upon it, is Jubilee, which for color, is one of the very finest dark *Roses* ever raised. An interesting feature of new *Roses* was seen in the *Wichuriana* hybrids of W. A. Manda, South Orange, N. J., some of which are evergreen; this year's novelties in this section are in some features superior to what have already appeared. Other leading exhibitors of *Roses* were G. Aitken and H. Kettle and A. Taaffe.

The Herbaceous Plants.

The sight of so many herbaceous plants amply proves that their cultiva-

tion is not by any means so neglected now as it was up to within a very short time ago; it also proves that an awakening of interest only was needed, and that the old-fashioned borders were not obliterated; the revival of interest in herbaceous stock augurs well for a growing love and interest in garden and plant craft.

The largest contribution in this section was John Lewis Childs, who had over fifty species *Lilium* *Kramerii*, and *L. Parryi* were well shown, but to the visitors the centre of attraction was the mosquito catcher, *Vincetoxicum acuminatum*. Mr. W. A. Manda had a very interesting lot, including several Scotch Pinks, *Scabiosa caucasica* and the *Edelweiss*. Mr. A. Grierson showed a collection including *Ixias*, *Calochortus*, English, Spanish and Siberian *Irises* and *Campanula persicifolia* in variety.

A display of rare beauty and quality was that of Mr. A. Herrington, gardener to H. McK. Twombly, Madison, N. J. Chief of all was *Hemerocallis aurantiaca major* (illustrated in American Gardening for March 13 last, page 179). The large size of the flower, the gorgeous Indian yellow color and its profusion of bloom commend this to favorable notice. Here were also seen *Armeria cephalotes* (Thrill), *Lychnis Haageana*, with very large flowers; *Stenactis speciosa*, native of California.

From the Osborne estate (G. B. Winslade, gardener) 19 genera were represented. Sweet Williams, *Campanulas* and *Aquilegias* were the strongest features. The first-named were of excellent quality and great in variety. This exhibitor also made a fine showing of thirteen varieties of Zonal *Pelargoniums*. The Shore prize was awarded here.

Campanula media, in great variety and stock, both showing excellent cultivation, were grandly shown by Mr. W. Anderson, gardener to J. M. Constable, Mamaroneck, N. Y. *Delphiniums* formed the leading feature of the display made by A. Wengert, gardener to E. W. Bliss, Bay Ridge, N. Y. He also showed a basket in blue and yellow, made up of *Delphiniums* and *Alamanda Schottii*. A few sprays of orchids had been added, but their effect was overpowered by the intensity of the blue *Delphiniums*.

President John Shore, gardener to W. H. Macy, Harrison, N. Y., made an excellent showing, the most striking features in the display being *Artemesia Haageana*, a superb hardy white pink *Her Majesty*; large, fragrant and very full; *Cornflowers* and Sweet Peas.

Mr. A. T. Brill, gardener to Miss M. B. Monahan, Pawling, N. Y., showed some Oriental Poppies and a collection of early flowering *Cosmos*, which were remarkably fine.

Mr. A. L. Marshall, gardener to J. B. Dutcher, Esq., Pawling, N. Y., sent a mixed collection embracing named Pansies, several varieties of ornamental-foliated *Begonias*, *Roses* and other plants.

Mr. J. Kirby, gardener to S. D. Ripley, Hempsted, L. I., had as his chief features *Gaillardias* and *Coreopsis*.

Orchids and Plants.

The most noticeable object here and one of the most conspicuous in the whole display was a grana plant of *Cattleya guttata* from G. W. Bramhall, Esq., Orange, N. J. This bore two enormous spikes of 27 and 16 blooms each; the form is a good one, very well colored.

Mr. A. Herrington sent a vase of *Odontoglossum crispum*. Mr. F. Mangold, gardener to Miss Helen Gould, had a spike of *Renanthera coccinea*, very finely colored, several pitchers of *Nepenthes* and hybrid *Cypripediums*. Mr. A. Welsing, gardener to Mrs. Erhardt, Brooklyn, N. Y., had leaves of fancy *Caladiums*, *Cattleya Gaskelliana*, *C. Mossii* *Cypripediums* and fine *Anthuriums* in variety, including *A. Andreanum*; also a hybrid *Ageratum* of his own and an unnamed *Solanum*.

Messrs. Siebrecht & Son had a general collection of cut flowers, including both hardy and exotic. Mr. P. Reilly, gardener to W. E. Brown, Flatbush, N. Y., had *Stephanotis* and *Goniphlebium appendiculatum*.

Fruits and Vegetables.

Fruits and vegetables were not numerous, but what was lacking in quantity was more than balanced in quality. The principal exhibitor was Mr. A. Taaffe, who had *Victoria Spinach*, Large Summer, Golden Queen and Grand Rapids lettuces; of Peas, Duke of York, Alpha and Extra Early Market, the first-named being specially fine; also potatoes and White Spine cucumbers. Strawberries from this exhibitor were of first-class quality, Sharpless especially so.

Mr. Wengert showed White Spine and Telegraph cucumbers in fine form; also early Market Peas, Lorillard tomatoes, Best on Market lettuce and some very fine spring onions. Gandy strawberry was well shown here.

Mr. J. C. Greer, Hackettstown, N. J., was an exhibitor of berries in Michel's Early, Sharpless and Marshall. These, while not the equals of others shown as regards size and color, were superior to all in flavor. They are grown at a comparatively high elevation on a hillside. Trophy and Essex hybrid tomatoes were well shown here.

The only exhibit of grapes (European) came from Mr. W. Scott, gardener to Mrs. T. C. Eastman, Tarrytown, N. Y. This was a bunch each of Buckland Sweetwater and Black Hamburg.

Mr. F. Boulon, Sea Cliff, N. Y., had an interesting display of fruit, including Mary strawberry, fine Bigarreau cherries, Crown Bob gooseberries (with a fruiting branch), a branch of a cord-on-trained currant, heavily laden with fruit, and lastly a dish of the Alpine strawberry, Everbearing.

Florists' Flowers.

A new white *Carnation*, Greater New York, of decided merit, was sent by Mr. H. A. Molatsch, Bay Ridge, N. Y. Mr. C. H. Allen, Floral Park, N. Y., had a magnificent display of Scott *carnation*. Mr. Wengert sent a collection of several varieties of *carnations*.

THE AWARDS.

The following is the official list of awards:


Roses.—To A. Grierson, Certificate of Merit for display of Moss Roses and Special Prize and Certificate of Merit for display; Certificate of Merit for collection of Tea Roses.

To John Ash, Special Prize and Certificate of Merit for display of Roses; Special Prize and Certificate of Merit for vase of *Jacqueminot* Roses; Certificate of Merit for best 50 H. P. Roses in 10 varieties.

To H. Kettle, Special Prize and Certificate of Merit for collection of Hybrid Perpetual Roses. Certificate of Merit for display of Roses to Ferd. Boulon. Certificate of Merit for display of Hybrid Perpetual Roses to Peter Duff. Certificate of Merit for vase of *Jacqueminot* Roses to Robert Marks. Certificate of Merit for display of Roses to John G. Aitken. Kennedy Silver Cup for display of Hybrid Perpetual Roses to William H. Harvey. Certificate of Merit for 50 Hybrid Perpetual Roses to John M. Hunter. Special Prize and Certificate of Merit for display of Tea Roses; also Special Prize and Certificate of Merit for display of Hybrid Perpetual Roses to Andrew Taaffe. Certificate of Merit for collection of New Roses (*Wichuriana* hybrids) to W. A. Manda.


Herbaceous Flowers.—Certificates of Merit for display of Herbaceous Flowers to A. Herrington and to John G. Aitken. Certificates of Merit for collection of Herbaceous Flowers and for collection of *Iris* to Andrew Grierson. Shore Prize for collection of Herbaceous Flowers to G. B. Winslade. Certificate of Merit for collection of Herbaceous Flowers to W. A. Manda. Special Prize and Certificate of Merit for collection of Herbaceous Flowers to John Lewis Childs. Certificate of Merit for display of *Paenias* to F. R. Piorkowsky. Certificates of Merit to W. A. Manda for collection of Japanese Tree *Paenias* and for display of single and double flowers of *Dianthus plumarius*.

Miscellaneous Cut Flowers, Etc.—Certificates of Merit for display of Petu-



GOOD HEALTH MAKES ONE HAPPY.

and the happy man is best fitted for the duties of life. The happy heart is the strongest heart. To produce and maintain this condition, you should keep constantly on hand a supply of that health retaining, health restoring remedy



It is a purely vegetable preparation that corrects all derangements of the Liver and Kidneys and works a permanent cure for

**BRIGHT'S DISEASE
URINARY TROUBLES
GENERAL DEBILITY
FEMALE COMPLAINTS
AND MALARIA.**

In order that it may be handy for you we have placed it on sale in your nearest store. Beware of substitutes. There is nothing so good as Warner's Safe Cure.

...THE COMPLETE...

BOOK CATALOGUE.

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers
The Fruit Grower
The Nurseryman
The Private Gardener
The Market Gardener
The Seedsman
The Farmer
The Poultry Keeper
The Student of Botany, Entomology and Ornithology
and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE PTG. AND PUB. CO. Ltd.

P. O. Box 1697, New York.

nias and Phlox Drummondii to Andrew Taaffe; for display of Zonal Geraniums, Charles Webber; for display of Garden Flowers, A. T. Brill; for collection of Old-fashioned Flowers, James Kirby; for Flowering and Ornamental Begonias, George W. Barton; for collection of Geraniums, G. B. Winslade; for display of Roses and Carnations, Owen G. Owens; for collection of Novelities, W. A. Manda; for display of greenhouse and garden flowers, A. L. Marshall; for collection of Old-fashioned Garden Flowers, John Shore; for display of greenhouse and garden flowers, Ferd. Mangold; for display of Cut Flowers, James McKenzie; for display of Tropaeolum, Peter Duff; for display of Cut Flowers, Samuel Leuba; for floral designs, A. J. Wengert; for display of Cannas, A. Welsing; for New Ageratum Mexicanum crispum, A. Welsing; for new Canna, "John M. Hunter," John M. Hunter; to W. Scott for collection of Ferns; for display of Cut Flowers, William Anderson; for display of Cut Flowers, William Cowan; for display of Gloxinias, William Scott; for Specimen Orchid, Cattleya guttata, Richard Scherry; for vase of Gloxinias, Scott Carnations, Charles H. Allen; for display of Carnations, A. J. Wengert; for new white Carnations, Greater New York, to H. A. Molatsch, and certificate for general display of Carnations; William Brown, for collection of Orchids; to A. Herrington, for vase of Orchids; Special Prize and Certificate of Merit for display of greenhouse flowers and foliage, William Brown, Esq. Honorable Mention to Henry A. Siebrecht & Son for collection of Cut Flowers. Honorable Mention to Pitcher & Manda, Short Hills, N. J., for collection of Herbaceous Flowers.

Vegetables.—Special Prize and Certificate of Merit to John C. Greer for dish of Tomatoes. Certificates of Merit to A. Taaffe for collection of vegetables; to A. J. Wengert for display of vegetables; to Henry Cotterell for display of vegetables; to William Bartholomae for Potatoes and Tomatoes.

Fruits.—Certificates of Merit to F. Boulon for dish of Cherries and a certificate for general display of fruits, including Strawberries, Currants and Gooseberries; two certificates to J. C. Greer for Strawberries.

Special Prize and Certificate of Merit to A. J. Wengert for dish of Strawberries.

Certificate of Merit to William Scott for Strawberries.

The Dutcher Prize to A. L. Marshall for best dish of Strawberries.

Certificate of Merit to A. Taaffe for dish of Strawberries.

Special prize and Certificate of Merit to William Scott for Grapes.

Gardeners' Society's Silver Cup to A. Grierson for securing the largest number of certificates.

New York Gardeners' Silver Cup to A. Taaffe for best horticultural exhibit.

Business and Social Meeting.

After the close of their exhibition on Saturday last the New York Gardeners' Society held a meeting (social and business) in the "Potting shed," on Centre Street. In view of the great success that had attended their recent show, it was decided that an effort be made to hold a chrysanthemum exhibition in the fall, and looking toward its accomplishment a committee was appointed to confer with committees from the surrounding gardeners' societies on the subject. Mr. Withers, on behalf of the American Institute (horticultural section) made a proposition whereby the society could secure, free of rental, the use of the Concert Hall in Madison Square Garden, from October 24 to November 3, for the purposes of such a show. The offer was held over for consideration of the joint committees.

Future meetings of the society will be postponed until September, at which time a dinner will be given, in connection with which a committee of arrangements was appointed. At the close of the business meeting the gardeners spent a social hour and seemed highly elated over the success of their undertaking in the City Hall.

Boston, Mass.

Saturday, June 12, was to have been Pæonia day with the Massachusetts Horticultural Society, but owing to the lateness of the season these prizes were postponed for one week. Two collections of pæonias were, however, shown, one by T. C. Thurlow and one by Geo.

Hollis. In addition to these a large collection of flowers nearly filled the lower hall. The three prizes for fox-gloves were awarded to Kenneth Finlayson, W. N. Craig and John L. Gardner, respectively. James Comley made a large exhibit of rhododendrons, azaleas and other hardy shrubs. Thomas W. Dee showed some late flowering tulips and W. N. Craig made a good display of carnations.

The Garden Committee of the Massachusetts Horticultural Society visited the Hayes estate at Lexington (James Comley, gardener) on June 16.

Oceanic, N. J.

The second June meeting of the Monmouth County Horticultural Society was held at Oceanic on Friday, the 18th inst. The interest manifested in the public exhibition, to be held in Red Bank, on September 1 and 2, is probably responsible for the large attendance at every meeting. If there is one thing above all others that the private gardeners of Monmouth County are determined upon it is to make this, their first exhibition, a success if, by any efforts of theirs this result can be attained. The contributions already received surpass the most sanguine expectations, and it is safe to assume that there will be no difficulty in offering prizes of sufficient attractiveness as to provoke spirited competition.

A novelty in the carnation line was exhibited by Mr. Hugh Birch, of Oceanic. The plant, instead of the customary two, has four leaves at every joint, thereby doubling the amount of foliage. Mr. Birch has called it "Quadrifolia." The next meeting will be held at Oceanic on July 2 at 8 P. M.

Annandale Rose Show.

The tenth annual rose show was opened at Annandale, N. Y., on Wednesday, June 16, and was a pronounced success. The attendance was excellent, and the exhibits were more numerous and better than on any previous occasion. The feature of the show was a splendid table of orchids, and a group of crotons and other greenhouse plants from the Dinamore Estate (Mr. Thomas Emerson, gardener). The amateur exhibition was, as usual, very varied and very interesting. A wreath of crimson clover (*Trifolium incarnatum*) was unique and showy. Twelve fine gloxinias were shown by Archibald Rogers, Esq. (Mr. James Horrocks, gardener), and carried off first honors. The prize for best collection of ferns was awarded to Miss Cruger (Mr. Richard Lewis, gardener). The same exhibitor was awarded first for the best collection of outdoor roses, also the best collection of peas and the best collection of vegetables. The first prize (special) for twenty-four varieties of roses, three blooms of each, was won by Winthrop Sargent, Esq. (Mr. Wallace Gomersall, gardener). First prize for eighteen was awarded to Miss Cruger (Mr. Richard Lewis, gardener), and first prizes for best twelve and six were awarded to Hon. Levi P. Morton (Mr. Thomas Harrison, gardener). The same exhibitor carried off first honors with a vase of Paul Neyron. The exhibit of strawberries was very good. First prize for best three dishes was awarded to Miss Cruger (Mr. Richard Lewis, gardener, and first for best single dish to Hon. Levi P. Morton (Mr. Thomas Harrison, gardener).

The Dutchess County Horticultural Society held its regular monthly meeting at the show, and after some routine business was transacted, Mr. Richard Lewis was introduced. He delivered an address of welcome, gave a short history of the rose shows at Annandale, and closed with an original poem appropriate to the occasion, his effort being very warmly received. Mr. Patrick O'Mara then read a paper entitled "A Plea for Garden Roses," and afterwards the chairman, Mr. George Saltford, on behalf of Mr. Richard Lewis, presented him with an oil painting of the "Jubilee" rose, executed by Mr. Lewis himself. It was a great day for Mr. Lewis—gardener—artist—poet, and he richly deserves all the encomiums bestowed upon him.

Philadelphia, Pa.

The meeting of the Pennsylvania Horticultural Society on June 15 was a very successful one. The exhibition of roses was very good. Dr. Robert Huey obtained first premium for a very creditable display of good flowers, William L. De Shields, gardener to Mrs. Alexander Brown, being second with a very good lot. An excellent collection of roses from Miss Mona Robinson was a close contestant for second honors. Louis Horner, gardener to Robert Pitcairn, Esq., staged a very interesting collection of roses composed mostly of hybrid teas and teas; also four species of wild roses. These were all outdoor-grown and are the result of an experiment, after hearing the paper read by Dr. Huey last year and published in American Gardening at that time.

The contest for the Michell premiums for peas was very close, the first prize being taken by Herman Bruschaber and the second by Charles Leisz, gardener to B. A. Van Schaick, Esq.

Henry A. Dreer had on exhibition some varieties of peas from their trial grounds.

The Committee on Premiums presented a schedule for the spring exhibition for 1898, which offers prizes amounting to \$1,000.

A New Way of Catching Fish.

ONE of the most remarkable curiosities of modern times, is a preparation known as Zampa Compound, which will, when used on any kind of bait, cause the fish to bite with astonishing vigor. This seems like an impossibility at first thought but the careful investigations of the many fishermen whose statements are printed below, prove beyond all doubt that the claims of the makers of the Compound are true. The exact reason why the fish are so easily attracted by it is not known, but it seems probable that as extremely delicate scent is imparted to the surrounding water by the Compound, and that the fish are thereby attracted. Zampa Compound is composed of a glutino-saccharine powder which is saturated with the juice of a plant growing in the remote interior of Brazil, and called by the Indians of the upper Amazon River, "Zampa Zaru." This Zampa Zaru plant is said to be very rare and the Zampa Company of Boston, Mass., are the only people who can get the precious fluid extract of it from which Zampa Compound is made. Zampa Compound is used by direct application to any kind of bait when one is fishing with pole or line in the usual way. It has stood the test of actual trial by people all over the country and their words of praise which appear below are genuine.

The editor of this publication has personally examined the original letters from which the following testimonials were printed and will vouch his word of honor that they are correct and genuine even in the matter of exact names and addresses. The testimony and evidences given below ought to be sufficient to convince any fair minded person.

DEAR SIR:—I ordered some of your Zampa Compound some time ago and it works well. Fish surely do bite at it and people like it here. Find twenty-five cents enclosed for Zampa Compound. Send best terms to agents. REVEREND ISAIAH KING, Tallulah, La.

KIND SIR:—I have not had time to try the sample you sent me, but a little boy eight years old thinks it is very fine. His name is Harry McIntire. He used my box, hence this order. MRS. S. ALDRICH, Eagle River, (Vilas Co.) Wis.

DEAR SIR:—My partner has a box of Zampa. We tried it and it gave good satisfaction. GEORGE R. DELCAMP, Coryland, Pa.

DEAR SIR:—I forgot to send you the sum of fish I caught with Zampa Compound, and now I will tell you the sum—fifty one in a time of one hour and that is the best I have done. Maybe I can get more yet in an hour's time and I will tell you. ALBERT H. STEPHAN, Minnesota Lake, Minn.

ZAMPA CO.:—Please send me by return mail two boxes of your Zampa Compound. Having used it last summer it gave good satisfaction and success whenever used. J. H. HACKMAN, Elroy, Pa.

ZAMPA BAIT CO., GENTS:—Enclosed find \$1.00 for which send me the amount in bait powder. I could not tell you how I liked your powder until to-day, I have been fishing five times and used the compound with success every time. I gave some of it to Mr. Shanahan and Albert Hiron on the ninth, and they caught about fifty fish. They begin to think it is just about the thing. The lake is noted for the fish not biting good and I think you have a bonanza. CHARLES KIMMEY, Box 185, Edwardsburg, Mich.

"WHAT EVERYBODY SAYS MUST BE SO."

Zampa Compound costs ten cents a box and will be sent by mail to any address on receipt of price in postage stamps or money, by the Zampa Company, Box 1275, Boston, Mass.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*. We cannot undertake to reply by mail.

Wash for Insects on Fruit Trees.

Also please state what wash or preparation is most suitable to use in covering over the bark of apple and peach trees? Some time ago in one of the numbers of American Gardening it gave the name of a wash, but at this time I cannot find it.—E. R. WILLIAMS.

For use in summer against sucking insects kerosene emulsion is the best. This kills by contact. For winter use against scale, etc., whale oil soap is one of the best washes for fruit trees, provided it is not used stronger than two pounds of soap to one gallon of water.

Insects on Fruit Trees.

I have a couple of peach and some young Bartlett pear trees. Every spring they bud and flower, but when the leaves begin to grow I find them curled up and a small worm $\frac{1}{4}$ to $\frac{1}{2}$ inch long with a small web like a spider web around it. Some of the buds are affected the same way. These worms eat the surface of the leaves and the buds fall off, the trees almost dying. This year I sprinkled with the copper solution before the buds opened, but it has not done any good. What can I do now to remedy the evil and in the future to prevent it?—W. H. G.

It is too bad a specimen was not sent at the time, as the description would apply to several foes of fruit trees. We are inclined to believe that this must be one of the canker worms. As they eat leaves copper sulphate would not answer the purpose, as would have one of the insecticides, as London Purple, Paris green or hellebore, at their first appearance.

Lilacs Not Flowering.

I have several lilac trees which I planted six years ago, transplanting them four years ago. The trees are vigorous and strong, plenty of manure around them and the young suckers carefully destroyed, but they have never born any flower. Can you state why they do not bloom?—W. H. G.

W. H. G. does not say of what the lilac is. Seedlings of the common lilac, *Syringa vulgaris*, vary much in age before flowering. If of the so-called tree lilac, *S. japonica*, it should flower inside of six years. Of course W. H. G. does not prune lilacs.

Diseased Lilacs.

Many Candidum lilacs here that made good growth last fall and started apparently all right this spring will not bloom. Some of the blossom stalks grow a foot high and stop. The leaves turn brown like the one enclosed and some dead at the tips. Have heretofore always bloomed well; are in partial shade. Is it caused by our very cold spring after they had started to grow?—J. F. MUNSSELL.

The plants may have been checked in their spring growth by cold. This is very often the case, not only with Candidum lilacs but with most others. If they receive a severe check after the flower stems have started to develop it is difficult to make them produce flowers. The writer observed at one time in a lot of one thousand Harrisii lilacs, in which the young buds were well formed, but which had been checked in an attempt to hold them back for later bloom by means of low temperature, that they never passed the bug stage. Of course, it is possible that Mr. Munsell's plants may have been checked in some other way, and we would like to examine a few of the diseased ones, especially those having spotted leaves like the ones received. We shall be obliged if Mr. Munsell will forward us say two of the plants, with the bulbs and roots, being very careful not to remove any insects which may be working on the foliage.

Maple Leaves Dying.

I send by express to-day a branch of leaves from my maple trees, several of which are beginning to show signs of decay. Will you please tell me what to use, and if I should spray them? As I have a large number of maple trees, I should dislike to lose them.—M. P. M.

The maple leaves from M. P. M. do not show any serious trouble. They have been attacked by several species of insects, one producing a gall and the others simply scraping the surface of the leaves. None of these insects will do any particular damage. The dead spots are prob-

(Continued on next page.)

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Going Into the Poultry Business

One of the poultry papers tells of an inquirer who wants to go into poultry but is skeptical of success, as he says, "because I hear of so many failures." The writer of this note talked with numbers of inquirers at the last New York poultry show, and nearly all, though hugely interested, seemed fearful of failure. The main difficulty was a fear that too much poultry would be raised. Even if this were to be true in the far future, poultry make quick returns, and one embarking now might secure a competence before the time apprehended. As to failures, they are far more numerous than they are reported, doubtless, but the same may be said of the successes. How else could the middle classes of our country do a continuous business aggregating so many millions of dollars yearly? A quick eye and a capacity for following directions are here the necessary accompaniments of capital; given these, there is no call for failures in the poultry business. If dry goods offered 100 per cent. profit on the cost of running the business, what then? They say 95 per cent., or thereabouts, of the people who go into trade fail. "So many failures in the poultry business?" Does any one suppose that out of 100 who keep poultry, 95 are failing? Never!

Comparative Prices.

One hundred pounds of grit cost one dollar, or one cent a pound; five

STATE OF OHIO, CITY OF TOLEDO, } ss
LUCAS COUNTY.

FRANK J. CHENEY makes oath that he is the senior partner of the firm of F. J. CHENEY & Co., doing business in the City of Toledo, County and State aforesaid, and that said firm will pay the sum of ONE HUNDRED DOLLARS for each and every case of Catarrh that cannot be cured by the use of HALL'S CATARRH CURE.

FRANK J. CHENEY.

Sworn to before me and subscribed in my presence, this 6th day of Dec., A.D. 1896.

{ SEAL. } A. W. GLEASON,
Notary Public.

Hall's Catarrh Cure is taken internally and acts directly on the blood and mucous surfaces of the system. Send for testimonials, free.

F. J. CHENEY & CO., Toledo, O.
Sold by Druggists, 75c.

INCUBATORS. Self-regulating. Catalogue free
G. S. SINGER, Cardington, O.
Mention American Gardening when you write.

Built to Sit On, Not to Straddle.



THE WHEELER BICYCLE SADDLE.

Every rider who has given the WHEELER REFORM a trial prefers it to all other saddles. Endorsed by physicians. Especially recommended for ladies.

We will send a Wheeler Bicycle Saddle as a Premium for Three New Subscriptions at \$1.00 each. Purchaser pays express.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK

Smouldering fires of old disease

lurk in the blood of many a man, who fancies himself in good health. Let a slight sickness seize him, and the old enemy breaks out anew. The fault is the taking of medicines that suppress, instead of curing disease. You can eradicate disease and purify your blood, if you use the standard remedy of the world,

**Ayer's
Sarsaparilla.**

pounds of grit cost 10 cents, or two cents a pound; 100 per cent. more. Five pounds of charcoal cost 25 cents; one pound costs 10 cents. It is the same with cut clover, and with no one knows how many other supplies. See how the small buyer suffers? Here is a good argument for flocks of fifty, at least, for with these one may buy by the hundred all such supplies as grains, clover, grit, etc. Other things being equal, this extra hundred per cent. then stays in the poultry raiser's pocket, instead of going to the dealer. If "a penny saved is two-pence earned," this is equal to 200 per cent. profit to the raiser.

MYRA V. NORRIS.

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished. Mention American Gardening when you write.

LAND DEVELOPMENT, consultations, plans, superintendence, plans, labor, etc., supplied for work as wanted. 499 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1607, New York City.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial or a number, counts as one word. No cuts or display type allowed.

HULSBOSCH BROS., bulbs and plants, Englewood, N. J.

CELERY PLANTS. See our ad. in this issue. Kirkwood Celery Co., Kirkwood, Ohio.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

VEGETABLE PLANTS: Celery, 1000, \$1.25; Cab' bage and Tomato, 1000, \$1.00; Peppers, 1000, \$2.00. Price list free. E. C. Hargadine, Felton, Del.

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION as gardener's assistant, Scotch American, age 21. William Hossack, 208 Warren St., Brooklyn, N. Y.

GARDENER desires position in private place, thoroughly conversant with gardening and greenhouse work in all its branches, good all-around grower, 4 years reference from present employer. Address, Gardener, 840 Richmond st., Plainfield, N. J.

ably a secondary result of the insect work. During rainy weather the injured areas of the leaf become water-logged by taking up moisture from the surface of the leaf. These areas are then attacked by fungi and bacteria and the tissues are completely killed. When dry weather comes again the spots dry out. Judging from the specimens we do not think the trees are in any danger whatever or that they will require spraying.

Leaves of Ash Falling.

I herewith send you specimens of the leaves of an ash tree which I have on my lawn. The leaves keep falling off all the time and such has been the case for years. What is the best remedy?—J. D. F., Mass.

In regard to the shedding of leaves of the ash tree reported by Mr. J. D. Fairweather, it would be impossible to explain the cause without further data. Shedding of leaves follows a great many different disturbances in the foliage of the tree and the specimens sent throw no light on the cause of the trouble. In order to diagnose this case it will be necessary for us to have information on the following points: (1) Is the tree a strong, vigorous grower? (2) Are the soil conditions favorable? (3) Are the trunk or limbs attacked by borers (this can be determined only by careful examination)? (4) Is there any indication of diseased roots? (5) Is the tree standing alone or in close proximity to others? (6) Do all the leaves fall or only a part of them? (7) Do the leaves always have the dead spots on them when they fall? (8) Do twigs die? In addition to this information we would like to examine twigs from which the leaves have fallen and also twigs to which the leaves are attached.

Seaside Trees.

Will you please inform me what kinds of trees would be most suitable, both as to adaptability and effect, for planting around a long lake at a seaside resort in Monmouth County, N. J.—H.

Salix alba, *S. regalis*, *Picea Pinsapo*, *Broom*, *Hippophaea rhamnoides*, *Rhus Cotinus*, *Crataegus pyracanthus*, perhaps some *Bamboos*, *Pinus austriaca*, *Pinus pinaster*, *Deutzia crenata*, *Norway Maples*, *Colutea arborescens*, *Lilacs*, *Mountain Ash*, *Enonymus Europaea* *Hemlocks*, *Osage orange*, *Yew*, *Baccharis halmifolia*, *Myrica*, etc.

Geraniums for Winter Flowering.

How can I succeed in having Geraniums flower in the house during winter? When am I to take slips? What is the best way to get flowers early after the plants have been kept during the winter in a dormant state? Have they to be cut back? Mine are very backward; plenty of leaves, but few buds. They are now in open ground in good soil.—E. E. S.

To make Geraniums flower during the winter they should have all the blooms picked off during the summer, the plants pinched occasionally and careful attention given to watering. Another way is to lift some shapely plants in August, pick off all bloom and pot up in ordinary soil. Those now in the open ground will soon bloom or at least when the weather gets warmer and more dry.

Maples From Seed.

(To J. S. C.)—Maple seed should be stratified through sharp sand and sown afterwards on the surface of leaf or woodland soil, in open frames, and then transplanted to nursery rows.

Distance for Cosmos.

How far apart should Cosmos be planted?—S. KEAGY.

If the plants are strong and the soil rich, with full exposure they should be at least four feet apart each way. Sometimes even more space than that is given.

Hydrangeas Not Flowering.

My Hydrangeas have been growing since March 22 last; have not flowered yet. Before starting them I took them out of their pots and shook all the earth from the roots and put them in larger pots with fresh soil. I suppose that is the reason they have not flowered. I have had them for six or seven years. They have flowered every year. I enclose proof of one of them taken last summer. The size of pot is twelve inches. I suppose they won't bloom this year. Could I take cuttings now from every stalk without spoiling its chances of flowering next summer?—A SUBSCRIBER.

This is the proper season to cut back hydrangeas for next spring flowering. Commercial growers have theirs now cut back and planted out in the open field; these will be lifted and potted up in the early fall and the new growths are forced on for Easter or whatever season they may be needed.

OUR GREATEST 1897 PREMIUM

The Wonderful New Climbing Rose

Yellow Rambler (Aglaia)

A worthy COMPANION to the well-known Crimson Rambler.
The Hardest Yellow Climbing Rose Ever Introduced.

Yellow Rambler bears its flowers in immense clusters, often as many as one hundred and fifty blossoms in a bunch, the trusses being of handsome pyramidal shape.



A CLUSTER OF YELLOW RAMBLER ROSES.

Yellow Rambler holds its blooms from three to four weeks without fading; a large bush in full bloom is one of the most beautiful sights imaginable.

Yellow Rambler is a clear decided yellow, in marked contrast to many roses so described, but which have really only a yellow tinge.

Yellow Rambler is very vigorous; well-established plants often making shoots eight to ten feet in height in a single season.

Yellow Rambler represents the triumph of the century in the hybridizing art, and is the most valuable introduction in recent years.

Yellow Rambler is very sweetly scented.

Yellow Rambler combines the climbing habit and decided yellow color with hardness.

Yellow Rambler will withstand, without protection, a zero temperature; with protection it will thrive where any other rose will.

Yellow Rambler is thus adapted to successful culture in nearly all of the northern parts of the United States.

Yellow Rambler is absolutely NEW on the market and will prove the sensation of 1897!

One strong plant of Yellow Rambler, from 2¼ inch pot, will be mailed, postpaid, to any address, as a premium for one new subscription to **AMERICAN GARDENING**.

Special to Regular Subscribers

To those of our readers whose subscription has just expired, or is shortly to expire, who will send us a prompt renewal (adding fifteen cents to pay for packing), we will at once forward one fine plant of **YELLOW RAMBLER** by mail, postpaid. For your own renewal and that of a friend, we will send by mail, postpaid, on receipt of \$2.00, one plant to each address.

THIS OFFER EXPIRES JUNE 30.

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

WHOLESALE MARKETS.

New York.

Business has been very steady for some days, with stock of all kinds cleaning out well at fairly remunerative prices.

Hothouse grapes, 1/2 of No. 1 quality, have been making \$1@1.25 per pound.

Tomatoes realized 10c. per pound and the market sold out clean.

Cucumbers vary from \$2@33 per box.

Mushrooms are selling when of good quality at from 40@50c. per pound.

Strawberries are arriving in good condition. Oswego berries made their appearance Tuesday morning for the first time, but the stock came upon the market by too late a train to command the best price. Hilton and Irvington, extra fancy varieties, quart, 8@15c.; Staten Island, per quart, 8@12c.; up-river, fancy varieties, per quart, 11@12c.; up-river, upper stations, usual sorts, 9@11c.; up-river, lower stations, usual sorts, 8@10c.; Jersey and Delaware, Gandy's Prize, per quart, 7@10c.; Jersey, Monmouth County, small, per quart, *8c.; lower Jersey and Delaware, small, per quart, 6@8c.

Raspberries—Maryland, red, per quart, 18@20c.; Maryland, red, per pint, 7@10c.; Jersey, red, per pint, 7@10c.; blackcap, per pint, 4@6c.; blackcap, Maryland, per quart, 6@9c.

Gooseberries—Extra large, English, per quart, 5@8c.; small, green, per quart, 3@4c.

Huckleberries—North Carolina, large, blue, per quart, 12@13c.; North Carolina, poor to good, per quart, 8@11c.; Jersey, per quart, 12@14c.

Blackberries—North Carolina, cultivated, per quart, 8@11c.; North Carolina, small, per quart, 6@7c.

Currants—Maryland and Delaware, red, per quart, 8@10c.

Cherries—Sweet, per pound, 2@6c.; sour, per pound, 3@4c.; eight-pound baskets, as to size and condition, 15@50c.

Pineapples—Indian River, reds, standard crates, 24s, \$2.75@33; Indian River, reds, standard crates, 30s, \$2.50; Indian River, reds, standard crates, 36s, \$2@2.25; other sections, per 100, \$4@38; Porto Ricos, each, 25@50c.

Melons—Watermelons, Florida, good to choice, per car, \$175@325; watermelons, Florida, per 100, \$20@35; muskmelons, Charleston, per bushel basket, \$1.50@2.50; muskmelons, Florida, per basket, \$1@2.

Peaches—Georgia, early sorts, per carrier, \$1@2.50; South Carolina, per carrier, \$1@2.50; North Carolina, early sorts, per carrier, \$1@33.

Plums—Botan, poor to good, per carrier, \$1@2.25; Wild Goose, per carrier, \$1@2.75; Chickasaw and Robinson, per carrier, \$1@1.50.

Pears—Le Conte, Florida, small to medium, per barrel, \$3.50@4.50.

Grapes—Florida, Niagara, 25 to 30-pound cases, \$1@2.50.

Apples—North Carolina, green, per barrel, \$1@2; Northern Spy, State, prime to choice, \$3@4; Baldwin, W. N. Y., choice, \$3@3.50; Russet, Roxbury, State, per barrel, \$2.75@3.25; Russet Golden, per barrel, \$2.25@2.75.

Asparagus—Near-by, large, per dozen, \$1.50@1.75; near-by, average prime, per dozen, \$1@1.25; inferior, 50@75c.

Cauliflowers, per barrel, \$1@1.50.

Cabbages—Jersey and Long Island, per 100, \$3@3.50; Norfolk, per barrel crate, 75c.@1.25; Norfolk, per barrel, 75c.@1.12.

Cucumbers—Norfolk, per basket, \$1@1.25; North Carolina, per crate, 50c.@1; Charleston, per basket, 65c.@1; Savannah, per basket, 50c.@1.

Egg Plants—Florida, per one-half-barrel box, \$2@2.50; Florida, per basket, \$1.50@2.

Garlic—New Orleans, per pound, 5@6c.

Onions—Eastern Shore, per one-half-barrel basket, \$1.12@1.25; New Orleans, per barrel, \$2.50@3.50; Egyptian, per sack, \$2.25@2.35.

ARMSTRONG & McKELVY Pittsburgh.
DEYMER-BAUMAN Pittsburgh.
DAVIS-CHAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ANCHOR Cincinnati.
DOKSTEIN
ATLANTIC
BRADLEY
BROOKLYN New York.
JEWETT
ULSTER
UNION
SOUTHERN Chicago.
SHIPMAN
COLLIER
MISSOURI St. Louis.
RED SEAL
SOUTHERN
JOHN T. LEWIS & BROOK Philadelphia.
MORLEY Cleveland.
SALIM Salem, Mass.
CORNELL Buffalo.
KENTUCKY Louisville.

THERE is a right way to paint and a wrong way. The right way is to have the best paint—Pure White Lead (see list of genuine brands) and Linseed Oil—applied by a practical painter. The wrong way is to get some mixture about which you know nothing and apply it yourself or have some inexperienced, irresponsible person do it.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

LORD & BURNHAM CO., HORTICULTURAL ARCHITECTS AND BUILDERS. STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK.
Factory: Irvington-on-Hudson, New York. Mention paper

HOUSE PLANTS AND HOW TO SUCCEED WITH THEM.

BY LIZZIE PAGE HILLHOUSE.

This work has been written by a woman for women. Recognizing the fact that no practical and easily understood guide covering the subject has ever been published, Mrs. Hillhouse has undertaken to fill the deficiency, and most ably and effectively has she accomplished the task. The result is a book of information and instruction, written in simple, easily understood language, which will be prized and consulted by every woman fortunate to become its possessor. Of all books of reference issued for women, "HOUSE PLANTS" will take its position second only to the much prized and ever needed family cook book.

"HOUSE PLANTS" will be issued from our press, June 24. It is handsomely bound in cloth, beautifully illustrated, and will be mailed, postpaid, to any address on receipt of \$1.00.

AGENTS WANTED.—This meritorious work will be sold exclusively through our agents, and application for terms and territory should be made at once. We are in a position to offer large discounts, and so universal will be the demand for the book, every lady at all interested in plants being sure to need one, that agents will easily make from \$4.00 a day and upward. Send us \$1.00 for your first copy, terms, etc., the discount will be allowed on this copy when your second order reaches us.

For full particulars, apply to

A. T. DE LA MARE PTG. & PUB. CO. Ltd., P. O. Box 1697, New York.

Peas—Long Island, per bag, 50¢@55c.
String Beans—Jersey and Maryland, wax, per basket, 75c. @ \$1; Norfolk, green, one-half-barrel basket, 75c. @ \$1; Norfolk, wax, one-half-barrel basket, 50c. @ \$1; North Carolina, wax, per basket, 40¢@50c.; North Carolina, green, per basket, 40¢@55c.

Squash—Florida, marrow, per barrel crate, \$1.50; Southern, yellow, per basket, 50¢@75c.

Tomatoes—Savannah, per carrier, \$1.50 @ \$1.75; Florida, prime, per carrier, \$1.25 @ \$1.50; Florida, fair to good, per carrier, \$1 @ \$1.25.

Turnips, white, per 100 bunches, \$1.50 @ \$2.

Philadelphia.

Business has been very good here this past week and prices are somewhat firmer. The market has been much more crowded with stock of all kinds, but most dealers report quick sales.

Strawberries have fallen off very much in supply; in fact, the Jersey berries are about done; these sold at 6¢@8c. per quart for the last consignments received. Choice Pennsylvania berries continue to come in and are of good quality, selling at from 12¢@15c. per quart.

Hothouse tomatoes are very plentiful. The market is well cleaned up each day at from 6¢@8c. per pound.

Asparagus—There is yet some Pennsylvania stock coming in which is mostly small and selling at \$1 @ \$1.50 per dozen bunches.

Beets—New Jersey, 2¢@3¢ per 100 bunches.

Cabbage—Norfolk, per barrel, \$1 @ \$1.40; Charleston, per barrel crate, \$1 @ \$1.25.

Cucumbers—Charleston, per one-third-barrel basket, 90c. @ \$1.25.

Egg plant, per crate, 2¢@3¢.

Onions—New Jersey, per basket, 50¢@75c.; New Orleans, per barrel, \$2.50 @ \$3.

Lettuce—Pennsylvania, per barrel, \$1.25 @ \$1.50; New Jersey, per barrel, 80c. @ \$1.25.

Peas—New Jersey, 30c. per peach basket; Maryland, very few arrivals, selling at 60¢@80c. per one-third-barrel basket.

String Beans—North Carolina, green, \$1.25 @ \$1.75; wax, 80c. @ \$1 per one-third-barrel basket.

Tomatoes—Mississippi, per carrier, 80c. @ \$1.25; Florida, per carrier, 90c. @ \$1.40.

Potatoes are holding very firm, owing to the strong demand. Fancy Rose, \$3.50 @ \$4 per barrel; North Carolina, \$3.25 @ \$3.50 per barrel. New Jersey—Of these six carloads have been received, which sold at \$2.75 @ \$3.25 per barrel; seconds, 2¢@3¢.25 per barrel.

Squash—White Bush are very plentiful and sell well at \$1.50 @ \$1.75 per barrel.

Muskmelons—Florida, \$1.25 @ \$1.50 per one-third-barrel basket and go very slowly. This is a very poor market for melons that are shipped green.

Watermelons—Florida are arriving in large quantities and sell fairly well at from \$25 @ \$30 per 100; second size, \$15 @ \$20.

Boston.

This market is so well filled with fine fruits that hothouse stock is a little at discount. We find grapes dull at 75c. @ \$1.50 per pound. Hothouse peaches cannot be found. Some South Carolina stock is offered at \$2.50 @ \$3.50 per crate.

Gooseberries seem to be reaching this city from everywhere, bringing all the way from 4¢@8c. per quart.

Strawberries arriving from New Jersey, Hudson River, Connecticut and Massachusetts. Some fancy Marshalls, grown near by, taking only fifteen berries to fill a quart, easily brought 50c. on Monday. They were the largest and finest ever seen in this city. Bubach is finding very good sale at 25¢@30c. per quart. Fancy Jersey Gandys, 18¢@15c., while common varieties bring all the way from 8¢@12c.

North Carolina huckleberries meet very good sale at a range of 10¢@15c. per quart, according to grade. North Carolina blackberries take as wide a range and fetch 11¢@15c.

Cherries, mostly from Western New York, packed in the so-called ten-pound basket, selling 40¢@50c.

Mushrooms are very scarce and easily bring 75c. per pound.

No celery in the market; light demand for radish at 50c. per hundred bunches.

Georgia watermelons go easily at 30c. apiece; no muskmelons; but few would find good sale.

Asparagus selling 75c. @ \$1 per dozen. Readers must remember that Boston uses at this season pound bunches, practically one-third the size of that used in New York City.

Native beets bringing 2½¢@3c. per bunch; Florida stock not wanted.

Lettuce is druggery, 50c. for boxes holding three dozen heads.

Very fine under-glass cucumbers offered, 3½¢@4c. each; Georgia cucumbers bringing \$1 bushel crate.

Savannah marrow squash just appeared \$2.50 per barrel. Some Virginia summer squash as easily placed at \$1.25 half-barrel basket.

Egg plant moving fairly well, \$1 @ \$1.50 per bushel; old carrots quick demand, \$1.25 per bushel.

Egyptian onions bring \$2.75 per bag, while Virginia stock sells for \$1.50 in the half-barrel basket.

Tennessee sweet potatoes finding good sale, \$1.25 @ \$1.50 per bushel.

Native peas, \$1.50 bushel; Jersey poor and not wanted.

Virginia wax beans in half-barrel basket selling for \$1; same price for green, although the green stock is in much lesser supply and consequently bigger demand.

Home-grown radishes, 15¢@25c. per dozen bunches; under-glass tomatoes quite plenty, 10¢@12½c. per pound, while Florida stock brings about \$1.25 for the six-basket carrier, with Mississippi stock bringing 85c. in the four-basket crate.

Porto Rico pineapples, 25¢@30c. apiece, with Indian River counting 24 bringing 13c.; while those counting 30 as easily bring 8c.

Russet apples sold every day at \$4 per barrel. Some green Virginia stock showed up this morning, the best bringing \$2.25 per half-barrel crate, while some other stock would not bring \$1 for the same sized package.

New onions, 4c. per bunch; new carrots generally 5¢@6c. per bunch; some fancy more easily bring 10c. per bunch; new turnips, 2c. per bunch, while 30c. per bushel is all that can be obtained for spinach.

Little parsley wanted every day at \$1.25 per bushel.

Virginia Cabbage, \$1.50 @ \$1.75 crate.

Hebron potatoes, 50c. bushel; York State varieties, 40c. Old stock caught a big slump; receipts large and every one wanting to send to Boston.

Virginia new beets, \$2.75 @ \$3 barrel; common, 2¢@2.25.

Obituary.

Hon. Joseph S. Fay.

Hon. Joseph S. Fay, the well-known horticulturist and philanthropist, of Wood's Holl, died at Cambridge, Mass., Sunday, June 13. The deceased was 84 years of age and for many years since retiring from active business pursuits had spent his summers at his seaside home, where forestry and horticulture were carried on to a large extent and on a thoroughly scientific basis. He was a member of the American Forestry Congress and the Massachusetts Horticultural Society, and a constant exhibitor at the shows of the latter, roses, pansies and hollyhocks being among the specialties he most admired. He was a man of great wealth and was charitable, genial and kind. Among the monuments which will for many years recall his memory to the present and coming generations is a fine forest of 100 acres at Wood's Holl, which Mr. Fay successfully grew from seed that he planted. The rose garden at Wood's Holl is a far-famed spot, whence came annually some of the finest blooms ever seen.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 665, ALBANY, N. Y.
Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 2 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America.
A printed list sent on application. Sales made at reasonable prices.

E. CORNING.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price with list extra discounts. All of our pots from 7 in. and upwards have our Patent Enamel Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Built Pots.
THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
{ Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.
Mention American Gardening when you write.

"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address THE AMERICAN JADOO CO.

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

Diplomas and Certificates



HORTICULTURAL SOCIETIES,
FOR FAIRS, INSTITUTES,
GARDENERS' CLUBS, ETC.

These should be selected well in advance of the date needed, and secretaries of above should send now for our set of samples, all of which have been especially designed by first-class artists and engravers for the purpose. Owing to the wide demand for these samples and their expensiveness, we will mail the set of five, postpaid, for \$1.00; money refunded on return of samples, or placed to credit of order, as directed. One single sample sent free on application if the writer will explain the exact purpose for which it is wanted.

A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.

HEADQUARTERS FOR ALL PRINTED SUPPLIES.

Almost an Out and Out Present to You.

The Three Best Known Cannas are

Austria, Italia and Mrs. Fairman Rogers

Your choice of one of the above three Cannas sent, postpaid, for one new subscription. The set of three for two new subscriptions. Grown in N.Y.

With the introduction several years ago of the famed Madam Crozy type of Canna began the era of popularity for this class of plants, until now it has become the most popular of all bedding plants and the possibilities for further development of this species is yet far from being exhausted. Its great claim for popular favor is the extreme ease with which it can be grown, thus making it at once everybody's plant; also in its ready adaptability to our climate.

MRS. FAIRMAN ROGERS.

One of the finest American Cannas, was originated at Newport, R. I. This plant often produces fine branched flower heads, and while in texture, color and markings the individual flowers excel the standard of Mme. Crozy, their superiority is again evidenced in the fact that each branch presents a rounded head which is one dense mass of bloom. The flowers will measure 4 inches across each way, and the segments (without the claw) measure $2\frac{1}{2} \times 1\frac{1}{2}$ inches. The color is a grand scarlet, bordered with a narrow band of gold. The compactness of the flower head, rich color, and the well-flowered spike, complete its great value as a bedder. It grows to a height of three feet under liberal treatment.

ITALIA and AUSTRIA.

Among the many sterling novelties which have been added to the already large list of Cannas during this last three or more years, there are none that form so distinct a break from existing forms, and which have at the same time proved such valuable acquisitions to our list as the above.

In habit, color, and style of growth and foliage, they resemble a good deal the species *Canna flaccida*, which is said to be one of the parents; the texture of the bloom is also very much the same as in that species, and it is that feature which is decidedly the weakest of either novelty. This lack of texture causes the floral segments of each to bleach out in the early season if grown out of doors in a position exposed to the strong sunshine at that period.

This, however, is compensated for by the fact that each morning while the spike lasts (and it usually carries seven to nine blooms), one is treated to a new, clean, bright bloom of the most gorgeous and exquisite coloring imaginable. Austria is of the clearest canary-yellow, slightly speckled with a few dots of red in the throat. Italia as flowers of similarly hued yellow, dotted and emblazoned with a clear scarlet which adds wonderfully to the effect of its gorgeous coloring.

The spikes and flowers act somewhat differently from other Cannas in their habit and style of expansion, behaving in reality like the Gladiolus, and being arranged on one side; there is one expanded bloom and two partially open, and when the older bloom is ready, it drops clean away, leaving no trace of dead or wilted flowers; the reverse of which is a source of annoyance with too many of our good Cannas.

The largest individual bloom of Austria with us measured five and one quarter inches across, and the average on all the flowers we should judge was about four and three quarter inches. One plant put out in June from a five inch pot into only eight inches of very poor soil, without any special treatment, produced eleven spikes of bloom, 33 growths, and attained a height of 43 inches. This wonderful development on our poor soil, when compared with others grown on equally poor and still more sandy soil, goes far to prove that these new types do not need a very rich soil.

Austria and Italia were also found to stand wind storms better than the ordinary kinds.

As a cut flower they are unique and good keepers. They have been aptly named the "Orchid-flowered" Cannas.

One Plant for One new subscription; the set of Three Plants for Two new subscriptions.

SPECIAL TO OUR REGULAR SUBSCRIBERS.

To those of our readers whose subscription has just expired, or is about to expire, who will send us a prompt renewal (adding fifteen cents to pay for packing), we will at once forward one Canna, their choice of either AUSTRIA, ITALIA, or MRS. FAIRMAN ROGERS, the three great Canna novelties of the season.

THIS OFFER EXPIRES JUNE 30.

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.



**OFFER
No. 66.**

Every Lady is Interested in the AMERICAN KITCHEN MAGAZINE

The title tells the story, and although the Magazine is One Dollar a year, we will send it, in club with AMERICAN GARDENING, for only \$1.50. Or will send it free one year for two new subscriptions to A. G. at One Dollar each.

AMERICAN GARDENING, P. O. Box 1697, New York.

FARMERS
You can make money by selling and using **HOLDFAST Corn Binders**, used on every shock. Pull and it's fast. Ties itself. Costs less than string. Never wears out. Thousands sold in a town. Good profits. Get town agency. Samples, 3 sizes, mailed 5 cts. **TIE CO.**, Box 351, Uxbridge, N. Y.

Mention American Gardening when you write.

UNIVERSAL INSECTICIDE
For Flowers, Trees and Animals.
Recommended and in use by the foremost Florists and Nurserymen in the land. Sample 6 oz. packages sent by mail upon receipt of 25c.
Rose Manufacturing Co., Niagara Falls, N. Y.

Mention American Gardening when you write.



Harvest Your Wheat For A Cent An Acre.

This amount invested in a grain cradle, with plenty of time, (any old time will do,) will enable the farmer to harvest his crop with less outlay than any other method. The "machine" should be painted a bright red, and ornamented with gilt stripes, also have an attractive name. After cutting his own, he can coin money by cutting wheat and building fence for his neighbors.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.
CYPRESS SASH BARS
UP TO 35 FEET IN LENGTH OR LONGER.
GREENHOUSE
AND OTHER BUILDING MATERIAL.
Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.
THE A. T. STEARNS Lumber Co.
Newport, Boston, Mass.

Mention American Gardening when you write.

THREE NEW CANNAS. 40 NEW IRIS.

BAY TREES,
HARDY PALMS,

AND EVERYTHING FOR
DECORATING.

SIEBRECHT & SON, 409 5th Ave., New York.

Mention American Gardening when you write.

GLASS For Greenhouses, Grap- eries, Conservatories, GLASS Hothouses and Hotbeds. VANHORNE, GRIFFEN & CO.

Importers of French Glass.

19, 15 & 17 LAIGHT ST., AND
62, 64 & 66 VARICK ST.,

NEW YORK

Mention American Gardening when you write.

A One-Horse Farm Wagon The "PIQUA" is the Best.

IS SOMETHING EVERY

Horse Owner Needs.



Hollow Steel Axle,
Double Box, Spring
Seat, Easy Riding
and Light Running,
and needs only ONE
Horse to Pull it. . .

Made in Two Sizes,
1200 Pounds and .
2000 Pounds . .
Capacity. . . .

WRITE FOR PRICES.

use on a Small Farm, in the Garden, or about a Country Place.
PIQUA WAGON CO., PIQUA, OHIO.

Mention American Gardening when you write.

Offer No. 81.

FOR TWO NEW SUBSCRIPTIONS We will send, postpaid, this wonderful Combination Tool needed in every garden and by every Gardener and Fruit Grower.

**KELLY'S PRUNING SHEAR
AND GRAPE PICKER**
A NEW DEPARTURE IN
PRUNING AND GRAPE
SHEARS.
A COMBINATION SHEAR AND
HOLDER WORKING WITH ONE MOVEMENT
OF THE HAND. IN TRIMMING ROSE OR PICKING GRAPES THE
HAND DOES NOT COME IN CONTACT WITH THEM.

A PRUNING SHEARS, FLOWER GATHERER and GRAPE PICKER ALL THREE IN ONE.

AS A FLOWER GATHERER.—In picking flowers or removing dead leaves they are held firmly by the shears until released by the operator.

AS A GRAPE PICKER.—In picking Grapes the bunch out off is firmly held by the shears and placed in the basket without touching them with the hands, preserves the bloom on the grapes; leaves left hand free to hold up the vines or basket.

IN ADDITION.—The holders do not extend to the point of the shears, thereby facilitating the trimming off of small branches, leaves and defective grapes.

Every one who gathers flowers or fruit has been annoyed by the difficulty in catching the fruit or bloom after it was severed from the parent stem. With this instrument there is no danger of fruit or flower dropping to ground, or of polluting trees, vines or plants when clipped from high places.

Every pair of Shears mailed out by us is made from High Grade cutlery steel and fully warranted, and should one be found defective, when used for the purposes advertised, we will replace. Patented March 16, 1897. When not wanted as a premium these shears can be obtained from the publishers of AMERICAN GARDENING, postpaid, for \$1.00.

AMERICAN GARDENING, P. O. Box, 1697, NEW YORK.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 132.
COMBINED SERIES VOL. LI.

NEW YORK, JULY 3, 1897.

6 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Berry Picker's Card.....	473	Gladiolus from Seed,	473	Orchid Collections.....	474	in America.....	475	Illustrations.	
Boston, Mass.....	476	Raising.....	473	Peas.....	471	Tomato Rot.....	471	Berry Picker's Card.....	473
Budding.....	473	Hail Insurance.....	474	Peaches, etc.....	473	Vegetable Garden.....	471	Nymphaea gigantea.....	471
Canna iridiflora.....	473	Home Plot, The.....	480	Poultry Notes.....	480	Water Garden Hints.....	476	Victoria regia var.	
Chrysanthemums.....	473	Market Reports: N. Y.,	473	Private Gardeners.....	476	Water Lilies.....	470	Randii.....	469
Floral Notes.....	473	Boston, Phila.....	476, 481	Readers' Notes.....	475	Watering During Sun-		Water Lily Pond at W.	
Fruit Garden.....	473	Nomenclature.....	475	Roses, Plea for Garden.....	472	shine.....	475	Washington.....	477
Fruits of Experience.....	471	Onions.....	471	Strawberries, English		Window Garden, The.....	480		



FIG. 131.—VICTORIA REGIA VAR. RANDII. (See pages 470, 476.)

Water Lilies.*

The water lily is given the botanical name *Nymphaea*, derived from the Greek word "nympha" or "naiad," water fairy, alluding to the growing place of this family. Its geographical distribution is most general in the northern hemisphere and in the tropics. The water lily has been known since the earliest time of horticultural history. The ancient Egyptians considered it sacred and called it *Lotus*. It was the symbol of the Nile, a river by them regarded as sacred. It was also engraved on the columns of their temples and was used as an essential part of their religious ceremonies. Aps, the holy bull of the Egyptians, was adorned with wreaths of lotos flowers, and the Egyptian goddess, Isis, is portrayed, holding a lotus flower in her hand.

From a botanical point of view the lotos, or, as it has been named in modern time by Linnaeus, "*Nelumbium speciosum*," the water lily from the Nile, differs from *Nymphaea* by its manner of growth and by the setting of its fruit. Its fruit reminds one very much of the rose of a watering pot, whereas the fruits of the *Nymphaea* resemble closely the fruits of the species belonging to the families *Ranunculaceae* and *Papaveraceae*.

It is not my intention to relate the legends of this family nor do I propose to cite any scientific botanical examinations regarding water lilies, for my capacity as well as my pen is too weak, but instead of that I will tell you, from my own experience, how these charming, magnificently colored and sweet-scented plants are cultivated.

Its cultivation with us has gone rapidly forward of late; the methods and the locations, no matter how different, have shown good results. We have seen right here in this hall perfectly shaped flowers and leaves exhibited by such clever cultivators as Messrs. W. Tricker, J. Bryden and L. W. Goodell, and from their productions we can see for ourselves that the cultivation of water lilies is not impossible in the New England States.

Suitable Soil.

The most suitable soil for water plants in general, with the exception of *Nelumbium*, is a rich loam and the best rotted horse or cow manure mixed together in equal parts, with the addition of one or one and a half pounds of bone meal to each wheelbarrow load of soil, and we must not omit seeing that the mixing is done thoroughly. *Nelumbium* loves heavy loam or heavy, greasy clay, well enriched, as do all other water plants. They do not thrive and seldom or never blossom in sand or in soil strongly mixed with sand.

The planting can be made in natural or artificial lakes or ponds. Should the soil in such locations be poor or muddy, we must bring soil of such nature as has been previously mentioned, and to the places where we desire to place the plants it must be brought liberally. Supposing now that the bottom of the lake does not contain sufficient nourishing substances essential for the plants; place them in baskets, tube or large boxes and sink these, not more than three to six inches below the surface of the water, if your plants are of a tender nature; or if hardy ones lower them twenty-four to thirty-six inches.

Where Water Lilies May Be Grown.

If a lake or a pond, or a body of open water is not accessible, the planting may be done successfully in tanks made of brickwork and finished with cement, or in tubs or half barrels, or still better in large half hogheads. When tanks or tubs are used, and after the soil has been filled in, a layer of pure sand to the thickness of two inches should be put on top, to prevent the fertilizing substances, which have been mixed with the soil, from rising to the surface. When using tanks or tubs, it is necessary to see that they are exposed or built in places where they will receive a large amount of sunshine during the day, as this is one of the main points in successful cultivation. The tubs may either be placed on the ground, or they may be sunk partly or wholly. After the soil has been filled in and the plants put down, then comes the most important factor—the

water. Do not put in more than two inches of this at the most over the plants until they have made a visible growth, because deep water is of very little use. The water in the tubs must now and then be changed, to keep it from becoming stagnant. The best time to plant the hardy water lilies is from Spring to August, but the tender ones should not be planted before the middle of June, and not later than the 1st of July.

On the place where I am working we have a large artificial pond, about one acre in area. There are numerous springs, which make the water in the pond rather cool during the Summer, but in spite of this difficulty, I have had good success with the hardy *Nymphaeas*. The flowers may not have reached the enormous size of those which have been cultivated in warmer water, but this artificial pond gives me the advantage of a successful wintering of my plants, and during the four years I have had charge of this place I have not lost a single *Nymphaea* through frost. However, the hardy species must be set so deeply at the planting, that they are below the frost line—that is, 24 to 36 inches. The tender ones, that must be taken up in the Fall, I planted last year in a newly built, shallow pond, and planted them directly in the ground after suitable soil had been furnished, and I obtained better flowers than I expected.

Winter Care.

The winter care of water lilies is as follows: In the Fall, when the weather becomes cool, the tender species are taken up, and I have been in the habit of cutting off all the older leaves, and enough of the roots, so as to be able to plant them in tubs or large pots. These I have later placed in a tank that is built close to one of the greenhouses, and connected with the same by one heating pipe. This tank is shaped like a common hotbed, and is 30 inches deep, 40 feet long, and 5 feet between the inside walls, the sashes being 6 feet in length. The walls are made of stone, with a few layers of brick on top, and the bottom and sides are covered with cement. There is also an outlet pipe for the prevention of stagnant water. In this tank I can give the water the desired temperature, and the keeping of the plants during the Winter does not meet with any difficulties.

After the plants have been planted, to keep them alive I sow in the muddy soil in December my water lily seed, and when early Spring comes I have my young plants raised from the seed, strong and healthy. In a tank of this description the temperature of the water must never be allowed to fall below 65 degrees Fahrenheit.

Thus you will find that no difficulty is to be met with in the wintering of older specimens, but for you, my fellow-workers, who have not got this opportunity, I take the liberty of quoting from an article by Mr. Tricker, published in *Garden and Forest*, No. 295, October 18, 1898: "In the Fall, the tender varieties call for our immediate attention. Such plants as are grown in tubs can readily be taken from the tanks or basins and placed in a greenhouse; the largest leaves, that cannot be placed on the surface of the tub, may be cut off. The tubs should be set where they will receive a fair amount of light, and should be kept filled with water. There should be no haste in drying off the plants, since the decreasing light and temperature will allow the plants to rest naturally. Such varieties as *N. devoniensis*, *N. dentata*, and others of the lotus type will form tubers around the old root as the plant dies off, which should be carefully looked after and put into pots of sand or moss, and kept moist and in a moderate temperature. The tubs can be emptied and stored away. These tubers will keep sound and good until April, when, if planted, covered with water and subjected to higher temperature, they will make strong plants to put out again the following June. The case is not the same with *N. sarsibarenensis* or with the stellata type. These do not form side tubers, as the lotus varieties do, and if the plants have grown large and strong, and have flowered freely during the past Summer, the greater will be the risk and difficulty in keeping them over. Under the same conditions as the lotus varieties, they retain their foliage a much longer period, provided they have not received a chill or violent check; otherwise

they will not. These should be kept in tubs filled up with water as long as they retain live, green foliage. If new leaves appear, you will doubtless find, as the season advances, that the plants will show signs of active growth and give assurance that they will live on and take their places again another Summer. Plants grown in large pots or boxes can more readily be taken and placed in tubs or half barrels of water, and kept under the same conditions as above mentioned.

"The hardy varieties, if planted out, will be best left alone, provided there is sufficient water above the crowns of the plants, so that frost cannot reach them. Where the native *Nymphaeas* will grow, other so-called hardy varieties will survive under the same conditions. In shallow tanks, where there is danger of the masonry being broken by the frost, this should be covered with branches, leaves or salt hay after cold weather sets in. This is preferable to taking the tubs out and storing in a cool cellar or other building, for, keep the plants cool as we may, it is very difficult to hold them back in the Spring, and by time the tank is ready to receive them the plants will have made considerable growth, which is very apt to get out of and give them some check. This will not happen to plants left out all Winter in the tank. Where the Winters are not severe, and not more than 12 to 15 inches of ice are formed, it is not necessary to cover tanks all over if they are more than twelve feet in diameter. Branches of trees and salt hay on the rim are sufficient to save the masonry, which is all that is necessary. Plants grown in tubs and not submerged during the Summer season, must of necessity be wintered in cellars or other buildings. A good covering of sphagnum moss will help to keep the plants in a uniform condition and retard growth in Spring."

I now wish to render a short list of hardy water lilies: *Nymphaea odorata* and *N. o. minor*, our common water lilies; *N. o. rosea*, the pink water lily; *N. alba*, *N. alba rosea*, *N. alba candidissima*, *N. odorata carolinensis* (light salmon in color), *N. odorata sulphurea*, *N. o. carnea*, *N. Laidkeri rosea*, *N. pygmaea* and *N. pygmaea helvola*.

There is another group of hardy water lilies, namely, the *Mariliaceae*. This group, through hybridisation, tried first in the year 1879 by Monsieur Latour-Marliac, of Temple-sur-Lot, France, has given us many beautiful flowers, more perfect in shape and color than those we have had before. Time will not allow me to mention the different crosses, but I will present to you a few of these exquisite nymphs, as, for example: *N. chromatella*, yellow, albida, rosea, Robinsonii, fulgens, flammea, ignea, etc.

Tender Lilies.

Now let us turn our attention to those gems from the tropics which thrive well during the summer months in our New England climate. Among them we have the night-blooming or the *Lotos* type, *N. lotus*, *N. devoniensis*, *N. dentata*, *N. rubra* and *N. Sturtevanti*, and of those which open their flowers in the daytime, *N. sarsibarenensis*, *N. s. stellata*, *N. s. rosea*, *N. sentifolia*, *N. gracilis*, and *N. gigantea*, the blue lily from Australia, one of the most beautiful and at the same time the most difficult to cultivate. Various new varieties have started through these, among them Mrs. Anna C. Ames and Eastoniensis.

Knowing how these nymphs or naiads, daughters of Neptune, desire to live a life somewhat different from that of the ordinary garden favorites, there is no reason why many people who have a little water space at their command should not grow at least the ordinary water plants which abound in our streams and ponds.

Are You Renewing.

To those of our readers whose subscription has expired, or is to expire with the close of this month, and who will send us a prompt renewal (adding fifteen cents to pay for packing and delivery), we will at once forward one canna, well established, their choice of either Austria or Italia, the two great novelties of the season. This is an offer without parallel, but which, if desired, must be applied for at once.

*Paper read by Carl Blomberg before the Boston Gardeners' and Florists' Club, April 6, 1897.

The Vegetable Garden.

Peas. Pick off all pods as soon as ready, whether required for use or not; pods should not be permitted to remain upon the vines until they are old or ripe, as, by so doing, the vines quickly become exhausted. Peas should now be plentiful, as the season has been peculiarly favorable to their growth. As soon as the crop is over, remove the vines and prepare the ground by manuring and dig or plow deeply for sowing successional crops of spinach, turnips, carrots or for setting out winter celery.

Beets. Any spare ground that may be vacant can be utilized for a sowing of these for fall use; an application of a good grade of fertilizer will be beneficial and quicken growth.

Brussels-Sprouts, Cauliflower, and Cabbage may be transplanted whenever the weather is favorable, i. e., cloudy, with rain in prospect. If no plants are at hand, a few seeds may be sown in hills 18 by 30 inches apart, the seedlings to be thinned out when large enough to one best plant in each hill. This is a very satisfactory method of

already advised in previous issues, they should be comparatively free from the pest. However, if a few plants are seen to die off and if, on being pulled up by the bulbs, are rotten at the base, maggots will be present, and should be checked. Last year I gave the following treatment with very gratifying results: Into a barrel containing 50 gallons of water, we dissolved 50 ounces of sulphate of ammonia; then with a small hoe, drills were opened half an inch in depth and quite near the rows, the solution was poured into this drill from watering cans, and in this way the ground near the bulbs was thoroughly saturated. This will destroy all the young maggots that it reaches, and the onions by being fed with the soluble ammonia will commence to grow vigorously, the tops taking on a dark green color, and fine onions will result. Care should be taken not to give them any more free ammonia in any form, as they would be liable to grow thick-necked.

Potatoes should now be watched daily, both for bugs and the blight, and on the first appearance of either, promptly check, or bad results may follow. As



FIG. 132.—*NYMPHÆA GIGANTEA*. (See Pages 470, 476).

growing these vegetables, especially in dry soils, or hot, dry seasons.

Kohlrabi. Whenever turnips do not succeed, sow now seeds of kohlrabi. It is a near relation of the turnip, with a much stronger constitution, and is peculiarly free from attacks of insects to which the turnip is so much liable; it is a first-class substitute when used young, and a desirable vegetable.

Tomato rot and blight may be checked by spraying with the Bordeaux mixture; pick off all infected fruits, and, instead of allowing them to remain on the ground, as is usually done, carry to a fire and burn them, thus destroying the germs of the disease. This is the only way to rid a garden once affected with the disease, as frost will not destroy, and the germs will remain wherever the attacked fruits are left carelessly around, or taken to the rubbish heap, to be carried back to the garden again in the manure.

Onions at this season are frequently attacked by the onion maggot; if the young plants were given the treatment

soon as the blight can be detected by the black appearance of the leaves, use the Bordeaux mixture, with four ounces of Paris green added to every 50 gallons. This will check both troubles. The whole should be thoroughly mixed and applied in a fine spray, covering every particle of the vines. This operation to be repeated three times at intervals of a week or ten days, or immediately after heavy rain, that may have washed away previous applications.

W. M. EDWARDS, Conn.

A Mosquito Bite is an Accident.

The Court of Appeals, sitting in Louisville, Ky., recently decided a suit against an accident insurance company brought by a woman for \$50,000 for the death of her husband, which resulted indirectly from a mosquito bite. The lower court held that the bite was not an accident in the meaning of the word as used by insurance companies, but upon appeal the plaintiff got peremptory instructions in her favor.—Medical Record.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Berry plants should be cultivated often; it warms the soil and retains the moisture.

An erroneous notion—The larger the tree from the nursery the sooner in bearing.

June 6—Looked over the Michel's early strawberry rows in an old patch three years in bearing, and was surprised to find fine berries of large size for this variety. The rows were as productive as the last spring set plants; hardwood ashes were freely scattered over the rows last season.

Hydrangea paniculata grandiflora plants which were cut back severely early last spring are making a fine, vigorous growth.

Layer those new strawberry runners not closer than four inches apart in the matted row, if you wish to have nice large fruit next season.

If you have the strawberry leaf roller, study every method to eradicate it. It is a curse to any strawberry patch.

Do you nip the terminal bud in nipping black raspberries? Or do you wait until they are a large cane and break off a part of it? The former plan is much the superior one.

What large raspberries grow on the rows which were heavily mulched with straw and cornstalks, and the berries are so glossy and clean!

If you have not straw or marsh hay to mulch with, use the "dust mulch" by cultivating only an inch deep and often.

I have come to the conclusion that when a soil becomes hard and lumpy it is time to put plenty of barnyard manure on it: Commercial fertilizers will not do for this; there must be plenty of vegetable mold in the soil.

Barton's Eclipse strawberry is doing finely this year.

Outside of the fruit belt peaches in Michigan will be a poor crop this year.

Which are the best small fruit plants, from black soil on the low land or from the high land? Who will discuss the point?

Severe pruning and liberal manuring I find make the old raspberry plants productive.

My observation is that different soil and climate make considerable variation in the quality of grapes.

If you think you have your berry plantation "down fine," visit your neighbor fruit-growers and possibly you will find that some of them are ahead of you; then you can go back home and see many points which being attended to will put your place in still finer shape.

If in cultivating we "bark" a tree, a clay mortar is made and bound over the wound with burlap to hold it on. This is generally a success in repairing the wound.

June 19—First berries of Parker Earle strawberry ripening, and fine ones they are! This variety has a strong stem and holds its fruit well up from the ground.

Don't sow any more clover until you first put a little plant food in the soil for the rootlets to feed on.

A regular daily route over which the berry wagon runs in the city to supply fresh berries to regular customers, I find to be most profitable.

To our best pickers we give a cordial invitation to help us next year.

We would rather the large strawberries would be at the bottom than on top of the box, but would prefer to have the top berries arranged with tips up and hulls down; it makes the berries appear much nicer and does not exaggerate their size.

We set out less than a dozen of a choice new variety of raspberry and are anxious to grow all the tips possible from them, so we put from a peck to a half bushel of ashes around each plant on the surface of the ground, but by the looks of one of the plants we overdid the matter a little.

CHARLES NASH.

A Plea for Garden Roses.*

[Continued on page 449.]

The roots should be spread out and some fine soil put into the hole over them, firming it well, then adding more, and so on until the hole is filled level with the surrounding surface. Do not heap it in carelessly and then firm it, as the chances are that it will be loose at the root, where above all it should be firm.

After planting is completed give each plant a good watering, and it is better to leave a saucer-like depression around each plant, so that the water will descend to the very center of the plant. If many plants are to be set out, be sure that the roots are not left exposed to the sun while waiting to be planted; a very short exposure will rob them of much vitality. Keep them covered with a bag that is saturated with water, and it is good practice to dip the roots in a tub of prepared puddle before taking them out to be planted. What is said here about roots, watering and planting applies to dormant Roses on their own roots as well as budded or grafted ones; in fact, it applies with even greater force.

If the plants are pot-grown, rub off the "shoulder" of the ball of soil, tap it gently with the knuckles or a light stick, to loosen it slightly, and then insert it in the ground a little deeper than it was in the pot, firming the soil well around it afterwards, and water after being planted.

Pruning.

An important operation connected with planting is pruning, which is better done immediately after being planted. A pruning shears is best for this purpose, as, if a knife is used, the plant is likely to be loosened in the soil. Only general instructions on this all-important operation can be given. Right here it is well to say that, if any of the roots are bruised, they should be cut away to the sound part, and if any are of immoderate length they should be shortened back before planting. The strength of a shoot will determine how far it should be cut back; if very strong, cut it back to four or five eyes from the main stem; if weak, to the second or third eye, and let the topmost eye be on the outside of the shoot wherever possible. If the branches are crowded and the shape of the plant necessitates it, drive in a sharp-pointed stake—not too large—and spread them by tying, or cut enough away to insure against overcrowding as they grow. These directions apply mainly to Hybrid Perpetual Roses. The Tea or Monthly Roses only require a shortening back of the main shoots, severe in the case of soft, immature wood, and less so on well-ripened shoots, and the cutting completely away of all light spray wood, which will only produce foliage and no flowers.

When the plants bloom and the flowers are cut off, either for use or after they fade, it is better to cut back to the second eye, as they are more apt to flower again than if a greater portion of the flowering shoot was allowed to remain on the plant.

Distance to Plant.

The distance at which to plant varies somewhat, according to the class and variety, but as a general rule it is safe to say that the Hybrid Perpetuals may be planted eighteen to twenty inches apart, Hybrid Teas fourteen to sixteen inches, and the Tea or Monthly Roses twelve inches. The climbing Roses, if planted on a trellis or fence, should be planted about six feet apart.

Own Roots vs Budded Rooted.

The much-mooted question of the relative value of Roses on their own roots and budded Roses I would answer by saying: Whenever you can get Roses on their own roots, take them in preference to the others. Some sorts, however, can hardly be had on their

own roots, such as the Baroness Rothschild type and the Persian Yellow. Some of the Hybrid Teas do better on brier stock, but all the Tea or Monthly Roses do well on their own roots, and can be obtained easily in this country grown in that manner.

Many people prefer budded Roses because quicker results can be obtained, and where the grower keeps a careful watch for "suckers" they are just as good, assuming that they are budded low and properly planted, but too many of the cheap Roses vended by itinerant dealers, auctioneers and the large department stores are the work of cheap labor, budded high on stocks that have never been disbudded and are a very poor investment for the planter. Better buy from some reliable grower who knows what a good plant is and has a reputation as a grower to lose. If your watch wants mending, you don't take it to the blacksmith.

But pot-grown plants, although costing more at first, are cheaper in the end, for the reason that not one in a hundred will die if properly planted, while there is always a percentage of loss under the most careful planting with dormant Roses. The loss is always greater where experience is lacking, and therefore the beginner should always get pot-grown plants. It is only about two weeks ago that an acquaintance living near me asked me to stop and see his Roses. He looked ruefully at them and asked me when they were going to start. I replied: "Probably when the Keeley motor or a successful air-ship does." They were as dead as Julius Caesar and were probably dead when he bought them at a bargain from a street merchant. "Beware of a great pennyworth!"

If bloom is desired the first year—and it is usually desired the first minute and every minute thereafter—two-year-old plants of the Hybrid Perpetual and Hybrid Tea and climbing Roses should alone be planted. Young plants of these classes will make good blooming plants the second year, but will not bloom the first. Even in the Teas, or monthly section, it will pay to get two-year-old plants, as bloom will be obtained sooner and in greater quantities. But even the smallest plants in this section will bloom the first year. Plants from three-inch pots, rooted early the preceding fall and kept at a low temperature during the winter, will give splendid results; but beware of the long, slender one-stem plants that have been forced to get length at the expense of vitality.

Care After Planting.

When the Roses are planted then it will not do to fold your arms and let Nature do the rest. She will "do" it to be sure by sending up weeds and sending also various animals, called bugs for brevity's sake, to partake of the feast you have so carefully prepared for them. These uninvited guests must be ejected and some means will be suggested later on. The insects and diseases which attack the Rose (and other plants as well) are usually the effect of a condition and not the cause. Troubles of this kind rarely attack healthy and vigorous plants. It is the weakened, sickly plants which are the victims. The best remedy, then, is prevention. Keep your plants in good health by a little care and attention, and there will be little trouble from these pests.

Ultimate success depends in a great measure on the care given to the plants after planting. The soil should be stirred frequently with a fork, hoe or hand cultivator, so as to keep it mellow, as well as to keep down weeds. This is particularly necessary during dry weather, as ground which is frequently cultivated will be found to retain moisture far better than that which is allowed to become baked into a hard crust; in addition to this it induces a development of young roots close to the surface. Care must be taken, however, not to hoe so deeply as to injure the young roots.

Another important point is to cut off all the flowers which are past their prime, as not only are they unsightly, but they tend to weaken the plant by forming seed pods. By removing them the strength which would otherwise be wasted goes to form new growths, thus increasing the number of blooms. If a good sprinkling of bone meal is worked into the soil about the middle of June it will prove of great benefit.

Winter Protection.

The Tea or Monthly Roses are not entirely hardy where the thermometer falls 25 degrees below the freezing point, so that protection is absolutely necessary to them. The best way to do this is to throw up the earth around the plants, a foot or so, and cover it with well-rotted stable manure, then bend the branches down and fasten them securely within three inches of the ground, tying them to stakes driven in for that purpose, or tying them to each other if feasible. Then spread dry leaves or rough litter over them to a depth of say six inches. This should not be done, however, until severe cold weather sets in, so that the foliage is off the plants and they are thoroughly ripened, which is usually about December 1 in this latitude. This covering should not be taken off until all danger of severe frost is over, say about April 1. As soon as the ground is free from frost and it is dry enough to cultivate, the portion that was thrown up about the plants and the manure which was placed on it should be leveled off, the ground cleared up, necessary pruning looked after before growth sets in, and then the beds are ready for another season's blooming.

These directions as to covering with leaves or litter and bending down the branches do not apply to the hardy roses, but that portion of them relative to throwing up the earth and putting on manure does. As mice are apt to find a winter's shelter under the leaves or litter and eat the bark off the roses, poison traps should be laid for them. Throwing up the earth and covering with manure are the most essential features of these recommendations, because if the crowns of the plants are preserved in the Tea section, they will bloom well from the new growths even if the tops are killed off. One thing more in cultural instructions and I am done. During long-continued dry spells be sure that the beds do not suffer for water, and when you water at all do it thoroughly, no mere surface sprinkling, as it only aggravates the plants without benefiting them. Put the hose on and let it run until the bed is saturated to the roots of the plants.

(To be continued.)

Cleveland, O.—This district has seldom experienced a more backward spring than this year. Cold, blighting weather has continued through the month of May, accompanied by very cold nights, with intermittent frosts, threatening, and in some cases destroying, small fruit and the more tender vegetables. The damage done can be estimated only by occasional reports from growers whose localities were particularly affected. Almost incessant rains, too, aid in discouraging the grower.

For Peach Growers in Pennsylvania.

A bulletin upon the peach industry in Pennsylvania has just been issued by the Pennsylvania Experiment Station. It consists of thirty pages of readable text, interspersed with several good illustrations, and has sound, practical advice for the peach orchardist. The following subjects are briefly discussed: "The Peach Districts," "Selection of Soils and Locations," "Cultivation and Fertilization of Soils," "Pruning and Thinning," "Marketing," "Insect Enemies and Diseases of the Peach."

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 25c stamp.

*Paper read by Mr. P. O'Mara, at the Annandale N. Y. Rose Show, June 16, 1897.

Raising Gladiolus From Seed.

The ground should be worked well and deep, whatever the character of the soil, and as nearly level as convenient to avoid washing out, in case of heavy rain. Prepare, in all respects, the same as for any garden vegetable; sow the seeds thickly in rows, sufficiently far enough apart to work with the hoe; cover the seeds with fine soil, half an inch deep. Then cover the bed with newly-cut grass, fine hay, or, what is better, excelsior, which will exclude all the sun. This will keep the soil moist and prevent baking, two essential conditions. If the seed is good and the conditions are favorable, the plants will appear thickly in from two to three weeks. When well up remove the covering, and at all times keep the surface of the soil well worked and free from weeds. Take up after the first frost, and keep the bulbs through the winter in the same manner as larger bulbs. Very many of the bulbs will flower the second year.

Much confusion exists regarding the propagation of the gladiolus, as many persons consider as seeds the little bulbs that form between the old and the new bulb, which they are not in any sense, other than that they perpetuate the species, and what is more important, distinct varieties; they are always true to parentage, while seedlings show every variety of form, color or variegation the species is capable of producing. These little bulbets, or spawn, as they are sometimes called, may be sown as early in the spring

by fall you will have a new rooted plant. Better let it alone until the following spring, then cut it from the parent plant and put in soft soil.

Don't have a poverty garden. Keep your tub of manure tea in an out-of-the-way place and apply liberally when the plants are budded.

Flowers of any kind don't ask how much money you have. They will grow and bloom beside the homeliest shanty in the world, as well as in the most beautiful ground if loving care be given them.

Don't say because there is so much shade in my yard I can't have any flowers. Some of the most beautiful flowering plants will do much better in the shade of the house trees than in a bright, sunny location. Plants that are especially adapted to the shade are Forget-me-not, Pansies, Fuchsias, Lily of the Valley and Begonias of all kinds.

One of the most necessary things in flower garden as well as the vegetable garden is thorough cultivation. Flowers cannot or will not do well with weeds and grass nor in soil that is as hard as the road.

W. B. LONGSTRETH, Gratiot, Ohio.

The Fruit Garden.

Strawberries.—Unintentionally, Wilson, the good old Wilson, was omitted from my last notes. I have it, and intend to keep it, if only to supply the demand for a good-sized, firm berry for preserving and strawberry shortcake.

these, though a tedious job if done well, will nevertheless pay either for home or market. If any one be inclined to doubt it, try for fun thinning just one branch on a large tree, trying to leave the single fruits.

Spraying is still in order, especially if many Flemish Beauty pears are in the collection.

Insect Pests.—A few warm days are bringing these into active life, and a watchful pair of eyes are called for in all out-of-the-way places.

J. HOLLOWAY, L. I.

Chrysanthemums.

Watering During Sunshine may injure some plants, but the man who waits till sunset to water his Chrysanthemums will most assuredly not be on hand when the prizes are being distributed next fall. Give water when the plants need it, which will be often, as the pots get full of roots. Plants should be sprayed over at least once every two hours on bright days. In no other way can fine foliage be got and maintained during the hot months; and what does a plant look like when all the bottom leaves are gone?

Late varieties may still be rooted and will come in for late work. They will throw terminal buds and if kept very cool will prolong the season quite a little. H. W. Riegan is a fine variety for this work.

Insects are numerous, but not too numerous to mention. Once a week, anyhow, plants should be dusted with tobacco dust or syringed with tobacco water to keep down the fly. Where the leaves are getting gnawed round the edges there is a caterpillar at work; watch and wait and he is bound to come your way. The first consignment of grasshoppers struck here last week and of course made straight for the Chrysanthemums. They are small as yet, but they, too, will bear watching. Insects come and insects go, but the work of extermination must go on; if not forever, at least till the blooms are fairly under way.

Potting Up.—Don't let those cuttings you intend to pot up into six-inch pots hang around too long. They dry out in half an hour and the foliage is bound to suffer.

Buds.—If any of the earlier rooted plants are showing buds pinch them out and let the plant break. The second shoot below the bud, if perfect, is generally the best one to keep, removing all the others. C. TOTTY, N. J.

Another Berry Picker's Card.

In our issues of May 22 and 29 we were enabled, by the courtesy of several of the leading berry growers, to give illustrations of the different check systems used. Recently the veteran New Jersey berry grower, Dr. J. B. Ward, of Lyons Farms, brought to our notice the ticket which he uses, and which he claims for simplicity and ease of calculation beats all previously introduced in these pages. The accompanying illustration needs but few words in explanation. A punch is used to cut out the required figure, and the number is seen at a glance; multiplication by the price alongside is very easy, and the cash value can be marked in the blank space at the right of each line.

Manure for Rubber Plants.

What is the best liquid manure for a rubber plant in a pot?—E. E. S.

A little weak cow or sheep manure water is the best for rubbers.

Ants.—On page 443 of American Gardening I see some inquiries about ants. Pouring hot water where the ants are will kill them; laying onions around will drive them away, as they do not like onions. I have tried both and with good success.—W. F. SCHMEISKE.

1c.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2c.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
4c.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
JOSEPH B. WARD															
5c.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
6c.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

FIG. 133.—A BERRY PICKERS CARD.

as the soil can be put in suitable condition. Prepare the ground the same as for peas, sow in the drills quite thickly, say one hundred to the foot of drill; cover with half an inch of fine soil, work in the same manner as recommended for the seed bed, only mulching is unnecessary.

Bulbets of choice varieties should have their outer scales taken off before planting, as it will greatly facilitate growth; in cases where they have been kept very dry, unless this scale is removed, not one in twenty will grow, while with this precaution not one in ten will fail to make a bulb.

Floral Notes.

In transplanting give the seedlings plenty of room, throwing away the surplus, or still better give them to your neighbors who are not so fortunate as to have the plants.

Every Monday put the soap suds around the trees, Dahlias, Asters and Balsams. You will be astonished at the results.

Remember, the price of Roses is constant attention. When the flowers are gone don't relax your efforts, but keep the plants growing; loosen the soil after the showers. Cut off a little piece from the under side of a stem; lay it down on some soft soil, fasten with a stone, sprinkle over some soft soil and

Budding.—The season is now open, and the different kinds of fruit may be operated upon from now until September, running in this way: Plums, Cherries, Pears, Apples, Quinces, Peaches. The locality and state of the trees regulating the proper time. In other words, the bark must separate freely from the stock, and the buds of the current year's growth be fairly plump.

Blackberries.—Any stopping of the young growth should now be done for the last time.

Peaches and Nectarines.—Finish the thinning of these, working from the bottom up, and if all the motions connected therewith are upward less wood will be broken off. If the fruit be plentiful, try to leave no two together, remembering that a fruit near a crotch is likely to be caught in it, as the swelling goes on, and trying to get a ripe peach from such a position is not conducive to a tranquil mind. Also keep away from the slender tips, as the weight of the fruit will probably break the twig, if the wind does not manage to rub or knock it off. The ripe peaches here mentioned are not those intended for shipping to market. They are somewhat of another texture and flavor when gathered.

Plums.—These, where heavy, should be thinned; at the same time be on the watch for black-knot.

Apples and Pears.—The thinning of

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 13, 1896.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 5154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

JUST a few weeks more than ten years ago there was inaugurated by a small body of earnest men, the Florists' Hail Association, the purpose of which was mutual protection, or rather insurance against the damage sometimes wrought to glass through hailstones. Coming into existence under a cloud of doubt from these very men for whom it was primarily intended—the florists—this organization has by sheer force of its merits made a steady and firm progress up to the present day, when, as its secretary informs us, it carries insurance on over eight and a half million feet of glass, and its risks amount to over half a million of dollars. The volume of business transacted can be gathered from the fact that within a recent period of ten days the association has experienced losses amounting to between \$1500 and \$1600, and had placed new insurance, within the same period, of over one hundred thousand feet of glass.

The average cost of hail insurance to a member who had been in the association for ten years, is 3-5 cents per 100 feet single

glass, and 4-5 cents per 100 feet of double-strength glass per annum.

We draw the attention of our readers to the existence of this association and its work, because we feel that there are very many owners of houses, whether private or commercial, who could, with much benefit to themselves, take advantage of the benefits of co-operative risk, yet who up to this time have not been made aware of the existence of such a body as the Florists' Hail Association, called Florists, because of the business of the originators, but the articles of incorporation compel the admission of all, and any who are owners of glass structures so fixed that the wind cannot cause breakage of the glass.

There are gigantic houses now being erected in certain localities for the growing industry of vegetable raising under glass, the capital invested is large, much is at stake, and the benefits of the Hail Association, at least so it seems to us, should appeal strongly to the proprietors. Again, in private establishments it is not an uncommon thing to find a range of glass that represents a considerable sum of money—and here again insurance should be taken. Hardly one man who has invested in glass houses but holds a fire insurance policy on his household furniture—yet fire is not an annual occurrence, and with due care its probability of happening may be reduced to a very low figure; but on the other hand no man can control the weather, a hail storm will come and let one do as he may, the greenhouse glass cannot be saved from being dashed to fragments in a few moments.

It has often been urged that there were certain "belts" of security or immunity from hail, but Secretary Esler has some amusing experiences (of others) to relate in this connection. When lately speaking in New York he said there had been some sad results of those who had considered themselves outside the supposed "hail belt," mentioning the cases of Pittsburg and Newport, R. I., as examples. He said there was only one region where glass was probably safe. It commenced at Clifton, N. J., and extended over Union Hill and on to Long Island as far as Flatbush; but some day these localities won't be out of the hail belt either.

Curiously enough one of the first to join the hail association was a man named William Springborn, of Dubuque, Iowa, whose place, previous to that time, had been riddled with hail on three different occasions. Strange to say, Mr. Springborn has paid seven different assessments and has not received a dollar from the association. Since he became a member his greenhouses have evidently been outside the hail belt.

Statistics show that the largest number of hailstorms within the past ten years had occurred in New York State. Missouri came next. New Jersey and Pennsylvania are pretty well up on the list, and have had their share.

It had been observed that more losses have been experienced in the West than in the East, so that the Western people have greater need of hail insurance than those located in the East; hence the association carries more insurance in the West. Whenever a storm occurred East, the society had been fortunate in having few of its members hit, those who suffered loss being uninsured. There were two or three exceptions to this rule, however, Philadelphia being a notable instance.

In addition to being without the hail belts, there were some who counted on freedom from the danger consequent on storms from the fact that their places were sheltered by mountains. This view had been rudely dispelled by experience, however.

As regards the resisting power of glass, Mr. Esler stated that small glass always breaks the quickest. Glass of 16x24 size is not nearly so liable to be broken as is size 12x14, or smaller; but when a big pane gets broken, the hail makes a larger hole, and that about evens up the matter. The speaker preferred the larger-sized glass; there was a good deal of resiliency to it which had the effect of throwing off the hail.

Quite recently, we have had correspondents address us on the subject of hail insurance, and also of providing against that other risk, fire. As regards the former the above remarks will serve as a reply; for fire in greenhouses, there is no insurance to be had at present. The subject is being agitated, however, and the future may bring forth fruit.

Orchid TWO famous, it may even be stated world renowned, collections of Orchids have been disposed of within the past five weeks, viz., the Corning collection at Albany, N. Y., and the Pitcher & Manda collection at Short Hills, N. J., the first named by private sales and the latter by private sale and public auction.

This statement on the first blush would make it appear that the love for Orchid growing was decidedly on the wane, but, fortunately, this is not proven by the distribution of the collections, nor yet by the prices obtained for much of the stock. On the other hand, we plainly see the signs of an increased demand for these gems of the greenhouse demonstrated by the fact that commercial men have taken up their culture for cut flowers in a manner heretofore unprecedented in the Orchid history of this country. But there is a difference; for the future the reason for growing Orchids will be strictly utilitarian, these self-same collections are now disposed of among those who will grow mainly for market work, and will ship the flowers instead of so many Roses or Carnations. Consequently, the species that answer this end the best, realized the most money, and those that are purely aesthetic, the least; less than 400 plants of *Cypripedium* insignis at the recent Dean sale realized nearly \$1000, and were purchased by the Dailedouze Bros., of Flatbush, L. I. A large part of the Corning collection went to Siebrecht & Son, New Rochelle, N. Y., and the Pitcher & Manda stock to Julius Roehrs, Carlton Hill, N. J.; Theo. Jones, Short Hills, N. J., and Lager & Hurrell, Summit, N. J., all trade men.

It is a noteworthy coincidence that when the collection which had cost Mr. J. R. Pitcher so much time and money to get together, had, unfortunately for him, to be disposed of, Dr. J. M. W. Kitchen, of East Orange, was ready with seven new houses to go into fancy Carnations and other plants, together with some Orchids. The opportunity thus presented to the Doctor, however, caused him to change his plans, and he made an offer for the entire collection of Orchids, and eventually purchased about one-half.

The result of this will be that Mr.

Pitcher's work is to be continued, and a representative collection of Orchids will be retained in almost the same locality. Dr. Kitchen having determined to enter the lists of traders makes it possible for the amateur and others to purchase odd and rare Orchids from an American house, the majority of unflowered *Cypripediums* were taken by him.

Mr. Schliegel, of Bay Ridge, N. Y., and Mr. Coles, of Farmington, Conn., have at recent sales been also large purchasers. The latter, we believe, has been led to go into the cultivation of Orchids, after a trip in the search of health taken in the regions where the Orchids are native, and their strange natural growth so impressed him that he has joined the ranks of collectors for amusement purely, and is getting together a large general lot.

Many other similar cases could be cited, but the above are sufficient to prove for the nonce that Orchid growing is on the increase.

Nomenclature.

We are requested to publish the following:

Sir:—The Nomenclature Committee of the Society of American Florists is charged with the general duty of bringing before the society, at its annual meetings, cases of misnaming, renaming, or nomenclature entanglements relating to decorative plants handled by the American trade. It will facilitate the work of this committee if any of your readers who may have noted cases which should properly come under its notice would kindly report them to the undersigned not later than the 1st of August, so that they may be incorporated in the report of the committee, which is to be submitted at the annual meeting of the society in the latter part of that month. It is particularly requested that full details be given concerning any cases reported.—WILLIAM TRELEASE, Chairman Missouri Botanical Garden, St. Louis.

Plants Named.

(To F. Shaffe.)—The Roses are possibly Belle Siebrecht (light) and Souvenir de Wootton (dark); but another time send specimens not packed in cotton batting; it is the worst possible material for flowers; it dries them out completely.

(To E. L. P.)—Sedum acre.

Two days ago I received the Canna "Austria." It arrived in excellent condition. Please accept many thanks.—MRS. WM. A., Honeoye, N. Y.

The plant premium No. 51 was received some time ago and all are doing nicely. I have also written to the grower to the same effect, as I think he would be pleased to know. I should, if I were in his position.—C. A. H., Vineland, N. J.

Louisville, Ky.—The advance premium list of the eighth annual chrysanthemum show and floral festival, to be given by the Kentucky Society of Florists, has been issued. The exhibition will be held November 10-13 inclusive. Secretary, F. C. Haupt, 241 West Jefferson Street, Louisville, Ky.

Are You Renewing?

To those of our readers whose subscription has expired, or is to expire with the close of this month, and who will send us a prompt renewal (adding fifteen cents to pay for packing and delivery), we will at once forward one canna, well established, their choice of either Austria or Italia, the two great novelties of the season. This is an offer without parallel, but which, if desired, must be applied for at once.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

A Big Berry.—A Correction.—In issue of June 5, page 407, in article entitled a big berry, instead of "four plants in a six-inch pot" read "one plant, etc.;" and instead of strong "crowns well ripened and rooted" read "well ripened and rested."—JAMES BLAIR.

Watering During Sunshine.—In your issue of June 12 Mr. Henry Snyder, Oxford, Md., states that "watering during sunshine causes each drop of water to act as a sun glass, bringing the rays to a focus and burning the leaves." Perhaps it would be well for Mr. Snyder to remove the blistered glass from his house and note the results. He also states that "he seldom sprays overhead unless the foliage gets dusty." I am curious to know what plants Mr. Snyder raises in a temperature varying from 40 to 80 degrees. If roses, how does he succeed in keeping the red spider off without syringing overhead? Perhaps his success in this respect is due to his keeping his house at 40 degrees? As we are obliged to keep our houses at a more even temperature than that quoted, I would be under obligations to Mr. Snyder if he would answer the foregoing questions, as we deluded people of the North feel the need of information which it seems can only be acquired from a Maryland gardener.—N. BUTTERBACH, Oceanic, N. J.

—Are plants watered during sunshine injured by it? is a query that cannot be answered precisely, either in the negative or affirmative. True it is, that, as regards many plants under glass, if water be allowed to stand in beads on the leaves and exposed to the direct rays of a noon-day sun, with the surrounding atmosphere of the house rather dry, a burned spot where every drop of water lay would be the result. Hence, condemnation of the practice of spraying all plants in bright sunshine would be confirmed by all who had been ignorant or negligent enough to admit such to occur. Begonias, Hydrangeas, Cinerarias and many more are easily spoiled by such negligence while the same plants will stand undamaged with all the spraying one wishes to administer, providing the water is not at too low a temperature, and the atmosphere is kept humid enough to allow the water on the foliage to be absorbed by the leaves, or to evaporate and mingle with the humidity of the house. Consequently, the brighter the sun and the more tender the plants the more water will be required on the paths, benches, etc. And while a drop of water remains on the foliage of such plants, no path or woodwork should be allowed to become dry. I do not believe that spraying overhead in the middle of the day should be practised, as too much time would be taken up with the operation, unless with plants that are under a well-shaded roof; but in every case a plant should be well watered at the root, when dry, and when dry only. That is, alluding to plants in active growth. Suppose you have a house, empty, with the exception of a hundred or so of Chrysanthemums in pots, placed on one of the benches, which is very often the case during summer, and the man who has charge of the same is called upon to get some plants, flowers or anything ready at the request of the lady or gentleman who may be on the eve of traveling, although he is aware that the "mums" require their morning drink, he is de-

tained until, say eleven or twelve, and finds a great many of his plants wilting. Does he feel satisfied to wait until evening to water them because Mother Nature never waters her plants while the sun shines, or will he think he has done enough in that case to water at the roots only? I think if I were in his shoes I should water top and bottom, dashing plenty of water on paths, empty benches, etc., until every plant was standing erect. It might be a mistake, but I doubt it. I am of the opinion that water of the same temperature as the house is a great benefit to the health of plants, and would prefer rain or river water to that from the well, as in the latter there are apt to be limy substances; and while it may not do any actual harm, yet one will observe where Crotons, Dracenas, etc., are continually syringed with it they gather a dirty, musty appearance, and if not sponged off pretty often they look as if not properly cared for. While practical success has been obtained in general horticulture, by the constant use of cold water and other rough and ready methods, still I believe that first-class specimens of any plants have only been produced by careful applications of the necessities to promote sturdy growth for individual plants.—DAVID McFARLANE, Wethersfield, Conn.

—I have been much interested in the letters on "Watering Plants During Sunshine" in recent issues. I think that flower seeds are more injured by watering than by any other way. I refer to flowers that are to go for seed. I have seen gardeners and nurserymen sprinkle such when it was almost, if not entirely, ripe—the idea of watering in such a way seeds that are to be stored away for future use! I have found that the best way is to let the water run under the plants, as our good brother, Alexander MacLellan, advises.—F. A. CARLSON, San Francisco, Cal.

English Strawberries in America.

I forward to you a few fruits of the English strawberry Royal Sovereign. Please give me your opinion of its value. The fruit, under good culture, must get an immense size, as the plants from which the specimens sent were gathered were planted on the poorest border in our garden and have received no care whatever, and were overgrown with phlox all last summer. We all think the flavor exquisite.—J. MILLER, Westbury Station, L. I.

—The fruits accompanying the foregoing communication made a very handsome appearance, conical, nearly two inches long and over one inch across at the widest part. In flavor the berry was of fair quality and vastly superior to many native varieties now largely grown, but for all that the flavor was not such as is found in Royal Sovereign in its own country. The fact that the plants received no protection whatever speaks volumes for the hardness of the variety, and it is to be recorded as an exception to the general rule that English berries do not flourish here, but, of course, further experience may modify present conclusions.—Ed.

An Accurate Report.—I wish to thank you for publishing my address on "Strawberry Culture" at the American Institute meeting on June 8 and to say that your report of the whole affair was very accurate and interesting.—T. J. DWYER.

Canna Iridiflora.—In reply to your correspondent, S. J. Yancey, who inquires after this plant, I write to say: Haage & Schmidt, Erfurt, Germany, quote Canna Iridiflora at 6 marks a dozen. Vilmorin, Andrieux & Co., 4 Quai de la Mégisserie, Paris, France, can furnish stock of the species. Probably any leading dealer in America could furnish stock or would be glad to import it to order.—F. A. WAUGH.

For Present Sowing.

TURNIP SEED. We have all the best varieties.

CUCUMBER SEED FOR PICKLES. Our STOCKS are the Finest.

The first Consignment of our **SURE CROP, Mushroom Spawn,** just arrived.

Quality! BETTER!! than ever!!!

Descriptive Catalogue Free, by mail.

WEBER & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.
Mention American Gardening when you write.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 645, ALBANY, N. Y.

Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 20 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America.

A printed list sent on application. Sales made at reasonable prices.

E. CORNING.

Mention American Gardening when you write.

WHOLESALE MARKETS.

Philadelphia.

The market has been doing very well this past week. All kinds of stock continue plentiful and on most days the market is well cleared up.

Strawberries are now arriving from New York State. The first shipment reached this city from Oswego on Wednesday, 23d ult., and sold readily at 12¢ 15¢ per quart. This week the quality is better and 20¢ per quart has been realized on a few crates. Several shipments have arrived from Newhaven, N. Y., which sold at 10¢ 15¢ per quart.

Harry Sproson, of Berry & Sproson, has just returned from a trip to the berry-growing districts of New York State and reports the crop the best the growers have had in many years. He also reports that the apple crop will be a small one this year.

Tomatoes—Hothouse are falling off in supply and this week will probably see the last for the season, as the outdoor stock from Jersey is now coming in. The first shipment arrived on Monday.

Raspberries—Maryland, 15¢ 18¢ per quart; Jersey, red, 6¢ 8¢ per quart; Jersey, black cap, 4¢ 6¢ per quart. Huckleberries—North Carolina, per quart, 10¢ 12¢; Jersey, 7¢ 9¢ per quart. Blackberries—North Carolina, cultivated, 8¢ 10¢ per quart.

The supply of watermelons is much larger this week; Floridas, per 100, \$25¢ 30¢; muskmelons, Florida, per basket, \$1 1.75; Charleston, Jenny Lind, \$1.50 2¢ per basket.

Pears—Florida, per barrel, \$2.50 3.25; selling slowly.

Asparagus—Pennsylvania, choice, per dozen, \$1.25 1.50; fair to good, 75¢ 1.

Cabbages—Jersey, per 100, \$2.75 3.25; Norfolk, per barrel, 75¢ 1.20.

Cucumbers—Norfolk, per basket, \$1 1.25; Charleston, per basket, 75¢ 1.

Egg Plant—Florida, per crate, \$2 2.25.

Onions—New Jersey, per basket, 90¢ 1.20; New Orleans, \$2.25 3; Egyptian, per bag, \$2 2.50.

Peas—Jersey, per basket, 25¢ 40¢.

String Beans—North Carolina, wax, 50¢ 75¢ per basket; green, 75¢ 1; Jersey, wax, per basket, 90¢ 1.25; green, per basket, \$1 1.25.

Squash—Florida, white, \$1.25 1.50 per barrel.

Potatoes are still firm, with prices unchanged.

A few shipments of sweet corn arrived from the South, but quality is poor and sales slow.

(For other reports see page 481.)

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Patrick Hogan, a very old gardener, died recently at Bridgeport, Conn., where he had been a resident for fifty years. He was at one time gardener for Col. O. B. Hall. Mr. Hogan was a native of Ireland and was reputed to be over 100 years of age; he left property valued at \$30,000.

Boston, Mass.

The annual rose and strawberry show of the Massachusetts Horticultural Society was held Tuesday and Wednesday, June 22 and 23. The exceedingly cold and wet spring has not been conducive to the production of the best quality of either flowers or fruits, consequently the display was not as large and possibly the quality not quite as good as in former years. The exhibits of roses made by Hon. Joseph S. Fay (M. H. Walsh, gardener) and Miss E. J. Clark, of Pomfret, Conn. (John Ash, gardener) were noteworthy. Mr. Walsh made a fine showing with his seedling roses, receiving a silver medal for Lillian Nordica and a certificate of merit for Joseph S. Fay.

Beautiful collections of orchids were shown by John L. Gardner, James Rothwell, W. P. Winsor and E. V. R. Thayer. A very handsome bougainvillea, trained in pyramidal form, exhibited by Nathaniel T. Kidder, attracted a great deal of attention. Jas. Comley showed a large collection of rhododendrons arranged with handsome colored foliage, and T. C. Thurlow an exhibit of seventy-two varieties of pæonias.

Following is the list of the prizes awarded:

Orchids—Six plants of six named varieties, in bloom, E. V. R. Thayer; second, W. P. Winsor. Three plants of three named varieties, J. L. Gardner; second, W. P. Winsor. Single specimen named, Kenneth Finlayson; second, J. L. Gardner. Tuberous Begonias—Six pots of six varieties, Edward J. Mitton.

The society's silver medal was awarded to W. A. Manda for new hybrid Lælio-Cattleya Arnoldiana var. superba.

Hardy Roses—Twenty-four distinct named varieties, three of each variety, Joseph S. Fay; second, the same; third, Mrs. E. J. Clark. Sixteen distinct named varieties, three of each variety, Kenneth Finlayson; second, Joseph S. Fay. Twelve distinct named varieties, three of each, the second prize to Joseph S. Fay. Six distinct named varieties, three of each, the second prize to same exhibitor; third, Mrs. E. J. Clark. Twenty-four distinct named varieties, one of each, the second prize to Mrs. E. J. Clark; third, Joseph S. Fay. Eighteen distinct named varieties, one of each, the second prize to Joseph E. Fay; third, Miss E. J. Clark. Twelve distinct named varieties, one of each, Kenneth Finlayson. Six distinct named varieties, one of each, W. N. Craig; second, Joseph S. Fay; third, Kenneth Finlayson. Twenty-four blooms of Mme. Gabriel Luizet, Mrs. E. J. Clark; second, Joseph S. Fay; third, Kenneth Finlayson. Six blooms of John Hopper, the second prize to Kenneth Finlayson. Six blooms of Marquise de Castellane, the second prize to Patrick Kane. Twelve blooms of any other variety, Kenneth Finlayson; second, W. N. Craig. Best single bloom of any variety introduced since 1893, Mrs. E. J. Clark. Moss Roses—Six distinct named varieties, three clusters of each, John L. Gardner; second, Joseph S. Fay. General Display—One hundred bottles of hardy roses, buds admissible, W. N. Craig; second, Kenneth Finlayson; third, Mrs. E. M. Gill; fourth, Mrs. E. J. Clark; fifth, Joseph S. Fay; sixth, William H. Spooner. Sweet Williams—Thirty spikes, not less than six distinct

varieties, The Bussey Institution; second, W. N. Craig; third, Miss M. S. Walker; fourth, Charles H. Souther. Spanish Irises—Collection, named, the second prize to The Bussey Institution.

Port Chester.

There has been a strong desire among many of the gardeners in this locality to establish a horticultural society and recently several meetings have been held to elaborate plans. The first regular meeting was held at Irving Hall Saturday, June 26, when the following officers were duly elected: President, W. Smith, gardener to the Mallory estate, Port Chester; vice-president, W. H. Harvey, gardener to Robert Park, Esq., Rye, N. Y.; treasurer, John Marshall, gardener to Trainor L. Park, Esq., Purchase, N. Y.; secretary, Andrew Grierson, gardener to Hicks Arnold, Esq., Rye, N. Y.

The name adopted by the new organization is the Port Chester District Horticultural Society. Its object is to promote interest in floriculture and horticulture generally in the district in which it operates, and being situated in the midst of many beautiful Westchester homes it should be a grand success. The by-laws which are now being prepared declare that all interested are eligible to membership. [This is how it should be.—Ed.] Several families of importance have declared their sympathy in a very substantial manner by contributions amounting to \$250, and more are expected. A Chrysanthemum show will be held in the Opera House in November. The Exhibition Committee has been appointed and is busy preparing schedules which will be ready in a month. American Gardening hails this young society with delight and wishes it all possible success.

Hints for the Water Garden.

Herewith I send you some photographs showing a partial view of our Water Lily pond, with surrounding growth of bold and striking foliage plants suitable for furnishing the edges of ponds.

The pond itself is quite large, and gives us accommodation for a great many different Water lilies and other aquatic plants, all of which here flourish in the greatest profusion. The water is 4 feet 6 inches in depth at the center of the pond, and this, we think, is a great advantage over shallower depths, as once warmed the larger volume gives greater stability to the temperature of the water, and there is not the same fluctuation as in shallow ponds, when the outside temperature falls.

Of course, in having this depth it is necessary for us to grow the most of the lilies in boxes, but on the other hand we gain a little by so doing, as the water, which is heated by the sun only, passes all around the box; therefore the whole plant is subjected to a warmer temperature than if it were planted in the bottom. The hardy species, however, we prefer to plant in the bottom, and therefore the pond at the edges is only from 18 to 24 inches in depth; here we have our hardy lilies.

The feed pipe is led from a small stream that runs from a nearby spring, and we have means to close off all water from the pond, which is a great advantage, for in times of heavy rain, if we could not close off the supply, the temperature of the water in the pond would be lowered from 10 to 15 degrees. The pond is exposed to the full sun, and we endeavor to keep its temperature as much over 80 degrees as possible, although it many times falls to 70 degrees without hurt to the plants.

The large leaves seen towards the center of the picture are those of Victoria regia var. Randil, which we consider to be a great improvement over the type, as the leaves are much more handsome, the edges turning up 5 or 6 inches. The largest leaf grown here last summer measured 5 feet 9 inches

in diameter, and easily supported a boy of eight years of age, with only a thin board to distribute his weight evenly over the leaf.

The plant bearing this leaf was grown in a box 8x8x2 feet in depth, in a soil composed of turves from a pasture and cow manure six months old, half and half. This having been well incorporated by turning three times, it was then put into the box and tramped lightly. As soon as the temperature of the pond reaches 75 degrees (which is generally in the month of June) we plant the *Victoria*; after this we are careful to regulate the supply of fresh water, so that the water in the pond will not fall below 75 degrees, and generally early in August the plant begins to flower and then keeps flowering every four or five days until cold weather sets in.

For growers further north I would recommend the new form of *Victoria regia*; it is intermediate between the type and *Randii*; the leaf is green, edges turn up from 4 to 5 inches; the flower is pure white and about the size of that of the ordinary *regia*. The great point in favor of this variety is that it can be grown very successfully in a much cooler temperature than either of the others. I have grown it very well in a temperature of from 70 to 75 degrees, and have had it in a temperature of 60 degrees for several weeks together without apparent injury. Here this variety blooms towards the middle of July, and it can be had in flower before that even, if a strong plant be put out. Indeed, Mr. Tricker informs me he has flowered it in an eight-inch pot, and that is as good a recommendation as it can possibly get.

These plants may be easily raised from seed where one has a stove temperature, or even a small tank which can be stood over the heating pipes of a greenhouse. There should be no reason for failure, as next to good seed the requirement is an even, steady temperature of 85 to 90 degrees for *regia* and *Randii*, while for the new form 70 degrees will be found just right. Sow the seed in a good free loam which has been put through a fine screen, and stand the pot or pan in water, so that the seed will be covered by about two inches, and don't use any manure in the soil, for it is detrimental to young plants of all Water lilies, almost always raising a green scum or low growth, which clings to the leaves of the young plants and very often proves fatal to the seedlings. Not until the plants are ready for three-inch pots do we give them manure, and from then on they can be grown in soil similar to that used for the old plants. They are shifted as they require it, exactly as one would treat any ordinary plant. As for *Nymphæas*, seed can be procured of *N. dentata*, *N. zanzibarensis*, *N. z. rosea* and a few others, but I would strongly advise the beginner to be content with a trial of the three named. After one has been successful with them he can go into raising seedling plants extensively, but, as in everything else that is new, go slowly. Young plants of almost all the *Nymphæas* can be had at a reasonable charge, excepting, of course, a few novelties and some which are difficult to propagate.

Tropical or tender *Nymphæas* that we consider indispensable to every collection are:

N. dentata, flowers, pure white, and of the largest size; a very free bloomer, native of Sierra Leone. We have had flowers of this measuring 15 inches in diameter, and they are borne on good stiff stems, carried from 6 to 12 inches above the water.

N. devoniensis is a good companion to the foregoing; flowers of a beautiful rosy-red color, equally free in flowering. Often on large plants as many as fifteen fully expanded flowers can be counted at one time. The two are night bloomers—that is, the flowers open about darkening time, and remain open until next forenoon, when on bright days they close about 10 or 11 o'clock,

FIG. 134.—THE WATER-LILY POND IN THE GARDENS OF HON. GARDINER G. HULBARD.



but if cloudy they remain open until past noon. They open and close in this way for three days.

For day blooming tender lilies, taking into consideration freedom of growth and flower, nothing beats *N. zanzibarensis*, deep blue, with its varieties, *N. z. rosea* and *N. z. aurea*, the colors of which are described by their names. But in a batch of seedlings one often gets many beautiful shades of color. These three are easily grown and are certain to prove satisfactory; they open their flowers about 9 A. M. and remain open well on into the afternoon.

The five water lilies above named are the ones I would recommend for beginners, and after growing them for one season, then they will be sure to want some of those named below:

In night-blooming tender lilies other than the two already named, we have *N. Sturtevantii*, with flowers of a beautiful rosy red color, and of large size. It is a fine species, but needs a warm temperature to grow it to perfection, which is a great hindrance to its more general cultivation.

N. columbiana is the darkest of all night-blooming lilies known to the writer. The only objection to it is we don't get enough flowers from it, but what we do get are of a beautiful dark red color, and quite distinct from those of any other species.

N. O'Marana is of a beautiful rosy red color, and is considered by all to be one of the finest of water lilies. It is a strong grower, and the flowers are held well above the water on long, stiff stems. We have had the flowers measure 12 inches in diameter.

N. Smithiana shows one of the prettiest combinations of colors to be seen in the whole *Nymphaea* family; the inner petals are pure creamy white, the outer ones the same color striped with green and suffused with a beautiful rosy pink.

The night-blooming *Nymphaeas* are started from tubers that have been carried over winter in damp sand. In February or March the tubers are potted into pots or pans, and submerged in a tank where the water can be maintained at a temperature from 70 to 80 degrees. Very soon they begin to send out shoots that will emit roots at the first joint when the shoot has made a few leaves; it should then be severed from the tuber, potted into a three-inch pot, put back into the tank and grown on with shifts as required until by the month of June it will be in pots from 6 to 9 inches. By this time the pond will be ready for them. (The old tubers will send out several crops of shoots, and therefore should be retained.)

To turn once more to the tender day bloomers; besides the *zanzibarensis* varieties named above there are:


Nymphaea gigantea, an Australian species, and one of the most beautiful of this class; the color is a satiny blue, shading to white; stamens yellow and silk-like; flowers borne on good, stiff stems; a very free bloomer. This must be grown on without a check or the plant will form a tuber and go to rest, and sometimes it will be months before it will again start; this is the only drawback to this most charming species.

N. gracilis, from Mexico, is desirable; it is the only white day-flowering tropical water lily in cultivation and is very free flowering. The flower stands well out of the water on a long stem.

N. pulcherrima is of a bright violet color and of good size. The buds are very pretty, long-pointed and irregularly striped with chocolate red.


We turn now to the class of hardy pond-lilies, all of which are day bloomers, and the roots remain in the pond all the year round; they can be planted in the bottom of the pond or be grown in half-barrels or boxes. The hardy lilies are the easiest to grow, and there is no reason why every one should not succeed with them.

N. alba, the old European white lily, still deserves a place, although *N. alba*



A Good Start

for the seasons operations on the farm, and one which will yield the most satisfying returns is to thoroughly renovate and rejuvenate the system by the aid of that time tested and reliable remedy



WARNER'S Safe Cure

It quickly corrects that clayed condition of the liver so productive of Biliousness and Dyspepsia after the long winter of inactivity. In addition to the above good qualities it is a positive cure for

**BRIGHT'S DISEASE
URINARY TROUBLES
FEMALE COMPLAINTS
GENERAL DEBILITY
AND MALARIA.**

Beware of substitutes. There is nothing "just as good" as Warner's Safe Cure.

Delaware-Grown Crimson Clover.

Absolutely pure.
New crop.
Now ready.
BROWN SEED CO.,
Wyoming, Del.

Mention American Gardening when you write.



THREE NEW CANNAS.

40 NEW IRIS.

SIEBRECHT & SON, - 409 Fifth Avenue, New York.

Mention American Gardening when you write.

A One-Horse Farm Wagon Horse Owner Needs.

The "PIQUA" is the Best.

Hollow Steel Axle,
Double Box, Spring
Seat, Easy Riding
and Light Running,
and needs only ONE
Horse to Pull It. . .

Made in Two Sizes,
1200 Pounds and .
2000 Pounds . .
Capacity. . . .

WRITE FOR PRICES.



Specialty Adapted for use on a Small Farm, in the Garden, or about a Country Place.

PIQUA WAGON CO., Piqua, OHIO.

Mention American Gardening when you write.

Celery, Cauliflower, Cabbage Plants

Field-grown, strong Celery, (once transplanted), White Plume and Giant Pascal, 25c. per 100; \$2.50 per 1000. Cauliflower, Early London, same price. Cabbage, Kottler's Brunswick and Large Drumhead, 5c. per 100; \$1.50 per 1000. Write for special rates on large lots. Cash with order, please.

R. KILBOURN, Clinton, N. Y.
Mention American Gardening when you write

LET US SUPPLY YOU WITH YOUR.....

Celery and Cabbage Plants.

Celery—Giant Pascal, White Plume, New Rose, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000. Cabbage—Succession, Flat Dutch, Drumhead, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000. For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.
Mention American Gardening when you write.

Offer No. 80.

FOR ONE NEW SUBSCRIPTION

200 CELERY PLANTS

AS FOLLOWS:

- 50 Plants White Plume.
- 50 Plants New Rose.
- 50 Plants Golden Self-Blanching.
- 50 Plants Giant Pascal.



This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to AMERICAN GARDENING. Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P. O. Box 1697, N.Y.

candidissima has largely supplanted it, as having much larger flower than the type.

N. Laydekeri rosea is a beautiful little gem of pygmaea type. The flowers on opening for the first time are of a beautiful pink, with golden center; next day the color deepens, and so on until the flower fades. We often get several shades of pink from one plant, as a good plant always carries from four to six flowers at different stages of color.

N. Marliacæa albidia is a desirable white and is fragrant, which quality the whites already mentioned lack; it is also one of the freest in growth and flower.

N. Marliacæa carnea, of a delicate flesh tint, strong growing and of a vanilla perfume. *N. M. rosea*; this is one of the very best hardy lilies; the color is a beautiful deep rose; free flowering and of strong habit. *N. Marliacæa chromatella*, a fine yellow variety with bright orange stamens; the flowers are produced in the greatest profusion; the young foliage is spotted with brown, which enhances the beauty of the plant.

We must also include our own native *N. odorata*, which is so well known for its delicious fragrance. *N. o. sulphurea* is a fine, clear yellow, the flower standing well out of the water, a form that every one should have. *N. o. exulstia*, deep pink, is the deepest-colored hardy water-lily in common cultivation, and it is one of the most desirable; fragrant and free flowering, this is much superior to *N. odorata rosea*. *N. o. caroliniana* is without doubt the finest of the group; the plants are of the strongest growth and flower right up to frost; the color is a clear flesh pink; very fragrant; the plants for best results should not be disturbed too often.

N. pygmaea, the smallest species in cultivation, has flowers about the size of a half dollar, pure white, and of a decided tea fragrance. *N. p. Helvola* is a fine variety with flowers of sulphur yellow, floating on the water, and produced in great numbers; they are also larger than in the type; the leaves are green blotched with red.

N. Mexicana is quite hardy here at Washington, D. C., but I do not think it will prove hardy much further North; however, it will well repay a little extra care bestowed upon it in the way of protection, or, better still, removal to a cold cellar in winter. It is, indeed,

a beautiful flower; color, sulphur yellow; the flowers stand well out of the water and are of medium size. It is best to grow this in a box or tub, as it will soon run over a large area if left to itself.

N. tuberosa rosea, a fine pink from *N. tuberosa*, but unlike that variety, it succeeds well under cultivation; it is fragrant and quite distinct, very free flowering.

Nelumbiums, or lotus, all of which are hardy here, are very desirable subjects where water lilies are growing; indeed, no collection of water plants can be complete without this grand aquatic. The best known is *N. speciosum* (Egyptian lotus); the color of the flower on first opening is a beautiful shade of deep pink, with the base of petal of a soft, creamy white; this is a free bloomer and is sure to please every one. *N. album grandiflorum* is pure white, but I cannot recommend it, as it has never done well here. *N. album striatum*, petals white, striped and tipped with rosy carmine, is an odd variety, but that is about all the claim it has for the flower lover. *N. Kermesinum*, this stands next to *speciosum* for general good qualities; the color is something on the order of the *Hermosa* rose—a free flowerer and can be thoroughly recommended. *N. luteum*, the American lotus, should also be given a place; the color is a rich yellow, but we don't get many flowers from it.

For *Nelumbiums* I would advise small ponds or tanks surrounding the main pond, for then one can plant the roots in the bottom and let them run riot, which they will soon do, and take possession of every available foot of space. If this be impracticable, then they should be grown in large boxes, or they will cause no end of trouble—leaves cropping up where least expected. This will give an idea of how fast they spread: We had a shoot that escaped through a crack in one of the boxes last season run a distance of twenty feet.

The soil for all aquatics should be very rich. If one will give them as good soil as is generally given roses, the return of flowers will pay the expense of same. I always use loam and cow manure in equal parts.

Plants that we grow largely to make a setting for the pond (as one will see by referring to the picture) are mostly large-leaved tropical plants, but al-

most any plant that has beautiful foliage is admissible. *Musa ensete* is just the kind of plant wanted for this position, and it delights in the moist soil that generally surrounds a pond. *M. vittata* is well worth growing for the beautiful variegation of its foliage. *M. zebrina* is similar to the last, except the leaves are green, striped with bronze.

Caladium esculbentum is just at home here; *C. odorata* is another one which thrives well and is distinct from the former in that the leaves are pointed upward instead of down, as in *esculentum*. Several of the showy *Caladiums* do exceedingly well and give bright touches of color.

The stronger growing *Cannas* are also suitable for growing here, especially *Ehemanii*, *robustum* and *giganteum*, with a few of the choicer varieties of the French class.

Solanum robustum and *Solanum Warscewiczii* we find very useful; the later has large cut foliage and grows to a height of from ten to thirteen feet; the former grows from three to five feet and is one of the finest plants possible for this work.

Ricinus zanzibarensis should not be omitted where one has room for it, as it is very strong growing and its large foliage is very effective. Bamboos in variety are also quite appropriate and they grow very freely, making a beautiful feathery contrast to the heavier foliage. *Aralia papyrifera* (*Fatsia japonica*) is also a splendid plant for this work; its large palmate leaves and strong, robust growth make it a desirable plant for the banks of ponds, where it will soon show its gratitude for the unlimited supply of water it will get.

All of the *Eulalia* grasses are very fine and none more so than *E. gracillima univittata*; planted on the edge of the bank, with its long, arching leaves nearly dipping into the water, it makes a pretty picture; also, *Eranthus Ravennæ*, with its erect habit reaching to a height of from ten to twelve feet. *Arundo Donax* will reach a height of from fifteen to twenty feet in moist soil.

Cyperus alternifolium simply delights to be planted around the edge of the water, and a clump here and there very agreeably breaks the even line of the water's edge. *Papyrus antiquorum* (Egyptian paper plant) is quite at home used in this way, as also are

IN THE PRESS.



PRICE, \$1.00.

The Water Garden

(PROFUSELY ILLUSTRATED.)

BY WILLIAM TRICKER.

THIS volume, which has been prepared by the foremost aquaculturist of the country, and to whose efforts the present growing popularity of the Water Garden is largely due, is designed to serve as a **SOUND, PRACTICAL CULTURAL HANDBOOK** for amateur and professional alike.

The book will be freely illustrated with plates and illustrations in the text, and will describe all operations, from the growing of plants in tubs to construction of the large pond, planting, seed saving, propagation, wintering, and all other necessary details of cultivation.

—→ ORDERS RECEIVED NOW. ←—

A. T. DELAMARE PTG. & PUB. CO., Ltd.,

Box 1697, New York.

Thalia dealbata and *T. divaricata*, which grow nicely in shallow water and are quite interesting; their foliage is not unlike the *Cannas*.

Plants I have omitted to mention previously that grow well in shallow water, and should be used at the edges of the water are: *Lymnocharis Humboldtii* (water poppy), a yellow poppy-shaped flower with dark center, it is rarely without flower. *Limnanthemum indicum* (water snow flake); its popular name well describes this pretty flower. *Echornia crassipes* major (water hyacinth), and *E. azurea* should also be provided for.

P. BISSET, Gard. to Hon. Gardner G. Hubbard, West Washington, D. C.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Window Box Needs.

A good body of upright plants for the main or central filling, a clothing drapery for the sides and a harmonious selection of colors are three strong general needs of the window box. This the florist usually understands quite fully, but the home gardener too often neglects to note the imperative points for insuring a successful and satisfactory result. Two colors, in addition to the greenery, are better than more; and if one of these is white all the better. Rose and purple pinks should by all means be kept away from yellowish pinks and reds, as well as from yellows. Let the novice beware of using *Maurandias* and *Nasturtiums* together, for instance. *Nasturtiums* with white are, however, most excellent. The double yellow trailer is very good.

Summer Investments in Orchids.

If one have any outside privileges as regards access to the ground, perhaps there is no better time than the present to acquire orchid plants. At all times of the year the transition from the moist warmth of the glass house to the dry heat of the dwelling is one of more or less shock to the plant. But, during June the outside temperature is quite likely to average moderate, while the pots may receive cool moisture from the damp soil, if set as near it as may be. Frequent gentle showering when there is not rain, with care not to allow a superabundance of water at any one time, will do much to tide the plants over the change with a minimum of injury. Shade, more or less dense, is grateful to most sorts.

A Disappointing Class of Plant.

Many of the newer plants similar in general traits to the Morning Glories have proved a snare and a disappointment to the amateur or novice buyer. Some of them have hard-shelled seeds, which have failed wholly or largely of germination. Some have been poor growers, or have required too long a season for northern latitudes. Filling or soaking the seeds will help to obviate the first difficulty. Growing inside until there is ample heat without will overcome the second. The *Minas* are among the troublesome ones to many. But a later one, *M. sanguinea*, is classed as more tractable than *M. lobata*. As a family, these plants are amenable to window culture and lend themselves to the needs of the window box, where their growth of drapery is not too ample.

Have We a Perfectly White Geranium?

Though it is a far cry from the first notifications of the trade concerning a novelty to the offering of such novelty at retail, the public cannot fail to be interested in the advance stories regarding a new and faultless white geranium, "a variety," says the introducer, "that will probably never be equalled." Look at the list of good qualities: 1. Flowers perfectly round; 2. truss compact and strong of stalk; 3. color, pure waxen white; 4. absolute resistance of sunburn and scald;

5. dense foliage; 6. unapproached freedom of bloom; 7. petals wholly persistent and non-falling until a fine ball of bloom is formed; 8. unrivalled ease of propagation; 9. best of shipping qualities of blossoms. All this is claimed for the new candidate, "La Purite," and it is indorsed by the city park gardener of Reading, Pa. (whence it is to be distributed), as a superb flower and plant. As no white geranium has ever yet been exactly all that was to be desired, interest in this novelty will be wide-reaching. It is to be put out by a woman florist, whose circular, while strong in its wording, is most business-like and dignified. One misses, with a sense of extreme satisfaction, the humiliating "please-patronize-me-because-I'm-a-woman" cry, lately becoming so common.

A Beauteous Novelty.

Last year a few firms offered, in the list of rose novelties, a new hybrid perpetual named "Clio." One dealer alluded to it as without question the finest white hybrid to date. As its "date" was more recent than that of "Margaret Dickson," its claim of superiority affected even that beautiful sort. Blooming with us this season, Clio is superb in beauty of flower. It is barely white—flesh-white is the nearest term perhaps. The form is something like that of *La France*, but better, its beauty being such that one would swear it to be a tea rose. The single bush we have has not proven a good grower, but this may be an individual demerit only.

Can "Suburbanite" Raise Poultry.

Suburbanite has several building lots which, while waiting for a rise in values, are yielding no returns. He inquires whether he could profitably build fowl houses and rear poultry upon them. Why not? So far as the fowls are concerned there is no reason to the contrary; but Suburbanite is seldom at home and must relegate the care of his fowls to hired servitors. All depends, then, upon the help engaged. If the man in charge understands poultry, or even if he is intelligent, and, above all, "a good hand at chores," he will make the venture a success. The quoted expression is the farmer's way of describing the faculty of "giving attention to details," which the poultry press so often exploits. The inquirer is anxious, as is so often the case, to grasp the whole business at once by putting up a number of buildings and buying fowls to stock them. He has been advised rather to buy (as it is now late to hatch) chicks four weeks old, enough to stock but one or two small houses for the coming winter. He has the rare chance thus to buy, and the advice, strictly followed,

Beware of Ointments for Catarrh that Contain Mercury.

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O. contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally and is made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free.

Sold by Druggists, price 75c. per bottle.



METAL WHEELS

in all sizes and varieties, to fit any axle. They last forever. Either direct or stagger spoke. Can't break down; can't dry out; no resetting of tires. Good in dry weather as in wet weather. Send for catalog & prices. ELECTRIC WHEEL CO., QUINCY - ILLINOIS.

Poor Pilgrimage,

there is no need for you to contemplate a wig when you can enjoy the pleasure of sitting again under your own "thatch." You can begin to get your hair back as soon as you begin to use

Ayer's Hair Vigor.

may either save him much money if he falls or be the foundation of his future success. It is good advice in either case.

East Windows.

Whatever may be the desired facing point of the winter window, experience goes to prove that, for summer, the east window is most nearly ideal for the general run of plants; the northeast aspect is fine, but seldom available. The morning sun, without the mid-day heat, is now greatly to be desired. All the air available without too strong draughts is not only a great advantage to the plants now, but of inestimable help in giving them a good constitution wherewith to resist the less favorable winter conditions. But heavy winds are injurious to foliage directly, and also indirectly through the drying effects at the root.

MYRA V. NORVS.

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished. Mention *American Gardening* when you write.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 188, New York City.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the ad., and each initial or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York

VEGETABLE PLANTS: Celery, 1000, \$1.35; Cabbage and Tomato, 1000, \$1.00; Peppers, 1000, \$2.00. Price list free. E. C. Hargadine, Felton, Del.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION as gardener's assistant, Scotch American, age 21. William Hossack, 208 Warren St., Brooklyn, N. Y.

WANTED

A copy of Sayer's book on the Dahlia (Boston 1889). Address,

Editor AMERICAN GARDENING, P. O. Box 4897, New York.

WHOLESALE MARKETS.

New York.

The cut flower market has reached a complete state of summer dullness and business is practically at a standstill.

Fruits and vegetables are moving freely, and considering the quantity coming in prices may be considered fair.

Hothouse grapes are slightly ahead of the demand except for exceptional quality.

Hothouse tomatoes have been clearing out well at 10¢@12c. per pound.

Mushrooms, when sound and in good color, are making 50¢@60c. per pound, with a few extra special, 75c.

Hothouse cucumbers are only worth \$2 per 100.

The strawberry crop is nearly over. Oswego County, N. Y., has the field almost to itself.

Monday's steamer from the South brought 5,000 barrels of Le Conte pears; the price came down to \$2.

Red currants and gooseberries are having a hard time and are making poor prices. If the former make 4c. per pound they do well. Preservers are only paying 3c. Gooseberries are only averaging 4c. per quart.

Cherries, if prime, are selling well; California-grown are remarkably fine just now.

Apples.—North Carolina, green, per barrel, \$1¢@1.50; North Carolina, green, per one-half-barrel basket, 40¢@50c.

Strawberries.—Western New York, extra, per quart, 10¢@12c.; common to good, quart, 6¢@8c.; Staten Island, per quart, 6¢@12c.; up-river, upper stations, usual sorts, 8¢@10c.; lower stations, usual sorts, 4¢@7c.

Raspberries.—Up-river, red, per pint, 6¢@7c.; per three-to-quart cup, 4¢@5c.; four-to-quart cup, 3¢@4c.; Jersey, red, per pint, 5¢@6c.; Maryland, red, per pint, 4¢@5c.; black-cap, up-river, fancy, per pint, 5¢@6c.; Jersey, per pint, 4¢@5c.; Maryland, per pint, 3¢@4c.; Maryland, per quart, 5¢@7c.

Gooseberries.—Large, per quart, 5¢@6c.; small to medium, green, per quart, 3¢@4c.

Huckleberries.—North Carolina, large, blue, per quart, 8¢@10c.; poor to fair, per quart, 6¢@7c.; Maryland crackers, per quart, 6¢@7c.; Jersey, per quart, 8¢@10c.

Blackberries.—Maryland, Lucretia, per quart, 12¢@13c.; other cultivated, per quart, 10¢@12c.; Early Harvest, per quart, 7¢@8c.; wild, per quart, 4¢@5c.; North Carolina, cultivated, per quart, 7¢@10c.; small, per quart, 5¢@6c.

Currents.—Large, red, per quart, 3¢@5c.; inferior, per quart, 2¢@3c.; bulk stock, per pound, 2¢@4c.

Cherries.—Sweet, per pound, 4¢@8c.; sour, per pound, 4¢@6c.; eight-pound baskets, as to size and condition, 20¢@50c.

Melons.—Watermelons.—Florida, good to choice, per car, \$125¢@175; Florida, per 100, \$12¢@30; muskmelons, fancy, per bushel basket, \$2; poor to fair, per basket, 75c. @1.50.

Peaches.—Georgia, Tillotson, per carrier, \$1.50¢@3; Georgia, early sorts, per carrier, \$1.00¢; North Carolina, early sorts, per carrier, \$1.00¢.

Plums.—Botan, poor to good, per carrier, \$1.00¢; Wild Goose, per carrier, \$1.00¢@1.75; Chickasaw and Robinson, per carrier, \$1.00¢@1.50.

Grapes.—Florida, Niagara, poor to fair, 25 to 30-pound cases, 50¢@1.25.

Cauliflowers, per barrel, \$1¢@1.50.

Cabbages.—Jersey and Long Island, per 100, \$2¢@3.50.

Cucumbers.—Norfolk, per barrel, \$2.25¢@2.75; Norfolk, per basket, 75¢@90c.; North Carolina, per crate, 50¢@75c.; Charleston, per basket, 40¢@75c.; Savannah, per basket, 40¢@55c.

Egg Plants.—Florida, per one-half-barrel box, \$1.50¢@2; Florida, per basket, \$1.25¢@1.50.

Onions.—Maryland, per one-half barrel basket, 85¢@1; Eastern Shore, per one-half-barrel basket, 75¢@85c.; North Carolina and Virginia, per barrel, \$2; Kentucky, per barrel, \$2¢@2.25; New Orleans, per barrel, \$3¢@3.50.

Peas.—Long Island, per bag, 40¢@50c.

Peppers.—South Jersey, per crate, \$1.50¢@1.75.

String Beans.—Jersey and Maryland, wax, per basket, 50¢@55c.; Norfolk, green, one-half-barrel basket, 40¢@60c.; Norfolk, wax, one-half-barrel basket, 40¢@50c.

Tomatoes.—South Jersey, per crate, \$1.50¢@1.75; Mississippi, per flat case, \$1; Savannah, per carrier, \$1.25¢@1.50; Florida, prime, per carrier, \$1.00¢@1.25; Florida, poor to good, per carrier, 75c.¢@1.

Boston.

There is a large movement in all kinds of fruits and vegetables. Everybody

seems to be making a little money. We do not think profits are large, but dealers seem to buy about what they are to be able to sell at an advantage.

Strawberries from Connecticut finished on Tuesday. Dighton berries will run the week; Western New York nearly in its height; near-by about half through. Some of the fine Marshalls or choice Belmonts bringing 25¢@30c.; Bubachs, 20c.; Dightons, 5¢@6c.; Western New York, 5¢@12c., according to quality.

Hudson River currants, 6¢@10c. a quart; York State cherries, 30¢@50c. a ten-pound basket; some fancy near-by cherries brought in last Monday sold at 13¢@20c. a quart; those bringing the latter price were "fine as silk."

Hudson River red raspberries, 5¢@7c. for thirds. North Carolina blackberries, 11¢@15c.; little better demand and lighter supply.

South Carolina peaches all the way from \$2¢@3 per carrier.

Virginia finished on cabbage, Long Island opening up in good shape; stock brings, 1¢@1.25.

Quite a few Russets linger at New England points; sell at \$4; while green stock from Virginia has a range of 1¢@1.50 per basket.

Botan plums selling all the way from 25¢@40c. a basket; Le Conte pears, \$2.50¢@3.50 per barrel; neither of these two articles are called for, yet, when arriving on the market bring their full value, according to their quality.

Choice watermelons, 25¢@30c. apiece. Southern cucumbers are so poor that demand for hothouse stock is very good; 2¢@3c. each.

Kalamazoo celery appears and is a little high for a good many, but those that take it pay 50c. a bunch.

Some home-grown summer squash showed up Monday morning and sold at \$1 a dozen; Southern marrow broke down to \$1.50 a barrel.

Long Island beans came to light on the same day; \$1.50 per bag.

Louisville onions find a ready sale at \$2.50 per barrel; about the same price as Egyptians; while Virginia stock is easier; 1¢@1.25; new onions, 4c. per bunch.

Tennessee sweets dropped 25c. a bushel and can be had at 1¢@1.25.

Some early home-grown peas selling 40¢@50c. a bushel, while McLean's brought 50¢@55c., and the dealers were glad to let them go even at those figures.

Virginia wax beans are in lighter supply and varied in quality, the best bringing 75c. per basket.

Under-glass tomatoes a peg higher; 12¢@15c. a pound. A car of Mississippi four-basket crates placed at \$1 per crate early in the week, while Florida stock sells \$1.25¢@1.50 per six-basket carrier.

Asparagus nearly over now and brings about 50c. a dozen.

Gooseberries unchanged; 4¢@8c. per quart; huckleberries, 10¢@14c. per quart; mushrooms, 75c. per pound.

Native beets, 2¢@3c. a bunch; egg plant, \$1¢@1.50 a bushel; old carrots hold their own at \$1.25 a bushel; radishes, 15¢@25c. per dozen bunches; new carrots, 4¢@8c. per bunch; turnips, 6c. per bunch; limited demand for spinach; 30c. a bushel; parsley continues at \$1.25 per bushel.

Hebron potatoes, 60c. a bushel; York State varieties, 35¢@45c.; little firmer feeling in old stock; new Virginia potatoes take a range \$2.50¢@3 a barrel; while some inferior have to be sold \$2¢@2.25.

(See also page 476.)

A PIONEER SHOEMAKER.

WORKING AT HIS TRADE ALTHOUGH EIGHTY-FIVE YEARS OLD.

Mr. James McMillen, of Champaign, Has Followed the Shoemaker's Trade All His Life—Every Day at His Bench Working with Apparently the Same Vigor as a Young Man—A Sketch of His Life.

From the Gazette, Champaign, Ill.

At the advanced age of eighty-five years, James McMillen, of 112 West Washington street, is one of the most active men in Champaign, Illinois. Mr. McMillen is a pioneer citizen of the city, and his form is as familiar on the streets as that of any citizen of the town. All his life Mr. McMillen has followed the trade of shoemaker, and every day finds him at his bench, bending over his work with apparently the same vigor he commanded when he was a young man.

He has a little shop on North Wright street, in the vicinity of the University of Illinois, and he is the official shoemaker, as it were, for the students of that institution.

About a year ago Mr. McMillen was absent from his bench for several weeks, and his familiar form was missed along the streets. The local newspapers announced that he was dangerously ill. For months he was a sufferer, but finally he appeared again at his shop, and has lost but very few days since then and none, perhaps, on account of sickness. His friends were surprised to see him out again, and they were more surprised when he told them the cause of his recovery.

There was no small amount of local interest in his case, and a reporter visited him, to have him relate the story.

"I feel," said the spry old gentleman, "that I owe my life to Dr. Williams' Pink Pills for Pale People. Something like a year ago it appeared to me that I was almost a physical wreck. I was suffering from a disease of the kidneys. A thick scurf had formed on the bottoms of my feet and my ankles were terribly swollen and inflamed. In fact, they reached such a condition that I could not walk, and it looked as though my days were numbered.

"I read in the newspaper testimonials from people who claimed to have been cured of kidney trouble by the use of Dr. Williams' Pink Pills for Pale People, and thought that it would do me no harm to give them a trial. I bought a box of them at the drug store and began taking them according to directions. It may seem strange, but it is a fact that I felt the benefit of them almost as soon as I began to take them. After I had taken a few pills my urinal discharges became a most as black as tar and I noticed at the same time that the pain and soreness were leaving my kidneys.

"A few days later the swelling began to go out of my ankles, and at the end of five weeks it had entirely disappeared, taking with it that terrible scurf which had formed on the bottoms of my feet and caused me so much trouble. I continued to gather my lost strength, and at the end of six weeks I felt entirely recovered and resumed my work at the shop. I think I took from four to five boxes of the pills and have taken none since."

Mr. McMillen's residence on West Washington street, is more than a mile distant from his shop, but nearly every day he walks the entire distance, morning and evening, and he could not do this if that swelling still existed.

Mr. McMillen has no backwardness in talking of the merits of Dr. Williams' Pink Pills.

Dr. Williams' Pink Pills for Pale People contain all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are sold in boxes (never in loose form, by the dozen or hundred) at 50 cents a box, or six boxes for \$2.50, and may be had of all druggists or directly by mail from Dr. Williams' Medicine Co., Schenectady, N. Y.

We Believe every reader of AMERICAN GARDENING feels proud of his paper and the practical, uplifting work it is engaged in; it is raising the standard of Gardening, and maintains the dignity of all engaged in the profession.

We Believe the cause of good Gardening to be eminently a missionary one; from which it follows that the circulation of AMERICAN GARDENING can most readily be enlarged through the efforts of its subscribers. Our circulation, therefore, is a reflection and an index of our subscribers' interest in us.

We Believe our readers are anxious to see AMERICAN GARDENING reach the highest possible development in its work of horticultural education. The legitimate aim of a class paper is to increase its influence through an extension of its circulation.

American Gardening is the most successful of all, and has the largest circulation of any weekly Journal devoted to Gardening and Fruit Culture, but has scope and the disposition to add to its list tens of thousands of patrons. "Come with us and we will do you good," is a living truth in our case; all our new friends are loud in their praise of the value of the paper to them. The cause of "AMERICAN GARDENING" is the cause of American Horticulture.

We Believe that our friends are the ones on whom to call for the desired assistance. Understanding thoroughly the value of the paper to every one interested in Gardening, they can best express its spirit and comprehensiveness and succeed in making subscribers.

With a View to obtaining the assistance of our friends in the propaganda for new subscriptions, and in order that they may have something tangible whereby to remember their successful efforts, we have compiled the following list of

SUMMER PREMIUMS

To which we invite your attention in the hope that each and every reader of the paper will endeavor to send us **AT LEAST** one new subscriber before the close of Summer.

American Gardening for 1896. Containing 832 pages of text and illustrations, with complete index. The most full, complete, and desirable volume on Gardening, Fruit Growing, and kindred subjects ever issued. Few works on horticulture can compare with this in value to the student or the practical man. *Handsomely bound in cloth, with leather back and edges.*

This most desirable volume will be forwarded, express paid, to any address, for only seven new subscriptions at \$1.00 each.

American Carnation Culture. By L. L. LAMBORN. A work on the Classification, History, Propagation, Varieties, Care, Culture, etc., of the Divine Flower. Nothing has been left unsaid from which any practical benefit could be obtained. Illustrated. Third edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Bulb Culture (Henderson's). By PETER HENDERSON. Contains special cultural directions for over 200 varieties of Bulbs. Compiled with great care, and its information is accurate, reliable and up to the latest. 25 cents.

Given for 1 new subscription at \$1.00 each.

Bulbs and Tuberous-Rooted Plants. (Their History, Description, Methods of Propagation and Complete Directions for their Successful Culture in the Garden, Dwelling and Greenhouse). By C. L. ALLEN. The author of this book has for many years made bulb growing a specialty, and is a recognized authority on their cultivation and management. He has taken the initiative to make bulb growing a special industry in this country, and writes from his own long and extensive experience. The subject is treated in a very exhaustive manner. Handsomely illustrated, cloth, 12mo. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

Chrysanthemums and Their Culture. By EDWIN MOLYNEUX. Sixth Edition. By far the best practical work yet written on this subject. 50 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemum Culture for America. By JAMES MORTON. This is the only "Mum" book published for American use, and is an excellent and thorough work; especially adapted to the culture of Chrysanthemums in America. The field is fully covered. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Elliott's Practical Handbook of Landscape Gardening. By F. R. ELLIOTT. Designed for city and suburban residences and country schoolhouses, containing designs for lots and grounds, from a lot 30x100 feet, to a 40 acre plat. Cloth, 8vo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Ferns and Fern Culture. By J. BIRKENHEAD, F. R. H. S. How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, Wardian cases,

dwelling houses, etc. A thorough and complete work by a renowned specialist. 128 pp., thoroughly illustrated, 16mo, cloth. 75 cents.

Given for 2 new subscriptions at \$1.00 each.

Fruit Culture, and The Laying Out and Management of a Country Home. By W. C. STRONG, ex-president of the Massachusetts Horticultural Society, and vice-president of the American Pomological Society. Illustrated. New revised edition, with many new additions, making it the latest and freshest book on the subject. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Grape Culturist. By A. S. FULLER. New and revised edition, 1894. One of the best works on the culture of hardy grapes, with full directions for all departments of propagation, culture, etc. Illus., cloth, 12mo., \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Grape Growers' Manual. (The Bushberg). An exhaustive work on the cultivation of the grape, with accounts of diseases, insects, etc., by specialists. The descriptive list of varieties is specially useful and complete; the typographical method of designating importance of varieties is a feature. Pp., 200. Royal 8vo. Illustrated. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Greenhouse Construction. By PROF. L. R. TATZ. A complete treatise on Greenhouse structures and arrangements of the various forms and styles of Plant Houses for professional florists as well as amateurs. All the best and most approved structures are so fully and clearly described that anyone who desires to build a greenhouse will have no difficulty in determining the kind best suited to his purpose. The modern and most successful methods of heating and ventilating are fully treated upon. Special chapters are devoted to houses used for the growing of one kind of plants exclusively. The construction of hotbeds and frames receive appropriate attention. Over one hundred excellent illustrations, specially engraved for this work, make every point clear to the reader and add considerably to the artistic appearance of the book. Cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

How to Grow Cut Flowers. By M. A. HUNT. A thoroughly practical treatise on the cultivation of the Rose and other flowering plants for cut flowers. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

How to Know the Wild Flowers. By MRS. WILLIAM STARR DANA. A guide to the names, haunts, and habits of our common wild flowers. The most handy and easy reference book for amateurs. With 100 illustrations by Marion Satterlee. 12mo. \$1.75.

Given for 5 new subscriptions at \$1.00 each.

Henderson's Handbook of Plants and General Horticulture. By PETER HENDERSON. This has long been acknowledged as the standard American work on general horticulture, giving history, geographical distribution and cultural directions for all cultivated fruits and flowers. Illustrated. Cloth, 8vo. \$4.00.

Given for 9 new subscriptions at \$1.00 each.

Insects Injurious to Fruit. By PROF. WM. SAUNDERS. A work of great value to all fruit growers, written by a man of science as well as a practical agriculturist, and the result of careful and minute observations and experience. It treats, under separate chapters, of the injurious insects which prey upon our fruit trees, vines and bushes, together with their mode of operation, and contains careful directions as to the best means of destroying them. With over 400 pages, 440 illustrations. 12 mo. Cloth. \$2.00.

Given for 5 new subscriptions at \$2.00 each.

Johnson's Gardener's Dictionary. This is a new and revised edition, greatly enlarged, of "Johnson's Cottage Gardener's Dictionary," first published in 1846; containing a full and reliable list of every plant in cultivation, names printed in bold type, rendering reference easy. An important feature of the work is the placing of synonyms alongside the correct name, instead of in a separate list. The habitat of each variety is given along with the date of its introduction. The cultural directions are brief and to the point. Insect foes, diseases and their remedies are fully described, and figures of some of the former have been given. Handsomely bound in one volume. \$4.00.

Given for 9 new subscriptions at \$1.00 each.

Landscape Gardening or How to Lay out a Garden. By EDWARD KEMP. Intended as a guide in choosing, forming or improving an estate (from a quarter of an acre to a hundred acres in extent), with reference to both design and execution, with numerous fine wood engravings. Cloth, 12mo. \$2.50.

Given for 6 new subscriptions at \$1.00 each.

Parsons on the Rose. By SAMUEL B. PARSONS. New and revised. A treatise on the propagation, culture, and history of the Rose. Illustrated. \$1.00.

Given for 3 new subscriptions at \$1.00 each.

Practical Floriculture. By PETER HENDERSON. A guide to the successful propagation and cultivation of Florists' Plants. As in every work from this gifted author's pen nothing has been left unsaid that bears on the subject. Illustrated. Cloth, 12mo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Profits in Poultry. Useful and ornamental breeds and their profitable management. This excellent work contains the combined experience of a number of practical men in all departments of poultry raising. It is profusely illustrated and forms a unique and important addition to our poultry literature. Cloth, 12mo. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Strawberry Culturist. By A. S. FULLER. Containing the history, sexuality, field and garden culture of strawberries, forcing or pot culture, etc., fully illustrated. Flexible cloth, 12mo. 25 cts.

Given for 1 new subscription at \$1.00 each.

Success in Market Gardening. By W. W. RAWSON. Illustrated. This work is written by one of the most successful market gardeners in New England, who gives here the results of his life-long experience in the growing of vegetables out-of-doors and under glass, with special adaptation to the climate of New England. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

The Shrubs of Northeastern America. By CHAS. S. NEWHALL, author of "The Trees of Northeastern America," etc. This volume is beautifully printed on beautiful paper, and has a list of 116 illustrations calculated to explain the text. It has a mine of precious information, such as is seldom gathered within the covers of such a volume. Illustrated, 8vo. \$2.50.

Given for 5 new subscriptions at \$1.00 each.

The Rose. By H. B. ELLWANGER. Revised edition. A treatise on the cultivation, history, family characteristics, etc., of the various groups of roses, with names and accurate descriptions of the varieties now generally grown, brought down to 1892. This work contains full directions for planting, pruning, propagating, and treating of diseases, and insect pests, and is particularly valuable for its classification and full alphabetical lists of one thousand and eighty-six varieties. \$1.25.

Given for 3 new subscriptions at \$1.00 each.

The Treasury of Botany. Edited by LINDLEY and MOORE. This is a popular Dictionary of the Vegetable Kingdom, with which is incorporated a glossary of botanical terms. Twenty steel plates and numerous wood cuts. Two parts, Fcp-8vo., 1372 pp. \$3.50.

Given for 10 new subscriptions at \$1.00 each.

The Small Fruit Culturist and Nursery Directory. By A. S. FULLER. This is the first work devoted exclusively to small fruits, and completely covers the ground of propagating, culture, varieties, preparing for market, etc. Thoroughly illustrated, cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

The Art of Propagation. By J. JENKINS. A concise, practical treatise on the rapid multiplication of vines, plants, trees, etc., detailing the management in propagation of seeds, bulbs, cuttings, etc., and the manner of operating in grafting, budding, inarching, etc. Ample illustrated. 30 cents.

Given for 1 new subscription at \$1.00 each.

Tomato Culture. By J. W. DAY, D. CUMMINGS, and A. I. ROOT. In three parts. A valuable treatise, embracing field culture, forcing under glass, and raising plants for market. Of value to any one growing garden truck of any kind aside from tomatoes. 150 pages. Illustrated. Paper. 40 cents.

Given for 1 new subscription at \$1.00 each.

The Nursery Book. By PROF. L. H. BAILEY. This is a complete handbook of propagation of plants treating on seedage, separation and division, layerage, cuttage, graftage, including grafting, budding, inarching, etc. It tells plainly and briefly what everyone who sows a seed, makes a cutting, sets a graft, or wants to know. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

The Amateur Orchid Cultivators' Guide Book. By H. A. BURBERRY, F. R. H. S., orchid grower to the Right Hon. Jos. Chamberlain, M. P. Tells how to grow Orchids, in cool, intermediate, or warm houses, successfully. There is a calendar of operations for each month, and full information as to the treatment required by all orchids mentioned in the book. Just published. New edition, colored plates. \$1.75.

Given for 5 new subscriptions at \$1.00 each.

Trees of the Northern United States. (Their Study, Description and Determination). By Prof. AUSTIN C. APGAR. This handbook is to the trees of its locality what Gray's well-known Manual of Botany is to the other plants. It furnishes a complete key to the wild and cultivated trees found east of the Rocky Mountains and north of the southern boundary of Virginia and Missouri. Preceding the key are chapters discussing the essential organs of trees and terms needed for their description, and the plans and models for tree description. The book is profusely illustrated, handsomely bound, and will be sent to any address on receipt of price. Nearly 500 illustrations, cloth, 12mo. \$1.25.

Given for 3 new subscriptions at \$1.00 each.

The Dictionary of Gardening. A Practical Encyclopedia of Horticulture. By GEORGE NICHOLSON, A. L. S., assisted by some of the most eminent writers in the botanical and horticultural world. The Dictionary of Gardening is the most complete work of the kind ever published; the practical information and botanical classification have been brought down to the latest date, and nothing has been neglected to make it in all respects the standard work on horticulture in all its branches, from the growing of the hardiest plants to the cultivation of the most delicate exotics. It is the recognized authority of the Society of American Florists on nomenclature of plants. Illustrated, with more than 2370 first-class engravings with numerous colored plates of exquisite finish and life-like exactness. 4 vols., cloth, large, 8vo. Prepaid, per volume, \$5.00; complete, \$20.00.

Given for 40 new subscriptions at \$1.00 each.

Vegetables, How to Grow them. By E. WATTS. 40 cents.

Given for 1 new subscription at \$1.00 each.

Vines and Vine Culture. (Considered the best book on Grapes). By ARCHIBALD F. BARRON, ex-superintendent of Royal Horticultural Society's Garden, Chiswick; Secretary of the Fruit Committee. Demy 8vo., handsomely bound in cloth. 3d edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Wild Flowers in Art and Nature. By J. C. L. SPARKES, Principal of the National Art Training School, South Kensington, and F. W. BURBIDGE, Curator of the University Botanical Gardens, Dublin. With 21 full-page colored plates, by H. G. Moon. Handsomely bound, gilt edges. \$4.

Given for 7 new subscriptions at \$1.00 each.

INCUBATORS. Self-regulating. Catalogue free
G. S. SINGER, Cardington, O.
Mention American Gardening when you write.

FARMERS
you can make money by selling and using
HOLDFAST Corn Binders, used on every
shock. Pull and it's fast. Ties itself. Costs
less than string. Never wears out. Thousands
sold in a town. Good profit. Get
town agency. Samples, 8 sizes, mailed
5 cts. **TIE CO.**, Box 441, Unadilla, N. Y.

Mention American Gardening when you write.



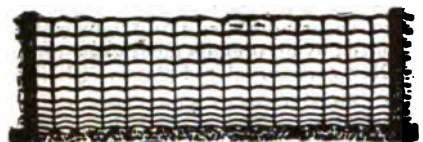
**UNIVERSAL
INSECTICIDE**
For Flowers, Trees and
Animals.

Recommended and in use
by the foremost Florists and
Nurserymen in the land.
Sample 6 oz. packages sent
by mail upon receipt of 25c.

Rose Manufacturing Co.,
Niagara Falls, N. Y.

Mention American Gardening when you write.

600 Second Hand BICYCLES
to close out. All makes, 6000
as new, \$5 to \$12. NEW,
HIGH GRADE, 90 Models,
fully guaranteed, \$16 to \$24.
'97 Models \$20 to \$30. Shipped
anywhere on approval.
Special Clearing Sale.
EARN A BICYCLE
by helping advertise us.
We will give one agent in each town FREE
USE of sample wheel to introduce them.
Write at once for our Special Offer.
M. M. MEAD CYCLE CO., Wabash Ave., Chicago, Ill.
Mention American Gardening when you write.



**You Will Never Miss The Page Fence,
'Till The Cows Break In.**

Many a farmer who has been persuaded to build
one of the many substitutes "warranted just as
good as the Page" has flattered himself that a sav-
ing has been made. Sooner or later the real test
comes, and as the smooth tongued agent is not
present to "assist" with the unruly stock, the vin-
dicky farmer awakens to the fact that his imagin-
ery "savings" have been transformed into an actual
loss, not to mention the "loss of confidence."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write.



If we could teach the
Indians **USE SAPOLIO**
they could quickly civilize them

Mention American Gardening when you write.

"JADOO" FIBRE.

A New Potting Material
A Perfect Substitute for
Earth.

Concentrated "Jadoo" Liquid.

**BOTH MEAT AND
DRINK TO PLANTS.**

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it
increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and
Testimonials, Address

THE AMERICAN JADOO CO.

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

A YARD OF ROSES.



Copyright, 1896, by O. D. Gray, New York.

The illustration but faintly represents the beauty of this celebrated painting by the well-known artist, Mr. Newton A. Wells. The grouping and coloring has been performed with exquisite taste, and the reproduction we offer is worthy a frame, and a position on the wall of any one's room. This sketch, in eleven colors, is 36 inches long and ten inches wide, on heavy drawing paper, and sells in the art stores of New York for fifty cents. We will send "A Yard of Roses," securely packed in a tube to prevent injury, postpaid, as follows:

To all renewing their subscription and adding five cents to pay postage and packing.

To all sending us \$1.00 for their own renewal subscription and 75 cents for the subscription of a friend, we will send "A Yard of Roses" free and postpaid, as a premium to both addresses.

AMERICAN GARDENING, P. O. Box 1697, New York.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 133.
COMBINED SERIES VOL. LI.

NEW YORK, JULY 10, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Akebia quinata..... 489	Conn. Fruit Farm, 486	Jardinieres..... 496	Red Spider..... 494	Window Gardening..... 496
Ants on Lawns..... 487, 491	On a..... 486	Market Reports: N. Y., 497	Rose, Crimson Rambler. 493	
Berry Beds, The Old..... 485	Cucumber Beetle, The 487	Phila., Boston..... 497	Rose Bugs to Destroy.. 491	Illustrations.
Bulletins..... 494	Striped..... 487	Paulownia Imperialis... 490	Small Fruits..... 487	Akebia quinata..... 489
Carbon Bisulphide..... 488	Fruit Garden..... 487	Pear-Leaf Slug - Worm 490	Societies' Reports..... 495	Cucumber Beetle, The 487
Celery..... 486	Fruit Market, The..... 490	The..... 491	Successional Crops..... 486	Striped..... 487
Chicks Dying..... 496	Fruits of Experience.... 491	Poultry Notes..... 496	Strawberries, Summer 486	Paulownia Imperialis, 485
Chrysanthemums..... 489, 494	Greenhouse Heating..... 494	Private Gardeners..... 495	Planting..... 490	Strong Growth of..... 485
Clematis Dying Off..... 480	Home Plot, The..... 496	Questions Answered..... 493	Sweet Vernal Grass..... 486	Wagon, Low Handy..... 492
Clematis Propagating.. 493	Insects Destructive VIII 487	Readers' Notes..... 491	Vegetable Garden..... 486	

The Old Strawberry Bed.

The old Strawberry bed must now receive prompt attention whether it is to be carried over for another fruiting, or not. Any care bestowed now will result in freedom from insect and disease troubles in the future.

The whole country seems to be badly infested with leaf rollers and all sorts of fungi, and for them all the old bed is the finest breeding place in existence; and the rapid increase of the pests is largely due to negligence of such. The idea that these insects have their natural enemies and that therefore we not need concern ourselves must not be entertained, but if the old patch is not to be fruited again it should be plowed under at once. I believe it is far safer to burn it over before plowing, but if this cannot be done, a chain should be attached to the plow, so that not a leaf will be left above ground on which an insect could feed.

If these old beds could be sowed to cow peas, or some leguminous plant, so the ground could be enriched and manure applied during the fall and winter, and then reset next spring, great results would follow. A rotation is much better if it can be had

We practice setting Raspberries or Blackberries after Strawberries, taking care to enrich the ground as described.

Leguminous plants, with liberal applications of potash in the form of wood ashes, or the potash salts and phosphoric

acid as found in bone meal make the cheapest fertilizer. Great results cannot be obtained without plenty of humus in the soil and cow peas furnish this with great certainty. If the fall is sufficiently supplied with rain they will make a great growth if sowed right after the berries are picked.

If the bed is to be fruited again, then as soon as the last berry is picked, mow off the foliage; not too closely however, as it is better and safer to leave stems quite long to protect the crowns. Stir up the mulch so it will get dry and when all is ready and the wind blowing quite hard, apply the torch and burn all black as ink. Then not a leaf eating insect or vestage of fungus is left to tell the tale. If a mulch has not been



FIG. 135.—VIGOROUS YOUNG GROWTH OF PAULOWNIA IMPERIALIS. (See page 490.)

used, apply directly on the row enough straw to secure a good burn. If the wind is blowing quite hard the fire will pass over rapidly and one need have no fears about injuring the plants; plants are only heated when the fire passes slowly.

I have practised this method for many years and have never injured a plant.

Sometimes there are trees, bushes or buildings on the windward side; in that case back-fire, by setting the edges on fire and burning a strip off, then go to the windward side and let the flame go with a rush.

Immediately the fire is out lose no time in cultivating. The pickers have been tramping the ground for weeks and it is in consequence as hard as a rock. Capillary action is perfect and the moisture will pass to the surface, to be carried off by the wind with the greatest celerity, and the ground quickly becomes dry below the roots and the plants perish. More plants are killed by this neglect than by the fire. What plants are killed by fire are too weak anyway and should be destroyed; but the best ones often perish by this neglect of cultivation, and the owner charges all to the heat.

Narrow the row as close as you can by leaving only one plant every ten or fifteen inches. If you have any good rotted manure or other fertilizer, sow it broadcast before starting the cultivator. The new bright green foliage will soon appear, and in two or three weeks runners will start. Cultivate the same way every time and throw the runners around, and when one plant has formed cut the runner off just beyond, and it will soon develop new crowns and be a large plant before the ground is frozen up. This runner cutting is done in a wholesale way by attaching a rolling cutter to the side of the cultivator. It is made adjustable so it will follow and adapt itself to uneven places. A guard raises the leaves so they are not injured. The work can be done rapidly with a sharp hoe. The natural tendency of runners is to go straight out, so as to establish the new plant in open sunlight; they are thus admirably exposed to wheel or hoe for removing.

In no case must one plant be allowed to stand close to another so its foliage will fall over the crown of another plant, as strong fruit buds will not form in deep shade. Give each plant plenty of sunlight, and keep the cultivator going until freezing sets in. It is a blunder to stop the cultivator.

As to whether it will pay to fruit two or three years depends on conditions. If the bed be seeded with grass and sorrel or other weeds not killed by the fire, it will not pay; neither will it pay if a very large and exhaustive crop has been raised; in such a case better plow under at once.

No one can afford to offer the market poor fruit. It is better to have large, fine, rich, firm berries, and these can only be secured from vigorous plants.—R. M. KELLOGG, Three Rivers, Mich.

Clematis Dying Off.

I set out three Clematis (two Jackmanni and one Henry) last spring, following closely the florists' instructions, digging the hole 18 inches deep and 12 inches in diameter, and setting the crown of the roots about four inches below the surface. The plants grew splendidly for about two months and began flowering, when one by one the leaves commenced to droop, dry up and blacken upon the stems. I looked for cut-worms, but could not find any. Soil: Loam hauled from the pasture and filled in about two feet on a clay sub-soil. Drainage good. I wish to plant three more next spring and would be grateful for any additional advice on preparation of soil, etc?—H. J. BOTHE.

From your description of the work the planting was properly done and we are at a loss to know what the trouble can be unless, as does happen occasionally with plants of a similar nature: They grow for a time until they exhaust their own vitality, and having failed to put out roots to produce more energy, growth ceases. Imperfect storage or late planting is usually responsible for this.

The Vegetable Garden.

Celery.—During the continuance of the hot days all celery should be frequently cultivated so as to conserve, as well as to prevent any evaporation of, moisture. Whenever the ground becomes very dry a thorough soaking of water is of great importance, and if water be given at all it must be applied so that the ground is well soaked to a depth of at least six inches. When given in a proper manner the water will reach the roots, which will then withstand drought and grow during the hottest weather without check, and the plants will possibly not need more watering for a month. If watering is impracticable, as unfortunately is often the case, efforts should be directed to procuring a suitable mulch, applying this material between the rows. If lawn rakings are kept they are very suitable for the purpose. Utilize every cloudy day, especially when rain is in prospect, to set out plants for the winter crop.

The melon worm is at times quite destructive, as it feeds upon the leaves and fruit; as soon as detected sprinkle hellebore on the leaves early in the morning while dew is yet on.

The cucumbers should be regularly picked off clean and none allowed to run to seed, otherwise their vitality will soon be exhausted. The larva of the striped beetle is a small worm feeding upon the roots and is about an inch long. The beetle itself is about one-fourth inch long and feeds upon the leaves. The best thing to do for them is to spray with Paris green. This should not be done after fruit is half grown. Keep off all insects on time!

The greyish-green louse frequently attacks the underside of the leaves of both the cucumber and melon plants, especially after a hot, dry spell; it multiplies very rapidly and the first appearance should be carefully looked for. Destroy by pulling up the entire vine, if it be badly infested, or take off the leaves and burn. If a few only are scattered over many vines it is best to bring in the aid of the force pump and spray the underside of leaves with the kerosene emulsion, which kills by contact; hence, it is necessary to cover the whole plant with a fine mist to successfully combat the pest.

The asparagus bed should now be allowed to grow. Encourage growth as much as possible by keeping down weeds and frequent cultivation. By reasonable care and attention the bed should be as good at twenty years of age as at five.

Successional and Constant Crops.—At this season when all the crops are coming in, the individual who plants is judged as to his competency. If he has followed the directions given in these columns, fresh peas, cauliflowers, celery and other vegetables should be had uninterruptedly. We frequently notice in many gardens that crops are coming in together; for instance, a great abundance of peas may be picked one week, none the next, and during this interval possibly there is a large party to be entertained, and plenty of fresh vegetables are called for and expected; but things are "off crop." This is not as it should be and is evidence of mismanagement and want of foresight at planting time. It is much more satisfactory to all concerned to be able to gather, through the season, fresh vegetables in just sufficient quantities to go around. These matters are very easily adjusted by a little study at planting time, and the faculty for this should be constantly exercised and cultivated; for without it success is impossible to attain in any of the many garden operations.

The Gerkim Cucumber for pickling may still be sown.

Egg Plants. Pick off all potato bugs every morning, if possible; otherwise, treat as advised in former issues.

W. M. EDWARDS, Conn.

On a Connecticut Fruit Farm.

The strawberry field meeting of the Connecticut Pomological Society, held June 15, at the fruit farm of President J. H. Hale, south Glastonbury, brought together over 250 of the leading fruit growers of Connecticut and adjoining States. The outing was a complete success from beginning to end, reflecting credit both on the society and the genial host.

To most of the visitors the centre of attraction was Mr. Hale's trial bed of strawberries, containing forty-three of new and old varieties, grown for a comparative test. To say that it was a grand display of vigorous plants, healthy foliage and large, handsome fruit, but faintly expresses it as an object lesson of what the various varieties of berries will do when given the best care and most favorable conditions. It would be almost impossible to pick out from this great mass of fine fruit the best varieties, but several of the newer sorts that promise remarkably well deserve mention.

The Clyde, Mr. Hale's favorite berry, showed a wealth of berries of fine form and size. Tennessee and German ranked first in size, while Brandywine, Glen Mary, Bismarck and Isabella attracted much attention.

Many acres of field strawberries were seen with arrangements for irrigating the same. An interesting sight was made by the big peach orchards, containing about 8,000 trees loaded with fruit, and as many more young trees not yet in bearing.

Mr. Hale's place is beautifully located on high ground, embracing a view of the Connecticut River, the farm being tastefully laid out and excellently cared for. Perhaps the most noteworthy fact on the whole farm is the system of clean cultivation that is practised. The soil is kept loose and friable and not a weed is to be seen.

After a bountiful lunch under the trees the company assembled for some informal speech-making. The Hon. Franklin Dye, of the New Jersey Board of Agriculture, was made chairman. Addresses were made by W. F. Taber, of Poughkeepsie, representing the Eastern New York Horticultural Society; Wesley Webb, of Dover, Del., for the Peninsular Horticultural Society; George A. Rogers, of Boston, spoke for the press; W. F. Allen, Jr., Salisbury, Md., for the nurserymen; Dr. E. H. Jenkins, of the Connecticut Experiment Station, and Professor W. A. Taylor, of Washington, D. C., for the experiment stations; J. M. Hubbard for Connecticut horticulture; Sec. Sessions for Massachusetts; T. S. Gald, of Connecticut Board of Agriculture, closed the speaking.

A vote of thanks was tendered President and Mrs. Hale for their hospitality. A very large addition was made to the membership of the society. The day will long be a memorable one, especially from the fact that it brought together so many of the best-known horticulturists of the country.

Other field meetings are contemplated this season.

Sweet Vernal Grass.

Next fall I shall sow several bushes of lawn grass seed in sandy soil, fully exposed to the sun. The summers are long and hot—drought every year—and in winter no snow to speak of, freezing and thawing being the order of weather. Kentucky blue grass does well here, but does not make as thick a turf as I want. Observing the omission of sweet vernal from lawn-mixture formulas, I wish to know if it would not be a desirable grass with Kentucky blue for lawns in the climate and soil described?—SOUTH JERSEY.

Sweet Vernal is never, or at least should not be, used in lawn mixture, being in no way adapted for such a purpose. Its chief use is among meadow grass in order to give aroma to the hay crop.

Destructive Insects and Methods for Controlling Them.—VIII.

Miscellaneous Notes.

PROF. W. G. JOHNSON.

In this series of articles I promised to give an occasional note upon insects that need special mention at certain seasons of the year. The editor informs me that a subscriber has asked for details about the

Striped Cucumber Beetle.

This is a very troublesome little creature and by its depredations inflicts heavy damage upon the vegetable gardener. It confines its attacks almost entirely to the cucumber, melon and squash.

It is a small beetle, scarcely a quarter of an inch long. It is represented in the accompanying illustration. It is yellowish with a black stripe along the middle of each wing cover and with a narrow black border. These beetles feed voraciously upon the young, tender plants and delight in accumulating on the stem near the ground, gnawing into the plant. The female deposits her eggs in the ground near the stem and roots.

The young hatching from these eggs burrow into the stalk. They complete their growth in about a month. The worm is very slender, whitish and about one-third of an inch in length, as seen in the illustration.

Remedies.

Very many methods have been used for the destruction of this pest, but only one or two are of any practical value. Some persons who do not grow extensively for market protect their vines during the critical time with screens or netting, supported on wooden or wire arches. Some growers resort to driving; that is, they actually drive the beetles from the fields by the sowing of plaster or air-slaked lime. This, of course, must be followed up persistently.

Others apply Paris green and plaster at the rate of one pound of poison to 75 or 100 pounds of plaster, and dust it upon the plants. Tobacco dust can be used to good advantage about the base of the plant to keep the females from depositing their eggs.

Some growers use hard-wood ashes for the same purpose. Ashes or sawdust saturated with turpentine or coal oil will also repel the beetles to a certain extent.

Remedy for Ants in Lawns.

Some readers of American Gardening of June 19 asked for a remedy for ants on lawns. Ants or any other subterranean creatures can be destroyed by the liberal use of bisulphide of carbon. This is a foul-smelling substance, as clear as water, very volatile, the fumes of which are heavier than air. Its fumes create a death atmosphere in which insects cannot live.

In applying this material in lawns where ants are numerous the main runways or galleries should be ascertained; then saturate a small bunch of cotton with the bisulphide and thrust it into the hole, which should be heeled over. The fumes will penetrate the burrows and destroy the ants. It must be borne in mind that this substance is inflammable and no lights should be in its vicinity.

A grade known as "Fuma Bisulphide of Carbon" can be bought in 25 and 50-pound cans for about ten cents per pound, or in smaller quantities for a little more per pound. A can of this should be kept on hand constantly and whenever the ants show a burrow at the surface of the ground they should be treated as described.

The same remedy is an excellent one for moles. Their runways, when they enter deep into the ground, should be found if possible and the bisulphide and cotton applied as indicated above.

Roses Under Glass.

When we have finished planting it is then that rose growing commences in real earnest. To be on time and watch the proper requirements of our plants constantly will not only repay us now, but likewise in the future.

When visiting florists who have had rather poor success in growing roses, I am under the impression one of the chief causes of their trouble is improper ventilation. I believe I am right in saying that ventilation is not as thoroughly understood as it should be by many and that more err on the side of not giving enough than too much. It should be borne in mind that although a rose grown under glass needs the most careful and painstaking treatment, still that should not be construed into meaning coddling. Knowledge, experience and courage are three things that we must possess to ventilate properly. In visiting different establishments I notice quite a number of growers close up their houses at quitting time, no matter what the state of the weather is, while others, if it be warm, but cloudy, with a little breeze blowing, will either close ventilators up tight or have such a small particle of air on, that the atmosphere inside becomes too humid. I have asked quite a number why they don't use more air, and was invariably told that they are

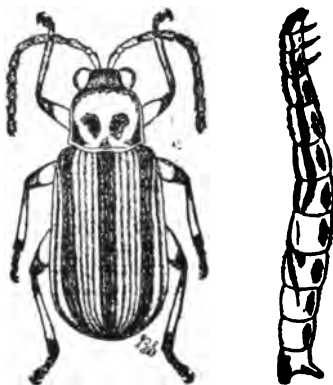


FIG. 135.—THE STRIPED CUCUMBER BEETLE AND LARVA. (MAGNIFIED.)

afraid to. What there is to be feared from the warm, summer air is a conundrum to me.

It may be well for me to mention here that it is very possible (in fact, I have seen it done) to produce a very pretty-looking house of roses during summer by keeping the plants rather close and shady, likewise by using a mulching of manure; but they most generally cut a very sorry figure when the sun begins to lose its power in the fall. The leaves fall and the plants become so sickly that they are an easy prey to various fungus diseases, consequently what few flowers are cut are very inferior in size, texture and color. While others that have been brought up with an iron-clad (if I may term it) constitution as soon as more artificial means are brought into play in the fall, instead of going backward, quickly respond to these means, and an improvement on nature then commences. Every successful grower fully realizes the vast importance at this time of the year of storing up vitality in his plants to tide them over the bad days of early winter.

I am a great advocate of lots of fresh air and a circulation through the plants at all times. As stated before, there are still some who don't seem to grasp its great virtue. During the warm summer time I keep all the air on possible, night and day, reducing only when rain, wind and thunderstorms occur, according to the severity of these; also in sudden cooler changes in the atmosphere. I do not know of any other plant that is more susceptible to sudden changes of temperature, or, in fact, checks of any kind, than the rose; hence the necessity of constant atten-

tion. It sometimes happens a storm comes up in the night during our hottest weather, then the sooner we close up for the time being the better. As far as wind blowing directly on the plants is concerned, I don't like it, if it causes a draught or strong, dry-air current; still, I like to see a breeze gently waving the bushes to and fro.

Now, I would not advise, where plants have been kept close and properly shaded, to give them the treatment I advocate right away; better gradually accustom them to it by giving a little more air each day and partly removing the shading, until in about three weeks' time clean glass is reached.

It is a mistake for us to go by date or season as regards heating, ventilating and watering. To go by outside conditions day by day, as they occur, is proper; at least, I have always found it so.

This season has been a very remarkable one in this section—almost continual northwest winds, accompanied by cold nights, the thermometer often going down as low as 45 degrees. This has not only necessitated reducing our air to about two inches, but firing also has had to be done.

It is no uncommon thing to hear some say that they either cannot afford, or it is too expensive to give a little gentle heat to roses during summer when needed. For the little extra outlay and the great benefit derived therefrom, my conclusion is that people with no larger reasoning powers can make but a very poor showing as rose-growers.

Surely, this season has taught many a lesson about mildew. H. H.

The Fruit Garden.

Raspberries.—Superlative is doing well; the first picking from it was made June 23. Looking over my other kinds, it will be a week or ten days before the first of them will be ripe.

Japanese Wineberry.—If you don't want it as a fruit, buy it for an ornamental shrub. There are many less attractive plants on the lawn just at this season, especially when a brisk breeze shows the silver underside of the leaves, mixed with the dark green of the upper surface. These, with the large bunches of the red, hairy calyx, which covers the fruit until ripe, make it a taking plant at this comparatively dull time among shrubs.

Strawberries.—I revert to these again to fulfill my promised note as to which would finish best—Marshall or Brandywine. My preference now, July 2, is Marshall.

Grapes.—The bagging should be completed. It is of no advantage to bag when the bunches are half-grown. I find it well to have two people at the work, one puckering up the mouth of the bag about the stem of the bunch, holding the bag by thumb and forefinger, while the other makes a tight tie about it, directly below the first man's fingers.

Rubus sorbifolius.—The strawberry-raspberry has a rather tough appearance just now. Who has found it a satisfactory fruit?

Gooseberries.—The Downing is small when compared with Industry, yet it is the best berry for cooking.

Currant Worms.—These will crop out several times this month on the currant and gooseberries.

J. HOLLOWAY, L. I.

Cape Fruit.—The Afrikander has entered the lists against the American fruit exporter in the English market and the trade is steadily growing. The months of January and February saw in London several tons of peaches, nectarines and pears from the Stellenbosch district. This was followed by extensive shipments of grapes from the Paarl, Wynberg and Constantia districts, the average shipments per week for the last three months amounting to two tons.

Bisulphide of Carbon.

I should be glad of space in your valuable paper to give your numerous readers my experience, also the experience of others in the use of this, one of the cheapest and the most destructive of insecticides.

Considering the continual increase of insect pests and the enormous amount of damage done annually by them, it behooves every one to consider the best and cheapest means of exterminating them. They are our common foes, causing annually millions of dollars' worth of damage, and all persons who can should assist as far as possible in their destruction.

Bisulphide of carbon, a compound of sulphur and carbon, formed by passing sulphur fumes over superheated charcoal, is a clear liquid heavier than water, and volatilizes with great rapidity. The vapor is more than two and a half times heavier than air; and from its inflammable nature its manufacture is accompanied by no slight danger. The vapors are also unwholesome and their entire confinement is quite impossible. From these causes the liquid retails at a high price. If purchased from the manufacturer, Mr. Edward R. Taylor, Cleveland, Ohio, in 50 or 100-pound cans, it can be purchased for about 10 or 12 cents per pound, including the can. The freight rates would be the same on 50 or 100 pounds.

The vapor from this liquid is a most powerful insecticide. It is superior to ether, chloroform and gasoline, and far less expensive than the first two, and no more dangerous to use than the last.

Storing.

All receptacles that contain bisulphide of carbon should be kept securely corked and placed in a shed or outhouse away from fire or light, and should never be kept in the house; neither should the vessel be uncorked nor the substance handled in any place where there is a lighted lamp, candle, match, pipe, cigar or fire of any description. While using it care should be taken not to inhale the fumes more than is possible.

Use in Buildings.

In buildings, houses, mills, granaries, etc., the structures should be made practically air-tight by stopping all crevices, and when sufficient time has elapsed for the gas to complete its work all doors and windows should be opened to allow the vapor to escape, and no light of any kind should be admitted till all smell of the gas has escaped.

Insects in the Ground.

To destroy insects in the ground it is well to have a piece of gas pipe, about three feet in length and two inches bore, into which is fitted a round plug pointed at the end and six inches longer than the tube. By inserting this instrument into the ground and then withdrawing the plug, the bisulphide can be poured down the tube, which is then at once withdrawn and the hole immediately stopped so the gas will permeate through the soil and kill every insect within range. The grape phylloxera, a minute plant louse, which attacks the roots of the grape vines, may be destroyed by making holes 10 to 16 inches deep, one and a half feet apart, and one foot from the base of the vine, putting into each hole about one ounce of the liquid. One dose will generally suffice. It takes from 175 to 300 pounds per acre. Apples, pears, peaches and other fruit trees can also be similarly treated for root insects.

The same quantity as named above, if put into holes made in ant hills, is successful in its effects; for prairie dogs, gophers, etc., one pound will be enough for twenty-five holes. The liquid may be poured directly into the holes or poured upon some cotton waste, previously tied to a piece of stick, and that pushed well down into the hole, which should be quickly closed to.

For ridding mills, granaries and other buildings of insects, mice, rats, etc., the windows and all other outlets should be made as tight as possible. Have a ladder reared against the outside of the building and reaching to a top story window; upon the floor of each story place a pan or dish capable of holding sufficient liquid and commence with the lowest floor. Take the can of sulphide, go inside, close the door, pour a portion of the liquid into the pan, go up to the next story, do the same, until you reach the top one, then get out upon the ladder, close the window and the business is completed. One pound of liquid to each 100 bushels of grain will be enough; still several pounds may be used without injuring the grain; infected grain is generally subjected to the bisulphide treatment for twenty-four hours; but may be exposed much longer without harming it for milling purposes. If not exposed for more than thirty-six hours its germinating powers will be in no wise impaired. Badly infested buildings should be treated about every six weeks in warm weather. After fumigating and before entering the building again the doors and windows should be thrown open and no one should be allowed to go in until all odor of the gas has escaped.

Seeds.

The large seedsmen are using this liquid to kill the weevils in peas and other seeds; they have houses (bug houses) made air tight, which they fill with sacks of peas, etc. An air-tight flue at one end opens at the very top, into the building and at the bottom out of doors. A sort of shoot with an adjustable air-tight valve is arranged to facilitate the turning in of the liquid, which is continued till the odor shows that the vapor is pouring out at the bottom of the flue. It is then, of course, they know that the air has all been forced out by the vapor, and the valve is closed and left for three days, when the doors are opened and the weevils, rats, mice, etc., are found dead.

Bisulphide of carbon may be poured upon the surface of flour in a barrel so as to kill all the insects that may be in the flour; it will not injure the flour for eating purposes. The barrel should be covered with something to keep in the fumes for an hour or so—a piece of oil cloth, oiled paper, or some such thing.

A Fumatorium.

Would it not be a good plan for every florist and seedsmen to have constructed an air-tight building into which could be placed manure or soil for the greenhouse benches or potting; also flower pots, rustic vases, pot plants, flowering shrubs, etc.; these could all be treated by the fumes of bisulphide of carbon. For every ton of manure or soil, one pound of the liquid placed in a basin or saucer will be sufficient. Leave the place closed for two or three days, according to quantity of material. Pot plants, etc., can be treated with a proportionate amount, according to quantity of plants.

Treating Bushes and Trees.

In treating currant bushes, gooseberry trees, raspberries, strawberries, tomatoes and other growing plants: Construct a small bell-shaped tent, with iron hoops or canes, and upon this frame fasten oiled canvas or thick paper; fix a wire hook to hang from the top of the frame inside, pouring a small quantity of the bisulphide into a little toy bucket hung from this. With the handles at each side the tent can be carried along and placed over the bushes or plants. The tent should be made so it will fit close to the ground, and if carefully lifted from plant to plant there need be but little waste of liquid. The tent should remain over the trees for five, ten or fifteen minutes; a great many subjects can be treated in a short time, and all insects, caterpillars, grubs, worms, larvae, etc., destroyed.

Other things.

Carpets, blankets, boxes full of clothes (with the lids open) and any household materials such as furs, skins, museum articles, stuffed birds, animals, etc., placed in a room for a few hours and treated with the fumes from bisulphide of carbon, will be effectually freed from all insects.

G. M. STRATTON.

Effect on Seeds.

In relation to the foregoing we reprint the following:

The Vitality of Seed Treated with Carbon Bisulphide.—Circular No. 11 of the Division of Botany, Department of Agriculture, deals with some experiments that have been made for the purpose of testing the vitality of seed treated with carbon bisulphide, looking to the use of this material for the extermination of weevils and other insects that infest grain.

The common remedy advised by entomologists for destroying seed-infesting insects is to treat the seed for twenty-four hours with the fumes of carbon bisulphide at the rate of one pound to the hundred bushels. This chemical when pure is a colorless liquid with a pleasant odor. Upon exposure to the air the carbon and sulphur composing the liquid are separated, each uniting with oxygen, for which they have a stronger affinity than for each other. Thus are formed carbon oxide and sulphur dioxide, the latter being a very poisonous gas with a disagreeable odor. The statement is made that seed grain may be exposed to these fumes for thirty-six hours without injuring its germinating capacity.

The length of time seeds must be treated with the fumes of carbon bisulphide depends not only upon the resistant power of the insect, but also upon its method of attack. In the case of the pea weevil the larva is embedded within the immature seed, becoming entirely surrounded by the seed coat during its development, hence a treatment prolonged over twenty-four hours may be necessary to destroy the weevils.

Seedsmen treat peas and other "buggy" seeds on a large scale by placing the bags containing the seeds in a fire-proof, practically air-tight building devoted to that purpose, setting shallow pans holding carbon bisulphide in various parts of the room near the ceiling. After being thus subjected to the fumes for about twenty-four, sometimes as long as forty-eight hours, the room is opened and thoroughly aired.

Some writers have advocated pouring the liquid through a pipe inserted into the centre of the bulk of seeds; others suggest the use of a ball of cotton, soaked with the chemical and plunged into the middle of the pile of seeds. Both of these methods are open to objection owing to the fact that the liquid comes in direct contact with some of the seed which takes it up readily, rendering such seed extremely liable to injury from the water which is left behind, if not from a superabundance of the gas itself. Furthermore, carbon bisulphide is a very heavy gas and the upper stratum of seeds treated in either of these ways is likely to receive too little of the fumes to destroy the insects.

The department's experiments were made with thirty-three different varieties of grains and vegetables, five of cotton, two of peas, three of Indian corn, two of rice, two of common garden beans, two of Kaffir corn, two of barley, two of wheat, one of oats, etc. In all the experiments only sound seeds were taken, being, so far as possible, from a single stock in each case. Two lots of treated seeds, each containing 200 seeds of the larger species and 100 of the smaller kinds, were used. Similar lots of untreated seeds were employed as checks.

In the first series of experiments the seeds were placed in shallow glass vessels, resting on a plate of ground glass

covered with a bell jar containing a saturated atmosphere of carbon bisulphide. At the end of forty-eight hours the seeds were transferred to the germinating chamber, in which were placed also the check lots of untreated seed.

The following seeds were uninjured by this severe test, the germinating percentages of both treated and untreated seed being practically the same: Peas, cotton, beans, Kaffir corn, buckwheat, turnip, cabbage, cauliflower, pumpkin, cow-pea and oats. It is safe, therefore, to conclude that none of the ordinary methods of treating these seeds with carbon bisulphide will impair their vitality.

On the other hand, the germinative ability was decreased in barley, rye, wheat, corn, crimson clover, millet and rice, the difference between the treated and untreated seed varying from 85 per

the forty-eight hours' treatment were then subjected to another test of twenty-four hours' duration. Some of the varieties suffered no deterioration whatever in vitality with the twenty-four-hours' treatment, while there was a marked decrease in the amount of injury in all of them.

Rye proved the most susceptible to injury, with a difference of 41 per cent. between treated and untreated seed. Millet showed 17.5 per cent., barley 11 per cent. and crimson clover 6.5 per cent. difference. All differences in germination tests amounting to 5 per cent. or less may be attributed to variation in the quality of each lot of seed used, and no conclusions should be drawn from them with respect to the effect of the treatment.

In order to ascertain whether similar injury to the seeds named in the foregoing table would result from treat-

In general, seeds of cotton, peas, beans, buckwheat, oats, the cabbage family and cow-peas will endure the most severe treatment with the fumes of carbon bisulphide without their germination being injured to any appreciable extent. On the other hand, seeds of corn, wheat, rye and other crops belonging to the grass family (except Kaffir corn and oats) should be treated with caution, as serious deterioration in vitality is likely to result from excessive exposure to the gas.

Akebia Quinata.

The accompanying illustration represents a branch of this very useful Chinese twining evergreen shrub. It is most valuable as a trailer on a trellis, fence, porch or such like arrangement and is very hardy. Left to itself it soon attains a growth of from twenty to forty feet, and once established, which presents no difficulty, it can thereafter be left to itself.

The long, slender shoots, with their gracefully-formed leaves of five leaflets, add to the elegance of any place over which it rambles. The flowers are peculiar and while not very conspicuous are interesting; they are of two sizes, fragrant, of a claret purple color, and are produced in drooping racemes.

Chrysanthemums.

Shading.—Many people think that when a house is newly planted it should be shaded until the young plants get established; but such treatment is apt to be more harmful than otherwise. It might do good where the plants cannot get much attention in the way of syringing, but it will induce a long, sappy, soft growth and the only way to get a big flower is to build up the plant from the ground with a close-jointed, richly-clothed stem, finishing in the fall with foliage like leather and a stem hard as nails.

Ventilation.—When the house is planted throw open the ventilators, doors, sides and everywhere you can and keep them so both night and day. The atmosphere should be kept charged with moisture by spraying over the plants, roof and floors, five or six times during hot days and scald will not amount to much except where there are bad spots in the glass.

Watering Benches.—The soil should be kept just moist enough to allow the roots to work, but not by any means saturated, or the soil will sour and the plants begin to lose that dark, healthy gloss, the sure sign of health and good digestion.

Planting, if not yet finished, should be done as soon as plants are in fit condition. Do not let them get pot-bound in such a small state, for that only means a check which the plants can do very well without.

Vivand-Morel.—This very fine variety is, with me, addicted to the habit of throwing a bud every three weeks or so, and I believe the best way to handle it is to strike it about the first week in July and grow straight along. Late-rooted plants only produce terminal buds, and this is one of the few varieties that produce better colored flowers from the terminal than the crown buds, the crown bud flower being, as a rule, pale and of a dirty white color.
C. TOTTY, N. J.

Peanuts grow in large quantities on the northwest coast of Africa, but are known there as ground nuts. They are dug up by the natives and bartered with the European traders for merchandise, tobacco, etc., at many places on the Gambia River, and afterward shipped in steamer loads to European ports, principally to Marseilles. The nuts are not roasted for retail sale, as in this country, but crushed and a fine oil extracted, which is valuable commercially.



FIG. 137.—AKEBIA QUINATA.

cent. in the case of rye to 9 per cent. in the chalky rice. With the exception of crimson clover, whose seed is much more tender than that of other clovers, all of the injured kinds belong to the grass family, oats alone of this group showing no injury. This resistant character of the oats is easily explained from the nature of its covering.

This method was an extreme one and represents conditions which would probably never be attained in actual practice. Here each seed, being exposed to a thoroughly saturated atmosphere of the chemical, had ample opportunity to imbibe as much of the vapor as it was capable of retaining. It is reasonable to suppose that seeds whose vitality was not affected by a forty-eight-hour test of this kind would be in no danger of deterioration in this respect from any treatment given them in ordinary practice.

The varieties which were damaged by

ment in bulk, one bushel each of wheat, rye, barley and field corn were subjected to a second series of experiments. One bushel of each kind of grain was placed in an air-tight bin for twenty-four hours. Upon the surface of the grain were shallow glass vessels containing carbon bisulphide in the proportion of one pound to one hundred bushels, as recommended by the Division of Entomology of this department. At the close of the twenty-four hours lots of each variety of seed, both treated and untreated, were germinated in duplicate.

As a result of these experiments the following conclusions are arrived at:

No appreciable difference in the vitality of wheat, corn, barley or rye results from treating the seed in bulk with carbon bisulphide for twenty-four hours at the rate of one pound of the chemical to one hundred bushels of the grain.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 35 cents per square line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

**** It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.*

The Fruit Market. WHILE it may be early as yet to speak with any great degree of certainty as to the prospects for the present season's fruit crop, yet there are certain features that demand attention. We naturally have our greatest concern and interest in the welfare of the Eastern fruit grower. His crop prospects this year are generally very good, and as a corollary his prospects as regards prices realized will depend solely upon how he markets his produce.

Californian fruit will this year be put upon our markets in considerably larger quantities than it was last year, as reports from the Pacific coast inform us of a much greater yield over a larger area. Already the growers of the district are alarmed over the prospect of low prices, and are bringing pressure to bear on the railroad companies to secure lower rates for transportation.

"Coming events cast their shadows before," and as evidence of the coming flood of California fruit on the New York markets reference can be made to the statistics to hand for the past week when 50 carloads were sold as against 30 for the corresponding time of last year, making a total of 174 carloads to date, as against 106 carloads during a like period of a year ago. The full significance of the foregoing figures is not on their face value, since it must be remembered that this year has been cold so far and the calls for fresh fruit are not so great in cold as in hot weather. The shipments of cherries up to the middle of June were 2,769,020 pounds, more than twice as much as the entire shipments of last year, and more than the total shipments of 1895.

So much then for the conditions. How are they to be met? There is but one way out for the home grower; it is the old story, yet cannot be too often impressed: Grade strictly and pack well. It is the worst folly to endeavor to pass off a few poor specimens in a lot of otherwise first grade fruits, for the wholesale buyer is trained to detect such and naturally bases his offer on the worst seen. Strict grading as to size is of as great importance as quality and condition, and uniformity in all respects must be striven for.

Canada and the U. S.

The Dominion Government purposes to at once introduce a measure in Parliament to prohibit the importation from the United States of trees and shrubs and certain classes of fruits. It is asserted that the introduction of the serious pest, San José scale, is the result of such importations from the United States. A convention of the horticultural societies was held at Hamilton recently to urge the necessity of taking legislative action to prevent the spread of the San José scale among the fruit orchards.

If the proposed legislation is enacted nursery trees from the United States will be excluded from Canada; and, as the scale also affects fruit, the fruit growers demand that the importation from infected States of fruit shall also be prohibited.

Victorian Medal of Honor in Horticulture has been instituted by the Royal Horticultural Society of England as a memento of the Queen's Diamond Jubilee. It will be awarded to persons who have rendered distinctive service to the cause of horticulture in any of its numerous branches—botanists, cultivators, hybridizers, introducers of novelties and writers are equally eligible, and not more than sixty medalists shall exist at one time. The distinction thus to be bestowed will, therefore, create a hallowed circle, to which admission will be a much-coveted honor.

The routine of the Government has its effect on high and low alike in the Federal service. According to the Washington correspondent of the New York Sun, one of the employees under the White House gardener is assigned to the duty of watering the flowers and lawn in front of the mansion at a certain hour every afternoon. It was raining hard at the regular time the other day, but the assistant gardener followed custom. He calmly arranged a hose, indifferent to the downpour, and then walked around the flower beds sprinkling the drenched plants.

Paulownia Imperialis.

The illustration on page 485 shows one very satisfactory way of treating this tree. The growth represents is that of two months only and where a tree is not desired, but only rich foliage effect, such can be had by annually cutting the growth to the ground, the stump then throws up strong shoots which develop large leaves and are highly decorative in many situations, as on the margins of a lake. Our photograph is from a specimen in the gardens of Hon. Gardiner G. Hubbard, West Washington, D.C., and was communicated by the gardener, Mr. P. Bisset.

Strawberries.

Summer Planting.—Varieties.

I was interested in your report of the American Institute Horticultural meeting on June 8, as published in your issue of June 19.

Mr. Dwyer gives some excellent points in relation to strawberry culture, but I shall take issue with him as to the general profitableness of summer planting of strawberries on any extended scale for market. The plants cost too much and unless one has a liberal amount of water it is seldom that a good stand can be secured.

At his estimate of cost, 2½ cents per plant, to secure a profitable fruit crop next year one would need 20,000 plants per acre, which would make first cost of the plants \$500, altogether too risky an investment, when the plants for setting an acre can be bought in the spring for from \$18 to \$25.

Summer planting is all right for a family garden, where it was neglected to plant a bed in spring, or for the purpose of getting a few fancy, showy berries; but for market culture not one person in a hundred is so situated that they can afford to buy plants and embark in the business by mid-summer planting.

In the way of varieties, Mr. Dwyer's experience is that of all the rest of us: that strawberries are a good deal like "white folks," mighty "unsartin"—they do well under certain conditions and break down entirely under others. His list of Marshall, Brandywine and Parker Earle as the three leading varieties would be way off for this section of the country. In my trial bed of forty-three varieties this past season Marshall was the least productive of any variety I had, and while Brandywine was large and fine, it was inferior in yield to at least six others.

In my ground this year for productiveness and large, uniform size, Clyde was way ahead of anything else, Parker Earle and Tennessee second, Isabel and Haverland third, Glen Mary, William Belt and Greenville fourth, Bismarck, Oriole and Ideal fifth, Brandywine and Michigan sixth.

Columbian and Michel's Early were the earliest to ripen; Michigan and Princeton Chief the latest. German, William Belt and Bismarck were my largest berries, Crescent and Beeder Wood the smallest. William Belt and German were the highest flavored of any, while the Ideal for uniform, typical strawberry shape, rich, glossy, red color, and sprightliness of flavor, although somewhat acid, certainly deserves the name of "Ideal."

J. H. HALE.

Manhattan (Kan.) Horticultural Society met at the home of Rev. R. D. Parker, in Manhattan, on June 24. Rev. Tunnell read an interesting paper on "What I Saw of Horticulture in California." President Fairchild gave a pleasant talk on "Reminiscences of Horticulture" and Mrs. Sam Kimball read a very practical paper on "What Boys and Girls Can Do on a Fruit Farm."

Heavy winds and hail have injured the fruit in places.

Georgia State Horticultural Society will hold its annual gathering at Savannah on August 4 and two following days.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

How to Get Rid of Rose Bugs.—Mr. L. F. Horner inquires in American Gardening of June 19 for some effective way of destroying rosebugs. The simplest and most effective way I have ever found is to plant a Clinton grape vine. For some reason this is peculiarly attractive to the little pests, so much so that I have often found my Clinton vine swarming with them when other varieties of grape in the immediate vicinity were almost unvisited by them. And, as the Clinton grape is almost worthless, one can well afford to use the vine simply as a trap for the rosebugs. For gathering them thus in large numbers upon a single vine it is very easy to destroy them with great rapidity by holding a cup of hot water underneath and by a slight disturbance of their feeding ground, causing them to lose their hold and drop into it.—W. H. W.

Ants on Lawn or anywhere else can be very easily and quickly killed in the following manner: Find their nest and make an opening into it or into the ground near it with a small, round stick. Into this opening pour a tablespoonful of bisulphide of carbon and the work is complete. If the ant nest be a very large one and occupied by thousands of ants, as is the case quite frequently in the South, more than one tablespoonful of the liquid may be necessary. The bisulphide is also excellent for killing ants and other insects in greenhouses and dwellings.—C. S. NEWMAN, Ark.

Struck the Key Note.—You struck the key note in your recent article entitled "Arouse Ye." How often do we see grounds surrounding a nice, well-built cottage, all growing up in weeds, and, worse still, some part of it used as a dumping ground for all kinds of rubbish. We may well ask the question why is it? And not only is this the case in the city, but in the country, where we have Nature, the master gardener and florist, to teach us, we find the same condition of things, and why? Some there are of the "I don't care" kind, who would not know a cowslip from a telegraph pole, and who would just as soon have their surroundings a swamp as anything else; but there are others who do not improve their home grounds for the reason, as they think and say, "I don't know how; I am not a gardener, and can't afford the cost of getting one to do the work." To all such I would say, as Lawrence said, "Don't give up the ship," for you will be surprised if you make an effort to improve and refine your surroundings how much you can accomplish even if you don't know how. My advice would be, watch and follow nature, for the nearer we can copy her the greater are our results. I have in my mind now a small lot that is tended entirely by a lady; the cost of flowers and other plants does not amount to four dollars a year, and yet it makes her home and surroundings attractive and home-like. What one has done others can do.—F. C. R.

"To criticize is easy" (page 442, third column) from your own standpoint. Very seldom does the critic know all the facts in the case, however, and therefore "criticism" is of little value except to draw out an explanation of conditions and personal practices. If these do not agree with the old-established

usages the writer is denounced as a humbug, or as a crank, a liar, or a fraud with an axe to grind; never as a person desirous of helping others in the same line of business as himself. Methods must necessarily vary with locations and conditions, and there can be no set rules laid down that others can follow implicitly, even on the same land year after year. Intelligence and judgment of the highest order are really imperative to secure the ideal result. Alas! how often we fail! Even those that are quoted as "authorities" fail to be successful at times, but those failures are not paraded before the public, lest they deter others from trying. Examples or object lessons are the most potent factors in inducing a change in the surroundings of the usually unkempt appearances of the average home grounds. How few own them! Make improvement the fashion and a rapid change will soon be apparent; enlist the attention of the younger people, even of the small children, to the improved fruits, flowers and vegetables by exhibitions and "talks" (not lectures) on the subjects, with a distribution of seeds and plants in the spring (Arbor Day, for instance). Seedsmen send out free samples of novelties; why should not the florists send each school district small packets of the cheaper flower seed to create an interest in floriculture as well as horticulture? Apply the government seed distribution to this purpose instead of using it for a political pull. Surplus copies of the horticultural and agricultural papers could be used with good effect; even a sample copy to the teacher, requesting reading before the scholars instead of the usual request to subscribe, would do very well. One other thing: The suppression of articles reflecting upon the veracity of writers who have an understanding of the capability of the production of soils and its offsprings.—H. SNYDER.

Strawberry Col. Cheeney.—Will R. C. P. (page 459) please tell us where he gets his Colonel Cheeney strawberry plants? I have searched the catalogues for them in vain. Is the variety ever called the Kentucky?—M. J. B., Mich.

The Pear Leaf Slug Worm.

The worm injuring the leaves of quince trees sent by W. E. F. is known as the "pear slug" (*Selandria cerasi*). It feeds on apple, pear and cherry, as well as on quince. This insect passes the winter in the ground in what is called the pupa or resting stage. It issues from the ground as an adult insect during the months of May and June. In the adult form it resembles a fly and is called a "saw-fly," but it is more closely related to the bees than to the flies. Soon after issuing from the ground the adult fly commences to deposit her eggs in small incisions which she makes in the leaf tissue with her ovipositor or saw. The eggs hatch within a week or ten days after being deposited. The worms or slugs, as they are usually called, feed for about two weeks, when they enter the ground and go through the resting stage. Here they remain until the latter part of July, at which time they issue as the second brood of adults. The second or last brood of worms passes the winter in the ground in the resting stage. The worms simply eat the parenchyma or green portion of the leaves. This causes the burned appearance of the leaves. Trees rarely die from the first attack of this pest, but they have to put forth a new set of leaves and are weakened as a result. Continued attacks will kill the trees. Spraying with Bordeaux mixture, to which Paris green or London purple is added at the rate of four ounces to every barrel of the mixture used, is the most thorough and practical method of destroying this pest. Hellebore or "slug shot" blown onto the trees in powder form will destroy many of the worms.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

The garden rake is a valuable tool to use among raspberry plants. We are now using it to kill the fine weeds just appearing on the surface of the ground, and at the same time to leave a "dust mulch." It is a pleasure to look down between the rows after the garden rake has passed among them and see the smooth, strictly clean and even surface, the green and luxuriant foliage responding to the extra cultivation given.

During the growing season a straw or "dust" mulch should be left between the raspberry rows; the latter is to be preferred if kept stirred once each week during the drouthy part of the season.

A plantation of strawberries here has been cultivated seven times since being set last spring. The strong, heavy growth and glossy leaves during this dry spell prove that there is big profit in cultivating often.

A sharp hoe for keeping the red raspberry suckers cut off.

The average price for strawberries this season has been low, but the large, showy varieties and those grown in hills have brought a fair price in the home market, but many growers in Michigan have not received satisfactory returns from shipments, especially to large cities.

Happy is the small fruit-grower who has "worked up" a good home market, and by strictly fair and square dealing holds it.

From my own experience as regards strawberries, my home house-to-house market has brought in the best results.

C. has not removed the old canes from his black raspberries. What a nuisance in the way of cultivating and hoeing and a propagator of disease! He tries to farm and grow fruit at the same time, and doesn't make a success of either, although he is an industrious and enterprising man; he has "too many irons in the fire."

June 29; strawberry-picking is now practically over, and we will run a mowing machine over the patch, let all dry, scatter a little straw on the thinnest spots and burn.

After fruiting, pull up the pea vines, work up the ground well, level off with a weeder (or, if the patch is small, the garden rake can be used), and there is a good plot on which to sow late turnips. Sow broadcast, and rake in.

Excellent greens—the beet and radish leaves cooked with a small piece of salt meat.

A lady near Jackson, Mich., grew, picked, "cured" and sold thirty dollars' worth of the large English broadleaf sage from not more than a half-dozen rows each about 10 to 12 rods long. The market was among butchers and druggists.

So often should the surface be worked over among onions that the smallest weed will not be allowed to appear.

Horticulturists are sowing more green peas this year than at any other previous time to plow under for a fertilizer. Experiments with them last year are proving very satisfactory in the extra growth of small fruit plants where they were plowed under.

B. says lime (air slacked) is a good remedy for the leaf roller on spring-set strawberry plants.

The articles in American Gardening on "Destructive Insects and Methods of Controlling Them" will be of much value to the amateur who wishes to keep his fruits, etc., in the finest shape.

Tariff or no tariff, the weeds will get ahead of us unless we keep them down. June 29th; Farmer raspberry is coloring up for ripening.

Princess strawberry was of good size this season. CHARLES NASH.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send stamp for our new catalogue.

Preservation of Farm Profits.

Anything that will save labor will save money. The difference between the high lift necessary to load a wagon on high wheels and the labor required to load the Low Handy Wagon represents so much vital force and physical energy. The man who saves that energy and force, other things being equal, will live longest. Why do a thing the hardest way when there is an easier and quicker way?

The cut shown herewith represents a modern Low Handy Wagon, which is being supplied by our advertising patrons, The Electric Wheel Co. of Quincy, Ill. These people manufacture the wheels themselves and are supplying the gear at cost in order to introduce the wheels, which are of the modern wide tire pattern, with staggered oval steel spokes. The Electric Wheel Co. also make wheels that will fit any wagon you may have on hand, or any cultivators, drills, cuts, etc.

A Plea for Garden Roses.*

(Continued from page 472.)

Insects and Diseases

And now for the insects and diseases. These could be dilated upon to a wearying length and then all that might, could or should be said would not be said, so I will be as brief and concise as possible. The first in the animal line is green fly. This is one

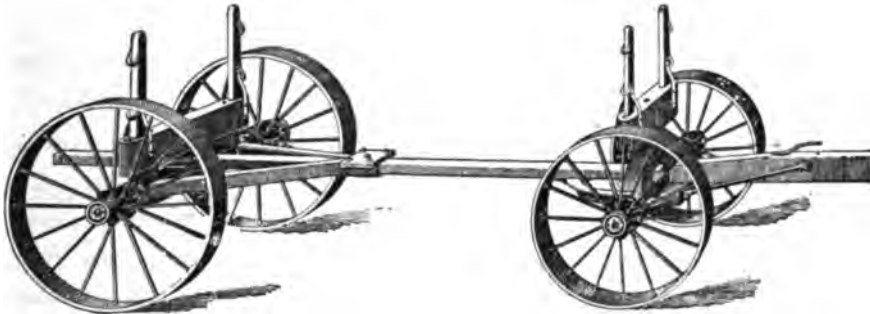


FIG. 138.—LOW HANDY WAGON.

of the most common, but fortunately the most easily destroyed of any insect that attacks the Rose, as it succumbs to tobacco in any form; the most convenient being tobacco dust, which should be liberally scattered over the plants, and be sure that it reaches the under side of the leaves, first wetting the foliage so that the dust will adhere to it. This should be done as soon as the plants start to grow, so as to prevent the insects from gaining a foothold, in which case it is very difficult to get rid of them.

The Rose beetle, Rose chafer, or rose bug, that "pesky critter" which eats up the young buds and tender leaves, almost defies destruction. He is invincible, usually because of his numerical superiority, but hand-picking and knocking off on sheets early in the morning, also a liberal use of the powder bellows and pyrethrum powder will get away with him. Open vials of bisulphide of carbon hung among the plants is an efficacious remedy; but I think most people would tolerate the bugs sooner than the remedy.

The rose leaf hopper is another annoying pest. Treat him to whale oil soap or kerosene emulsion and treat the rose slug to the latter beverage also; they don't like it and it doesn't like them, so get them together and let them fight it out to a finish.

The root gall-fly is a small larva which attacks the roots, producing galls, causing a rapid loss of vitality and eventually killing the plant attacked. The only sure remedy is to dig the plants up root and branch and burn them when found to be badly affected.

Mildew is a species of fungus gen-

*Paper read by Mr. P. O'Mara, at the Annandale (N.Y.) Rose Show, June 16, 1897.

erated by exposure to chilling winds, and is apparent by the presence of a grayish white film on the affected parts. It is very hard to effect a cure in the open air, where the conditions which produced it are beyond control; but it can be held in check by dusting the plants with flower of sulphur.

Black spot is a parasitic fungus which manifests itself in the form of round or irregularly-shaped black spots upon the upper surface of the leaves. Generally only the full-grown leaves are attacked and the disease gradually spreads through them, destroying the circulation of the sap and causing a premature fall of the foliage. The Moss Roses, Hybrid Perpetuals and the Hybrid Tea Roses are more subject to this disease than are the Teas or Monthly class. There is no known certain remedy for it up to the present time. The only thing to be done is to pick off and burn all affected leaves so as to prevent its spread, as it is quickly contagious. It is usually a consequence of an injury to the roots, either by an excess of moisture or an excess of drought. When grown out of doors the danger from drought may be remedied by watering; but nothing can guard against injury from dull, wet weather. Spraying with Bordeaux mixture before the leaves unfurl is a preventive. Rose leaf spot is usually found where there is poor drainage and in crowded corners, or when the plants are too thick. Reverse these conditions to get rid of it and burn diseased parts.

Rose rust is another form of fungoid disease, which can be checked by using the copper fungicides. Cleanliness, preventing overcrowding and good cultivation are the best safeguards, however, against all.

(To be continued.)

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

E. H. KRELAEG & SON, Haarlem, Holland.—Wholesale Bulb list for 1897.

DAN'L B. LONG, Buffalo, N. Y.—Priced Circular of the Wm. Scott Strain of Primulus.

FLORENCE ANTHONY, Reading, Pa.—Circular of New Single White Geranium, "La Purite."

SCHLEGEL & FOTTLER, Boston, Mass.—Special Price List of Bulbs for Import Orders.

HORACE RIMBY, Collegeville, Pa.—Price list of Greenhouse, Bedding and Vegetable Plants.

GOULD'S MFG. CO., Seneca Falls, N. Y.—Special circular of New Double-Acting Well Pumps.

AUGUST ROLKER & SONS, New York.—Special Offer of Bulbs for Late Summer and Fall Delivery.

JACKSON & PERKINS CO., Newark, New York.—Price list of Cumberland black cap raspberry, new.

MRS. THEODOSIA B. SHEPHERD, Ventura-by-the-Sea, Cal.—List of Novelities and Specialties for Fall Delivery.

PURDUE UNIVERSITY, Lafayette, Ind.—Announcement of Courses in the School of Agriculture for 1897-98.

PETER HENDERSON & CO., New York.—Midsummer Catalogue for Summer Planting. Strawberries, vegetable seeds, etc.

LUDWIG MOLLER, Erturt, Germany.—Catalogue of German garden literature containing a list of over a thousand horticultural books, pamphlets, etc.

H. H. BERGER & CO., 220 Broadway, New York, and San Francisco, Cal.—Wholesale Price List (Japan List) of Bulbs, Flowering Roots, Plants, etc.

E. A. ORMSBY, Melrose, Mass.—Pamphlet relative to the Ormsby Ventilating System, contains a list of parties who are using and endorse the system.

JOHN LAING & SON, Forest Hill, London-S.E., Eng.—Descriptive Catalogue of Tuberos Begonias; Special Catalogues of Caladiums, Dahlias, Carnations, Pinks and Canna, and Bedding and Border Plants.

DAN'L B. LONG, Buffalo, N. Y.—Catalogue List of Long's Floral Photographs. These useful adjuncts to the retail trade are meeting with considerable favor; the large assortment to choose from renders this list very valuable.

A Word on Drainage.

There is very little land in this country that may not be materially improved by tile draining. Much land that is naturally wet is slow to dry out in the spring. Tile it; it will advance the season two weeks and often more than that. Land is improved by the admission of air, and there is no better way of admitting it than by the under-drain, which, when it has carried off all surplus water, carries back to the earth a current of warm air—ideal treatment for cold, clammy soils. Henry F. French, in his admirable work on "Farm Drainage," says: "The simplest, cheapest and best form of drain-tile is the cylinder, or merely a tube, round outside, and with a round bore."

Business Cards.

C. D. ZIMMERMAN, Buffalo, N. Y. Horticultural Landscape Gardener. Plans and estimates furnished. Mention American Gardening when you write.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Joe Forsyth Johnson, P. O. Box 100, New York City.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the ad., and each initial or a number, counts as one word. No cuts or display type allowed.

HULABROCH BROS., bulbs and plants, Eng. wood, N. J.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

TRANSPLANTED CELERY PLANTS, all the leading kinds. John A. Smethers & Son, P. O. Box 104, Berwick, Pa.

WANT to exchange good Bausch and Lomb microscopes for horticultural books. Write for particulars. Sid Yancey, Covington, Ga.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 718 Wharton St., Philadelphia. Three shipping points, can save you freight.

CELERY PLANTS, strong and stocky, \$1.00 per 1000, \$9.00 per 10,000; satisfaction and safe arrival guaranteed; special low express rates. The most practical and complete book on celery culture. 75c. Peter J. Schuur, Kalamazoo, Mich.

CELERY PLANTS, Transplanted only. First-class, leading kinds. Greatly superior to seed-bed plants. Carefully packed; good for two weeks' transit. 40c. per 100, \$3.00 per 1000. R. M. Wells, Towanda, Pa.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION as gardener's assistant. Scotch-American, age 21, thoroughly familiar with work of gentleman's place. Assistant Gardener, care American Gardening.

WANTED

A copy of Sayer's book on the Dahlia (Boston 1899). Address,

Editor AMERICAN GARDENING, P. O. Box 1897, New York.

Questions Answered.

This is a Bureau of Information, to which subscribers can apply freely for advice on any and all subjects in the field of horticulture.

In order to lessen labor, and that the Editor and his friends may understand each other, the following rules must be observed:

Rules for Correspondents.

Questions must be concise, plainly written on one side of the paper only, and addressed INQUIRY DEPARTMENT, AMERICAN GARDENING, P. O. Box 1697, New York City.

Letters appertaining to subscriptions, or other business matters, should be directed separately; otherwise delay may follow.

The name and address of the sender is required, in addition to a nom de plume. Use a separate sheet of paper, not a scrap, for each question. Questions will be attended to without delay. If by mistake a query fails to be answered, it should be repeated.

Specimens of plants for identification must be ample; mere scraps will not do, and no notice can be taken of such.

Questions relating to insects or diseased plants should always be accompanied by specimens, packed in a tin box, and forwarded at letter postage. Always send a liberal sample.

Conditions and soils vary so infinitely that we would be pleased to have our correspondents describe theirs.

Correspondents referring to articles which have appeared in AMERICAN GARDENING should mention page and date of issue.

• We cannot promise to comply with requests to answer by mail.

• We cannot undertake to reply by mail.

Crimson Rose Rambler.

I have a fine plant in full blossom. It has made three very strong shoots. Should I cut off the old wood down to the ground when it has flowered or leave all the old wood till next year?—A SUBSCRIBER.

The best thing to do with the Crimson Rambler is to allow it to make all the growth it will and not to restrict it in any way. Later on the stronger wood can be tied in, and if so wished early next spring a little thinning may be done if the growths are too much crowded.

Propagating Clematis

Kindly tell me how an amateur can best propagate the different varieties of Clematis?—W. L. D.

Amateur cannot do better than follow the professional grower; there are four ways of propagation as follows:

Grafting.—One of the oldest methods of propagating clematis is by grafting on seedlings of Clematis vitalba, viticella, virginiana and flammula. In one year these are ready for working upon. Parts of roots, about two inches long, of C. viticella and C. flammula can also be used. Many varieties are shy growers. These are cultivated quicker and are the better for it, when root grafting is adopted. This is a very simple operation when done in heat. Any strong growing kind answers the purpose, but the four mentioned are especially well adapted. A quick method is to have a sunken bench or case, with a good bottom heat, yet free from the hot pipes. The root stocks can be placed quite thickly together, and need not be planted. Insert the cion of the kind required into the fleshy part, or what should be the base of stem or above ground growth; even smaller parts of healthy roots will do. All that has to be done is to lightly whip the two parts together with matting or raffia; no wax or similar material is necessary, unless, by preference, a little moss be used afterwards. But when all the roots are so served and placed closely together, they must all be covered with moss, this taking the place of soil. Keep moderately moist and give a bottom heat of 70 degrees and top heat of 85 to 75 degrees. Pot up when the graft begins to grow. This work can be going on all winter.

Cuttings.—Bring one or two-year-old stock plants into a greenhouse in the fall, and begin by giving a temperature

ARMSTRONG & McKELVY Pittsburgh.
BEYMER-BAUMAN Pittsburgh.
DAVIS-ORANGE Pittsburgh.
FAHNESTOCK Pittsburgh.
ANCHOR } Cincinnati.
ROCKSTEIN }
ATLANTIC }
BRADLEY }
BROOKLYN } New York.
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago
SHIPMAN }
COLLIER }
MISSOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROS CO Philadelphia.
MORLEY Cleveland.
SALEM Salem, Mass.
CORNELL Buffalo.
KENTUCKY Louisville.

THESE brands of White Lead (see list) are not made by any patent or quick process, but by the "old Dutch" process of slow corrosion. They are the best; are the standard, and have been for years. Protect your interests by making sure the brand is right.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price with list extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.



THREE NEW CANNAS.
40 NEW IRIS.

SIEBRECHT & SON, - 409 Fifth Avenue, New York.

Mention American Gardening when you write.

Bay Trees,
Hardy Palms,
AND EVERYTHING
FOR DECORATING

Park and Cemetery.

An illustrated monthly for the advancement of Art out of doors. Practical articles of permanent value by competent authorities on subjects of special interest to Commissioners, Trustees and Superintendents of Parks and Cemeteries, and those interested in Tree Planting and Town and Village Improvements. Plans of Parks or Cemeteries, and their architectural and landscape features, illustrated every month. Subscription \$1.00 a year. R. J. HAIGHT, Publisher, 334 Dearborn Street, Chicago.

Mention American Gardening when you write.

A One-Horse Farm Wagon

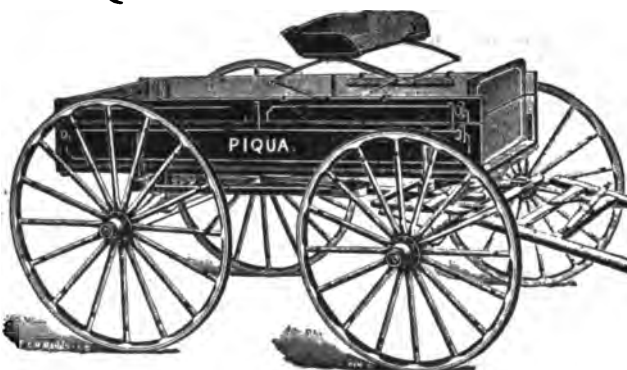
IS SOMETHING EVERY
Horse Owner Needs.

The "PIQUA" is the Best.

Hollow Steel Axle,
Double Box, Spring
Seat, Easy Riding
and Light Running,
and needs only ONE
Horse to Pull it. . .

Made in Two Sizes,
1200 Pounds and .
2000 Pounds . .
Capacity. . . .

WRITE FOR PRICES.



Specially Adapted for use on a Small Farm, in the Garden, or about a Country Place.

PIQUA WAGON CO., Piqua, OHIO.

Mention American Gardening when you write.

of 50 to 55 degrees, in January and February 60 to 65 degrees. The young shoots should be cut in March and given good shade for the first eight days. Further treatment should be similar to that given roses. In three weeks the cuttings will be rooted. They should then be planted in pots, not too large—about 2 to 2½ inches—and slowly inured to air.

Layers.—These are treated like layers of wistaria. Every twelve inches make a small cut to help make roots, and with small hooks tighten the layers in the ground. A five-foot shoot should make about three to four layers. This work can be undertaken when the first wood from outside is ripe in July or August. In October cut the layers in parts and plant in pots or frames over winter.

Seeds.—The seed will ripen in fall. It should be gathered over winter and mixed with sandy earth, and kept in a house or frame until life is seen, and then sown. Only persons who have the knowledge and time should raise seedlings.

Experiment Station Bulletins.

Please tell me how I can obtain bulletins of the different experiment stations? I often see the mention of one that I would like to have, but I do not know how to obtain it.—M. F. JAGGER.

The bulletins of your own State station can always be had for the asking. If you send in an application to the director he will see that your name is put upon the list to receive gratis the various bulletins as they are issued. As a resident of the State and being interested in horticulture, you are entitled to have them sent. As regards the bulletins of the stations of other States, you have no claim upon them, but a polite request to the director of the station concerned will always bring the desired result if sufficient copies be on hand after the State demands have been supplied.

Greenhouse Heating With Water.

Inclose a rough drawing of a ground plan of greenhouse to be built this summer. The west house is a rose house, 38x22½ feet; a partition cuts off five feet from the main house on the north side; temperature in both main and small house is to be the same. The centre house is a palm house, 25½x25½.

This house must be kept the warmest. The east house is a carnation house, 38x22½ feet, with a partition as in rose or west house. We have two boilers that will be placed under the palm house near the west wall of rose house and about in the centre, south and north, and the chimney is near the east end of the rose house. We have from the old greenhouse some pipes (¾ inch), which we wish to use for the new houses, as well as the two hot-water boilers.

(1) How would you place the pipes to give the best satisfaction?

(2) Can I run the pipes in such a way as to regulate temperature with valves in each house? or could I, if I should want no, or very little, heat, in one house, have such valves as to regulate the hot water in the pipes, and where would you place the valves to shut off in the one house if I should want less heat, and turn on to the other if I should want more heat there?—INQUIRER.

The best arrangements to be adopted are: (1) For the carnation house use five four-inch pipes, arranged in two coils, one flow and one return being along the north side and one flow and two returns on the south. In the narrow room along the north side of this house run two pipes, of which one is a flow and the other a return. In the rose house arrange the pipes in the same way, except that there should be six in the rose house (or seven, unless the smoke flue, which, according to the plan, must pass through it, will furnish some heat), and three in the narrow propagating house. To carry the water to and from these houses single four-inch flows and returns will answer. No data is furnished as to the height of the palm house or the amount of glass in the side walls, so that I cannot give a definite answer; but it will be safe to reckon a foot of pipe for every two and one-half feet in the glass area. As the pipes to the rose and carnation houses must pass through this house they should be considered.

(2) It will be very easy to regulate the heat in the different houses or to shut it off altogether by placing a valve on each flow pipe that carries the water to the different houses if these pipes run up hill; or on the returns if the circulation is down hill throughout.—L. R. TAFT.

Chrysanthemums Flowering Now.

I had a lot of Chrysanthemums blooming a while ago. Do you think it pays to have such early flowers—two crops?—J. LOEHR.

It is not unusual for Chrysanthemums to flower from old stools in the spring and early summer months. Some varieties are especially prone to do this, Mrs. Charles Davis, for example; but the blooms are worthless from the fact that they appear at a time when there is so much else, and further, it prevents the getting of good, healthy free stock, so that the so-called gain of the two crops would be an actual loss when the quality of the fall or seasonable flowers is considered.

Buds on Chrysanthemums.

I have some hardy chrysanthemums which are showing buds. Will it be necessary to pinch them off in order to have fall flowers?—R. C. S.

Do not pinch away the flower buds now in sight; they will not develop until September or October.

Red Spider on Roses.

How can I destroy red spider on roses? Is nicotine harmless on roses, if syringed on to destroy green fly?—J. T., Brooklyn.

Syringe heavily and often until the spider is cleared off. Water is the pet aversion of red spider. Nicotine is too expensive and dangerous to use in a crude state by syringing, neither is it so effective as when vaporized. Without the means of making it give off vapor it would be better to use stems or tobacco dust.

Propagating Wisteria.

(To D. W. S.)—Bring down a young branch and "layer" it; secure it to the earth by means of a peg and cover the part with soil. Or take some half-ripened points and dibble them in sand in a cool spot and keep moist.

Hare's-Foot Fern.

(To D. W. S.)—Almost any one of our regular advertisers of plants could supply this plant.

Late Cauliflower Sowing.

(To J. L.)—You will find the necessary information by referring to page 471 of last issue.

A YARD OF ROSES.



Copyright, 1896, by O. D. Gray, New York.

The illustration but faintly represents the beauty of this celebrated painting by the well-known artist, Mr. Newton A. Wells. The grouping and coloring has been performed with exquisite taste, and the reproduction we offer is worthy a frame, and a position on the wall of any one's room. This sketch, in eleven colors, is 36 inches long and ten inches wide, on heavy drawing paper, and sells in the art stores of New York for fifty cents. We will send "A Yard of Roses," securely packed in a tube to prevent injury, postpaid, as follows:

To all renewing their subscription and adding five cents to pay postage and packing.

To all sending us \$1.00 for their own renewal subscription and 75 cents for the subscription of a friend, we will send "A Yard of Roses" free and postpaid, as a premium to both addresses.

AMERICAN GARDENING, P. O. Box 1697, New York.

For Present Sowing.

TURNIP SEED. We have all the best varieties.

CUCUMBER SEED FOR PICKLES. Our STOCKS are the Finest.

The first Consignment of our **SURE CROP, Mushroom Spawn,** just arrived.

Quality! BETTER!! than ever!!!

Descriptive Catalogue Free, by mail.

WEEBEN & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

Crimson Clover Seed.

DERBY'S GROWS. Pedigree dates back to 1887. Crop of 1897 for Sale. Address
SAM H. DERBY, Woodside, Del.

Mention American Gardening when you write.

New Crop 1897 Crimson Clover.

READY NOW. Sample for 2c. stamp. My own growing.
E. G. PACKARD, Dover, Del.

Mention American Gardening when you write.

Orchids and Greenhouse Plants For Sale.

Address P. O. Box 665, ALBANY, N. Y.

Having disposed of several of my greenhouses and the remainder being over crowded, I have decided to offer for sale the excess, consisting of the greater portion and the choicest specimens of my collection for the past 30 years, either singly or in quantities. They are all well established, in fine condition, and many cannot be obtained in any other collection in America.
A printed list sent on application. Sales made at reasonable prices.

E. CORNING.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO.

Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

Built to Sit On, Not to Straddle.



THE WHEELED BICYCLE SADDLE.

Every rider who has given the **WHEELER REFORM** a trial prefers it to all other saddles. Endorsed by physicians. Especially recommended for ladies.

We will send a Wheeler Bicycle Saddle as a Premium for Three New Subscriptions at \$1.00 each. Purchaser pays express.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Thomas Hunt died suddenly at Poughkeepsie, N. Y., on June 27. He formerly lived in Norwich, Conn., and was for many years gardener for the late Lorenzo Blackstone.

J. E. Lager, the Orchid collector (of Lager & Hurrell) has returned from his extended trip in the Orchid regions of Central America; he arrived on July 2.

Hartford, Conn.

On June 16 the annual rose show of the Connecticut Horticultural Society was held. Roses and strawberries were the features and some excellent vegetables were staged.

Among the chief prize-winners were: Roses—Mrs. J. R. Moore and Gustav Minge. Strawberries—Gustav Minge, W. B. May and R. Patchet. Other winners were A. Williams, E. Brown, Mrs. G. W. Moore, C. P. Lincoln, Major Case and N. F. Peck.

Boston, Mass.

The exhibition of the Massachusetts Horticultural Society, held Saturday, June 26, brought out a show of roses that rivalled the annual rose exhibition of the week previous. Displays of roses were made by Joseph S. Fay, W. N. Craig, James Comley, J. Eaton, Jr., Kenneth Finlayson and Mrs. E. M. Gill, Messrs. Fay and Finlayson securing the prizes. The exhibits of delphiniums were very good; John L. Gardener being first, Kenneth Finlayson second. N. T. Kidder was first for display of herbaceous plants, J. W. Manning, second; Rea Bros., third. For vases of flowers, Mrs. E. M. Gill was first, Hattie B. Winter, second. E. S. Converse received a gratuity for six plants of *Begonia erecta multiflora*.

Lenox, Mass.

The horticultural society held its regular meeting on Saturday, July 3, some thirty members being present. This was the night set apart for the exhibition of roses, vegetables, strawberries, etc., and the result was a grand display. All the available space was taken up by the exhibits; and, indeed, some few flowers were not staged for lack of room.

The judges, Mr. J. White and Mr. T. Connors, of Pittsfield, recommended the following awards: For roses—First premium to Mr. J. F. Huss; second to Mr. G. H. Thompson; third to Mr. F. H. Butler. For sweet peas—First premium to Mr. R. A. Schmidt; second, Mr. C. R. Russell. For sweet williams—First premium to Mr. F. Butler; second to Mr. E. J. Norman.

Certificates of merit were awarded to Mr. J. F. Huss for a fine exhibit of *Campanula persicifolia* and to Mr. E. J. Norman for some extra fine Sharpless strawberries.

Mr. C. R. Russell had two fine benches of Black Hamburg grapes (diploma). Honorable mention was made of Mr. Schmidt's display of *Gloxinias* and *Begonias*; also for cherries and *Coreopsis* display by Mr. E. J. Norman.

Vegetables were not a large exhibit, but the quality compensated for the lack of quantity. Mr. G. H. Thompson was first and Mr. F. H. Butler second. The latter had some excellent potatoes.

Mr. James Paul was the essayist of the evening, his subject being the cultivation of grapes under glass, which he handled in a very capable manner.

A Gardeners' Excursion.

On Wednesday, June 30, a party of gardeners visited the 100 acres of nursery and seed grounds of J. L. Childs,

at Floral Park, N. Y. The day proved to be an admirable one for such a visit and the fields of Japanese Iris (which formed the chief centre of attraction), were just at their best. To many, if not all, of the visitors, it was a revelation that a popularly supposed sub-aquatic plant, one for which usually elaborate provision is made as regards water supply, should here be flourishing on the sun-burnt, unwatered flats of Long Island. True, the surface is not so very many feet above water, yet the fact is amply proved that this Iris, like the *Gladiolus* (of which acre upon acre was seen), can be grown to perfection in the open under ordinary field culture, weeds being kept under by means of horse cultivator.

A few of the best Irises seen were: Gold-Bound, white, early; Mahogany purple, late (it was just coming into flower); Victor, pale blue, closely lined on white, medium; Pyramid, mauve purple, very charming effect; Blue Jay, pale blue and white, late; Prince Camille de Rohan, deep purple blue, the best of the darks seen; Eugenie is an exquisite flower, white, flushed lightly with pale mauve on the flags, standard of white, with deep mauve plicotée edge; Exquisite is blue-grey, mottled effect, with standard of purple; Souvenir is mauve and grows only moderately high.

But enough of Irises, though they cover acres. A host of hardy herbaceous plants was inspected, including a choice collection of lilies of the best forms, a representative planting of ornamental flowering shrubs, and a large patch of the Wineberry, which is undoubtedly a handsome shrub, and deserves a place as such, even though the fruit be not greatly valued. Nearby was the *Souche* white raspberry—of the foreign type—very brisk and sweet.

Mr. Miller, the superintendent, conducted the party through the greenhouses, etc., and over the miscellaneous collection of herbaceous plants, which cannot be listed here.

Rudbeckia Golden Glow was seen in quantity; it is claimed to be a spontaneous double form found in Illinois and known locally as Wild Dahila.

Among those present were J. Holloway, W. Anderson and G. B. Winslade, New York; A. Welsing, L. G. Forbes, A. Herrington, P. Reilly, J. Withers, Dr. F. M. Hexamer and L. Barron.

Concerning Carnations.

Will some of the many gardeners who read *American Gardening* be kind enough to supply a brother gardener with a list of the most profitable carnations to grow in a private establishment, having no regard to commercial purposes? Such a list coming from experienced men will at the same time assist a great many others as well as the enquirer.

Rational Forestry Wanted.—It is evident that our virgin coniferous supplies of timber must share the same fate which the buffalo has experienced, unless a practical application of rational forestry methods and a more economical use of supplies is inaugurated. Since coniferous wood represents two-thirds to three-fourths of our entire lumber wood consumption, and its reproduction requires more care and longer time than that of hard woods, the urgency of changing methods in its use and treatment will be apparent.—*American Cultivator*.

Sunflower Oil.—Dr. Wiley, the chemist of the Agricultural Department in Washington, says that in his opinion the coming salad oil will be made of sunflower seed. It is a perfect substitute for olive oil, and will be so cheap that it may be used on the poor man's table. His remark, says the *American Cultivator*, was probably meant to encourage farmers in raising sunflower seed, but it is likely to work the other way. Farmers prefer to raise something that will be dear and not cheap.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Jubilee Carnation.

Young plants of this, as received from the dealer, show heavier foliage, and apparently better thrift than any others yet tried. The blossom, as shown in the exhibitions, seems almost without fault, and is of a remarkably glowing color. Eastern growers, however, shrug their shoulders a trifle over it, intimating that for market purposes it isn't equal to Scott. But what red carnation is? Why need everything be considered below the mark because not equal to Scott? Is any other carnation of any color as yet known equal to this marvelous money-maker? Let amateurs try Jubilee, notwithstanding the shrugs, some of which may be a trifle envious after all. Its wonderful color is a strong enough point, even had it not many other good ones.

Buying Orchids in Summer.

Our own experience has all been in the direction of this, common sense and actual trial both pronouncing it good. Last week the question as to the best season was put to a large dealer and grower, than whom none knows orchids better. "Yes," he said, "buy them in the summer and turn them out under the apple trees; you cannot do better, for here they get the abundance of fresh air and moisture which they crave, and the partial shade which satisfies most of them. Try *Cypripedium Lawrenceanum*. It is a fine thing and very easy to grow. *C. Sedeni* is also fine, and the colors are bright for a *Cypripedium*, being mainly white and rose-pink. It is a strong grower and good every way. *C. Dominianum* is another good one, in yellow, rose and green. There are three to five flowers on a stem, and the odd petals are about eight inches long. It attracts attention. These things aren't so difficult as people think. If you can grow a palm well you can succeed with these."

Bouquets for Window and Porch.

If the window garden proper is not prodigal with flowers, its effect from the street may be very much enhanced by the addition of one or two bouquets, either in jardiniere or vase. The big jardiniere, filled with cut flowers, is a little foreign to the average person's idea of a bouquet, but it is certainly "a bunch of flowers," and it has come to stay. On the piazza, near the head of the steps, it is especially effective. And if one is within reach of the country it may be kept filled from season to season with weeds so beautiful as to call forth never-ending admiration. Within the house, too, the rooms may always be made pleasanter and more beautiful by some such addition, on floor or mantel, or delightfully disposed of among the plants in the bay.

Newer Abutilons.

The beautiful pink Abutilon, *Infanta Eulalie*, was but the forerunner of a type of short-jointed, sturdy and free-blooming pot Abutilons. The delightful pink of *Infanta Eulalie* has been supplemented by a canary yellow and a blackish crimson. The yellow is named after President McKinley. The dark crimson sort is known as *African*, which seems to be a favorite French style of expressing the fact that the flower it names is very dark-colored indeed.

Close Quarters for Fowls.

The question as to how many fowls can be kept in a certain space is one that has continued to recur ever since poultry keeping became important and a matter of study. The general affirmation among experts is that 25 fowls will do better than 50 in the same space; 15 will do better than 25; 10 better than 15, and so on, perhaps to infinity. The fact as it stands is not

disputed, but another question hinges upon the first; namely, how small may be the flocks housed, without increasing too much the interest on investment, cost of labor and so on? Perhaps the best-known raiser of utility poultry in the East places the profitable number at 50, which is at least double what most writers advocate. Twelve to fifteen seems to be the right number, on paper, but we believe the man who makes a business of poultry keeping usually finds 25 suit all circumstances better, though the average number of eggs may not be so high.

Egg Markets.

On many moderate-sized places the eggs for hatching take much of the surplus, during the earlier portion of the cheap season. But just after the hatching the surplusage becomes marked, while the price is still at the lowest, and likely to remain there for some weeks. It is then that the suburban or country dweller becomes disgusted with grocery prices and looks for a new outlet for his products. With all due respect to the force of circumstances, it must be said that this is not a favorable time to look for markets. For one thing, grocery eggs change hands more quickly than and are at their best. Customers are not so irritated by poor eggs, and so eager to find places to buy at first hand. One cannot make yearly contracts for these surplus eggs because the surplusage is a matter of a few weeks only. This is the season of the year to encourage the "home market." Better make the heaviest table drafts upon eggs now. Let there be plenty of custards and puddings. Let the home consumers get their fill, so that the draft on the high-priced eggs later may be less. Thus one may snap one's fingers at the grocer and his 8 or 10 or 15 cents a dozen, and that "in trade!"

Why Do the Chicks Die?

For three months past this question has sprinkled thickly the query pages of farm journals and poultry papers. One harassed editor declared in the bosom of his family that hereafter he would have but one reply to this question, namely, that he had never been to guessing school, and therefore couldn't tell. One laconic answer pretty likely to hit the mark at this season is "lice." Even though the care-taker be pretty sure no lice are present, even though he may have examined the chicks many times, even though he may have made several examinations, there are so many varieties of lice, and they hatch so fast, they may still be the cause of the trouble. Large head lice have a habit of ensconcing themselves at the bend of the chick's neck, just below the ears, where they are seldom noticed. One or two lice may seem a small matter. The loss of one chick may seem a small matter also, and the one small matter may be the due effect of the other.

The Use of Jardinières.

The jardiniere (from the French, and pronounced *zhar din e air*) is coming into universal use despite its expensive character. It was once an ornamental stand for plants and flowers, used as a piece of furniture. In its most common form it is now a large-sized pottery vase, or bowl of varying shapes, generally decorated in relief, and somewhat highly colored. The home that is without a number of these misses an important addition to its attractiveness, but they are usually sold at a price which seems far out of keeping with the actual cost of manufacture. The greatest mistakes in their use usually lie in the selection of colors. If they are to carry merely a potted plant with green foliage, the fancy of the buyer may be more or less considered; but if for flowers of brilliant hue, color harmony is the first thing to be thought of and dull greens with more blue than yellow in their tones are usually the best choice.

Pandanus Veitchii.

The value of this *Pandanus* as a decorative plant, by itself, or as an addition to a window collection, is not fully realized by the average buyer. Its fine green and creamy white give it a very bright effect when kept perfectly clean. It is rigid and sturdy; it has the strap leaf, which always helps to give variety, and the gashed or spiny edges of the leaves add to the pleasant variation. It is a plant to consider seriously, even though the choice must be limited to one alone.

Doubling Up.

This is a very familiar term and it is well understood that, when applied to the sitters, it insists that they shall have been at work for equal periods of time. It should be noted that it is no less important that broods to be "doubled up," whether with hen or brooder, should be of the same age. Even three days' advantage in age makes a difference that will be felt as long as the chicks are kept together. The older ones rob the others of their chance by trampling on them, taking an undue share of food, etc. It is sometimes an advantage, however, to place two or three older chicks with a brooder full of young things. They will serve almost as mothers, at least to be copied. Chicks learn by watching others very largely.

Brooder and Hen-raised Chicks.

Two suburban women, next-door neighbors, are, this season, having a competitive exhibit of their own on the respective merits of natural and artificial mothers for chicks. One is raising about 100 chicks with hens and feeding cracked corn almost exclusively. With free range the chicks thrive admirably on this unvaried diet, the abundance of green food balancing the heavy grain ration. The brooder woman finds that she cannot use corn with impunity, as her chicks are not of free range. More variation in diet and much grit are found necessary. The race is about even, so far, the brooder chicks showing about the same proportion of loss as those reared with hens. The brooder woman proudly counts 15 chicks, but objects strongly to broods larger than 40 each.

Madam Sailer.

This variegated-leaved edging *Geranium*, though an introduction of ten years ago, or more, is not so often seen as its merits warrant. Its peculiar tuft-like branching habit permits it to form broad, compact, rounded cushions in a short time, and if set closely a fine border soon results. If plants are then too close alternate ones may be removed, as each plant will cover a space which its delicate appearance would, at first, seem to prove impossible. For window-boxes, too, it is very good. Indoors, throughout the winter season, we have not known it to do so well; but where it succeeds it is always most useful and satisfactory.

MYRA V. NORRIS.

Beware of Ointments for Catarrh that Contain Mercury,

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally and is made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free.

Sold by Druggists, price 75c. per bottle.

WHOLESALE MARKETS.

New York.

Business for the week ending with Saturday was very good, so far as cleaning up the market is concerned; stock of early all kinds sold out and clean stores were the result, but prices ruled low, unless for exceptional quality. Arrivals for Sunday trade met with but slight demand and for Monday still worse; Tuesday to the market crowded with goods, but buyers, outside of peddlers, were few and shy, while the first-named cleared the market all that was possible and paid only what they liked for their purchases, which in many instances was ridiculously small; but at the same time much of the stock offered was of poor quality.

Hothouse grapes are abundant and selling cheap. Prices obtainable range from 5c. to 10c. per pound.

Nectarines are selling at 1c. per dozen. Tomatoes, when of good quality, are worth 10c. per pound.

Hothouse celery from Maryland is on the market, but is hardly up to the quality of last season; good, large stock makes 1.50 per dozen.

Strawberries are nearly over and sales drag over what is left.

Raspberries, if large and sound, are worth 10c., but many are inferior and sell for 3c. per quart.

Gooseberries are a drug and a number of shipments offered fail to find purchasers at any price.

Apples—North Carolina, green, per barrel, 75c. to \$1; prime, per crate, 75c. to \$1; common, per crate, 40c. to 50c.

Strawberries—Western N. Y., extra, Atlantic, per quart, 12c. to 13c.; common to good, quart, 4c. to 9c.; up-river, poor to good, 4c. to 10c.

Raspberries—Up-river, red, per pint, 4c. to 6c.; per three-to-four quart cup, 3c. to 4c.; four-to-four quart cup, 2c. to 3c.; upper Jersey, red, per pint, 3c. to 5c.; lower Jersey, red, per pint, 3c. to 4c.; Maryland, red, per pint, 3c. to 4c.; blackcap, up-river, fancy, per pint, 4c. to 5c.; Jersey, per pint, 2c. to 4c.; Maryland, per pint, 2c. to 3c.

Gooseberries—Large, per quart, 4c. to 5c.; small to medium, green, per quart, 2c. to 4c.

Huckleberries—Pennsylvania, blue, per quart, 10c. to 11c.; North Carolina, per quart, 6c. to 8c.; Maryland, blue, per quart, 6c. to 8c.; crackers, per quart, 6c. to 7c.; Jersey, per quart, 6c. to 10c.

Blackberries—Maryland, Lucretia, per quart, 8c. to 10c.; cultivated, per quart, 6c. to 8c.; Early Harvest, per quart, 5c. to 6c.; wild, per quart, 2c. to 3c.

Currants—Large, red, per quart, 3c. to 4c.; inferior, per quart, 2c. to 3c.; bulk stock, per pound, 2c.

Cherries—Sweet, per pound, 4c. to 6c.; sour, per pound, 4c. to 6c.; eight-pound baskets, as to size and condition, 2c. to 4c.

Pineapples—Indian River, reds, standard, crates, 24s., \$2.50 to \$2.75; standard crates, 30s., \$2.25 to \$2.50; standard crates, 48s., \$1.50 to \$1.75; other sections, per 100, \$4.75.

Potatoes can hardly be claimed to be good property just now. The receipts for the month of June were 261,961 barrels, against 290,511 for same time last year, and prices don't go up with the decreased supply. The following quotations represent top prices; many are sold for much less: Norfolk and North Carolina Rose, fancy to prime, per barrel, 1.75 to \$2.25; Eastern Shore Rose, fair to prime, per barrel, 1.75 to \$2.12; Virginia and North Carolina, Pride of the South, 1.62 to \$1.87; Norfolk and North Carolina, red varieties, per barrel, 1.50 to \$1.75; Southern, new, No. 3 to No. 2, per barrel, 75c. to \$1; State, per 100 pounds or sack, 75c.

Asparagus, near-by, large, per dozen, \$1.25 to \$1.50; ordinary, per dozen, 75c. to \$1; inferior, 50c. to 75c.

Beets—Long Island, per 100 bunches, \$1.50 to \$2.

Corn—Jersey, per 100, 50c. to \$1.25; North Carolina, per 100, 75c. to \$1.

Cabbages—Jersey and Long Island, per 100, \$2 to \$2.50.

Cucumbers—Norfolk, per barrel, 1.50 to \$2.25; per basket, 50c. to 75c.; North Carolina, per crate, 40c. to 50c.

Cauliflowers, per barrel, 1c. to \$2.

Carrots—Long Island, per 100 bunches, 1c. to \$1.25.

Egg Plants—Florida, per one-half-barrel box, 1c. to \$1.25; per basket, 75c. to \$1.

Lettuce, per barrel, 50c. to 75c.

Onions—Maryland, per one-half-barrel basket, 35c. to \$1; Eastern Shore, per one-half-barrel basket, 75c. to 85c.; Jersey, per barrel, \$2.25 to \$2.50; North Carolina and Virginia, per barrel, 1.75 to \$2; Kentucky, per barrel, 1.75 to \$2.

Peppers—South Jersey, per crate, 1.25 to \$1.50.

String Beans—Long Island, per bag, 1c.; Jersey and Maryland, wax, per basket, 50c. to 75c.; Norfolk, green, one-half-barrel basket, 30c. to 50c.; wax, one-half-barrel basket, 30c. to 40c.

Squash—Southern, marrow, per barrel crate, 1c. to \$1.50; yellow, per barrel, 50c. to \$1; white, per barrel crate, 50c. to 75c.; Long Island, white, per barrel, 1c. to \$1.25.

Tomatoes—South Jersey, per crate, 1.25 to \$1.50; Maryland, per carrier, 1.50 to \$2.25; Mississippi, per flat case, 70c. to 85c.; North Carolina and Virginia, per carrier, 1c. to \$1.50; Savannah, per carrier, 75c. to \$1.25; Florida, prime, per carrier, 1c.; Florida, poor to fair, per carrier, 50c. to 75c.

Turnips—Russia, per barrel, 75c. to \$1; white, per 100 bunches, 1.50.

Philadelphia.

The market has been very good here this past week. All kinds of stock have been moving freely, but prices are not high; yet, on account of the extreme warm weather dealers are glad to sell at a fair price.

The strawberry season is closing up. Only a few New York State berries are now coming in and these sell very slowly. Many crates arrive in poor condition and 9c. to 12c. per quart is the highest price noted.

Raspberries—Jersey, red, per pint, 4c. to 5c.; blackcaps, per pint, 3c. to 4c.; Maryland, per pint, 3c. to 4c.

Blackberries—Maryland and Delaware, per quart, 8c. to 10c.; Early Harvest, 6c. to 8c.

Huckleberries—Jersey, per quart, 6c. to 8c.; Maryland, per quart, 5c. to 7c.

Gooseberries—Industry, Pennsylvania-grown, 10c. to 12c.; Jersey, per quart, 6c. to 8c.

Currants, red, per quart, choice, 4c. to 5c.; fair to good, 2c. to 4c.

Pears—Florida, per barrel, 1.75 to \$2.25.

Melons—Watermelons, Florida, per 100, \$20 to \$25; fair to good, 10c. to \$15; muskmelons, per basket, 1c. to \$1.50.

Cabbages—New Jersey, per 100, 1.75 to \$2.25.

Cucumbers—Norfolk, per basket, 90c. to \$1.10; Charleston, per basket, 60c. to 80c.

Egg Plants, per one-half-barrel crate, 1.80 to \$2.

Onions—Jersey, per basket, 90c. to \$1.20; New Orleans, per barrel, \$2.25 to \$2.75; Maryland, per one-half-barrel basket, 90c. to \$1.10.

Peas—Jersey, per basket, 30c. to 50c.

String Beans—Jersey, wax, per basket, 80c. to \$1; Norfolk, wax, one-half-barrel basket, 50c. to 60c.; green, per basket, 75c. to 90c.

Tomatoes—Jersey, per peach basket, 85c. to \$1; Mississippi, per crate, 75c. to 90c.; Florida, per carrier, 90c. to \$1.

Boston.

Part of the movement spoken about in our last on fruits, will this week be by decay, and the little money that was made by some of the fruit handlers will be lost, but the larger loss will fall on the grower.

Dighton strawberries are over; a few home-grown, but the larger part coming from New York State. Few days ago the average prices were big; to-day they will not much more than pay the expenses. The hot wave nearly consumed them. There are no high figures to name and as a range we are forced to say from 8c. down to 1c., so bad was the general condition.

Currants plentier and lower; price, 5c. to 8c. a quart; red raspberries, 3c. to 5c. for thirds; blackcaps or black raspberries no sale in this market; Delaware blackberries, good demand, 1c. to 13c.

No peaches here, therefore no quotations.

Lighter demand for Russet apples at 3c. to 3.50; new apples, mostly from Virginia, 50c. to \$1 half-barrel basket.

Hothouse cucumbers have caught the decline and move slowly at a cent and a half apiece.

Summer squash, 50c. to 75c. a dozen.

Long Island beans, 1c. to \$1.25 half-barrel bag; some native beans here this morning; wax, 1.50 a bushel; green, 1.25.

Long Island cabbage about 1c.

Choice watermelons, 25c. to 35c. This weather makes them taste good and they relieve the thirst.

Kalamazoo celery is in light demand; if sold brings 40c. to 50c. a bunch.

Asparagus but little wanted even at 50c. a dozen.

Native beets, 1c. to 2c. a bunch; turnips, 3c. to 5c. a bunch.

Spinach takes a range of 30c. to 50c. a bushel; parsley steady at 1.25 a bushel.

Best Virginia white potatoes, 2.50 a barrel, with fine red stock 2c. Quite a good deal of that quality which goes in between selling at \$2.12 to \$2.25.

Mushrooms, 75c. a pound.

Black Hamburg grapes lighter demand, 50c. to 75c. a pound.

Guess the sick people are getting well!

Egg Plants so little called for that it hardly needs to be quoted. If asked for sell fairly well.

Cauliflowers, 1.50 to \$2 a barrel.

Some peppers appearing, no one knows where they come from, but somewhere near home, bring 1c. a bushel.

Peas, 40c. to 50c. a bushel, the lowest prices ever recorded at Fourth of July time. The day before the Fourth they sold 30c. to 40c., as against 2.50 to \$2.75 last year.

Lettuce market demoralized; old beets and turnips all gone; few old carrots still needed for the soups.

Fair demand for some choice old potatoes at prices ranging anywhere 40c. to 50c. a bushel.

No pears or plums on the market, excepting California stock. The trade is quite well pleased, however, to see some of the California late Valencias, because they are fine, demand good prices and seem to please; 112 counts, 3c. to 3.25; 128 counts, 3.75; 176 counts, 4c.

The commission men say the late holiday time has been about the hardest three days to do business in, handling fruits, that this city ever saw. Of course a reaction will occur, but at this writing they are feeling pretty tired and have not done much to satisfy either the buyer or the seller.

Red Bananas.—It is reported that the supply of these, which is chiefly from Cuba, has ceased on account of the war in that island. The Boston Fruit Company reports that it usually receives two steamers a week, carrying each 20,000 bunches. Banana plantations have been destroyed like other food supplies.

BLINDNESS PREVENTED

The Absorption Treatment a Success. Hundreds successfully treated for all diseases of the eyes or lids without knife or risk at their homes and at our Sanitarium, the largest and most successful institution in America. "Don't want to be blind." Pamphlet Free. THE BEMIS EYE SANITARIUM, Glen Falls, N. Y.

Delaware-Grown
Crimson Clover.

Absolutely pure.
New crop.
Now ready.
BROWN SEED CO.,
Wyoming, Del.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

Celery and Cabbage Plants.

Celery—Giant Pascal, White Plume, New Rose, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000.
Cabbage—Succession, Flat Dutch, Drumhead, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000.
For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

Offer No. 80.

FOR ONE NEW SUBSCRIPTION

200 CELERY PLANTS

AS FOLLOWS:

- 50 Plants White Plume.
- 50 Plants New Rose.
- 50 Plants Golden Self-Blanching.
- 50 Plants Giant Pascal.



This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to AMERICAN GARDENING. Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P.O. Box 1697, N.Y.

We Believe every reader of AMERICAN GARDENING feels proud of his paper and the practical, uplifting work it is engaged in; it is raising the standard of Gardening, and maintains the dignity of all engaged in the profession.

We Believe the cause of good Gardening to be eminently a missionary one; from which it follows that the circulation of AMERICAN GARDENING can most readily be enlarged through the efforts of its subscribers. Our circulation, therefore, is a reflection and an index of our subscribers' interest in us.

We Believe our readers are anxious to see AMERICAN GARDENING reach the highest possible development in its work of horticultural education. The legitimate aim of a class paper is to increase its influence through an extension of its circulation.

American Gardening is the most successful of all, and has the largest circulation of any weekly Journal devoted to Gardening and Fruit Culture, but has scope and the disposition to add to its list tens of thousands of patrons. "Come with us and we will do you good," is a living truth in our case; all our new friends are loud in their praise of the value of the paper to them. The cause of "AMERICAN GARDENING" is the cause of American Horticulture.

We Believe that our friends are the ones on whom to call for the desired assistance. Understanding thoroughly the value of the paper to every one interested in Gardening, they can best express its spirit and comprehensiveness and succeed in making subscribers.

With a View to obtaining the assistance of our friends in the propaganda for new subscriptions, and in order that they may have something tangible whereby to remember their successful efforts, we have compiled the following list of

SUMMER PREMIUMS

To which we invite your attention in the hope that each and every reader of the paper will endeavor to send us **AT LEAST** one new subscriber before the close of Summer.

American Gardening for 1896. Containing 832 pages of text and illustrations, with complete index. The most full, complete, and desirable volume on Gardening, Fruit Growing, and kindred subjects ever issued. Few works on horticulture can compare with this in value to the student or the practical man. *Handsomely bound in cloth, with leather back and edges.*

This most desirable volume will be forwarded, express paid, to any address, for only **seven new subscriptions at \$1.00 each.**

American Carnation Culture. By L. L. LAMBORN. A work on the Classification, History, Propagation, Varieties, Care, Culture, etc., of the Divine Flower. Nothing has been left unsaid from which any practical benefit could be obtained. Illustrated. Third edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Bulb Culture (Henderson's). By PETER HENDERSON. Contains special cultural directions for over 200 varieties of Bulbs. Compiled with great care, and its information is accurate, reliable and up to the latest. 25 cents.

Given for 1 new subscription at \$1.00 each.

Bulbs and Tuberous-Rooted Plants. (Their History, Description, Methods of Propagation and Complete Directions for their Successful Culture in the Garden, Dwelling and Greenhouse). By C. L. ALLEN. The author of this book has for many years made bulb growing a specialty, and is a recognized authority on their cultivation and management. He has taken the initiative to make bulb growing a special industry in this country, and writes from his own long and extensive experience. The subject is treated in a very exhaustive manner. *Handsomely illustrated, cloth, 12mo. \$2.00.*

Given for 5 new subscriptions at \$1.00 each.

Chrysanthemums and Their Culture. By EDWIN MOLYNEUX. Sixth Edition. By far the best practical work yet written on this subject. 50 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemum Culture for America. By JAMES MORTON. This is the only 'Mum book published for American use, and is an excellent and thorough work; especially adapted to the culture of Chrysanthemums in America. The field is fully covered. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Elliott's Practical Handbook of Landscape Gardening. By F. R. ELLIOTT. Designed for city and suburban residences and country schoolhouses, containing designs for lots and grounds, from a lot 30x100 feet, to a 40 acre plat. Cloth, 8vo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Ferns and Fern Culture. By J. BIRKENHEAD, F. R. H. S. How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, Wardian cases,

dwelling houses, etc. A thorough and complete work by a renowned specialist. 128 pp., thoroughly illustrated, 16mo., cloth. 75 cents.

Given for 2 new subscriptions at \$1.00 each.

Fruit Culture, and The Laying Out and Management of a Country Home. By W. C. STRONG, ex-president of the Massachusetts Horticultural Society, and vice-president of the American Pomological Society. Illustrated. New revised edition, with many new additions, making it the latest and freshest book on the subject. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Grape Culturist. By A. S. FULLER. New and revised edition, 1894. One of the best works on the culture of hardy grapes, with full directions for all departments of propagation, culture, etc. Illus., cloth, 12mo., \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Grape Growers' Manual. (The Bushberg). An exhaustive work on the cultivation of the grape, with accounts of diseases, insects, etc., by specialists. The descriptive list of varieties is specially useful and complete; the typographical method of designating importance of varieties is a feature. Pp., 200. Royal 8vo. Illustrated. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Greenhouse Construction. By PROF. L. R. TAPP. A complete treatise on Greenhouse structures and arrangements of the various forms and styles of Plant Houses for professional florists as well as amateurs. All the best and most approved structures are so fully and clearly described that anyone who desires to build a greenhouse will have no difficulty in determining the kind best suited to his purpose. The modern and most successful methods of heating and ventilating are fully treated upon. Special chapters are devoted to houses used for the growing of one kind of plants exclusively. The construction of hotbeds and frames receive appropriate attention. Over one hundred excellent illustrations, specially engraved for this work, make every point clear to the reader and add considerably to the artistic appearance of the book. Cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

How to Grow Cut Flowers. By M. A. HUNT. A thoroughly practical treatise on the cultivation of the Rose and other flowering plants for cut flowers. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

How to Know the Wild Flowers. By MRS. WILLIAM STARR DANA. A guide to the names, haunts, and habits of our common wild flowers. The most handy and easy reference book for amateurs. With 100 illustrations by Marion Satterlee. 12mo. \$1.75.

Given for 5 new subscriptions at \$1.00 each.

Henderson's Handbook of Plants and General Horticulture. By PETER HENDERSON. This has long been acknowledged as the standard American work on general horticulture, giving history, geographical distribution and cultural directions for all cultivated fruits and flowers. Illustrated. Cloth, 8vo. \$4.00.

Given for 9 new subscriptions at \$1.00 each.

Insects Injurious to Fruit. By PROF. WM. SAUNDERS. A work of great value to all fruit growers, written by a man of science as well as a practical agriculturist, and the result of careful and minute observations and experience. It treats, under separate chapters, of the injurious insects which prey upon our fruit trees, vines and bushes, together with their mode of operation, and contains careful directions as to the best means of destroying them. With over 400 pages, 440 illustrations. 12 mo. Cloth. \$2.00.

Given for 5 new subscriptions at \$2.00 each.

Johnson's Gardener's Dictionary. This is a new and revised edition, greatly enlarged, of "Johnson's Cottage Gardener's Dictionary," first published in 1846; containing a full and reliable list of every plant in cultivation, names printed in bold type, rendering reference easy. An important feature of the work is the placing of synonyms alongside the correct name, instead of in a separate list. The habitat of each variety is given along with the date of its introduction. The cultural directions are brief and to the point. Insect foes, diseases and their remedies are fully described, and figures of some of the former have been given. Handsomely bound in one volume. \$4.00.

Given for 9 new subscriptions at \$1.00 each.

Landscape Gardening or How to Lay out a Garden. By EDWARD KEMP. Intended as a guide in choosing, forming or improving an estate (from a quarter of an acre to a hundred acres in extent), with reference to both design and execution, with numerous fine wood engravings. Cloth, 12mo. \$2.50.

Given for 6 new subscriptions at \$1.00 each.

Parsons on the Rose. By SAMUEL B. PARSONS. New and revised. A treatise on the propagation, culture, and history of the Rose. Illustrated. \$1.00.

Given for 3 new subscriptions at \$1.00 each.

Practical Floriculture. By PETER HENDERSON. A guide to the successful propagation and cultivation of Florists' Plants. As in every work from this gifted author's pen nothing has been left unsaid that bears on the subject. Illustrated. Cloth, 12mo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Profits in Poultry. Useful and ornamental breeds and their profitable management. This excellent work contains the combined experience of a number of practical men in all departments of poultry raising. It is profusely illustrated and forms a unique and important addition to our poultry literature. Cloth, 12mo. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Strawberry Culturist. By A. S. FULLER. Containing the history, sexuality, field and garden culture of strawberries, forcing or pot culture, etc., fully illustrated. Flexible cloth, 12mo. 25 cts.

Given for 1 new subscription at \$1.00 each.

Success in Market Gardening. By W. W. RAWSON. Illustrated. This work is written by one of the most successful market gardeners in New England, who gives here the results of his life-long experience in the growing of vegetables out-of-doors and under glass, with special adaptation to the climate of New England. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

The Shrubs of Northeastern America. By CHAS. S. NEWHALL, author of "The Trees of Northeastern America," etc. This volume is beautifully printed on beautiful paper, and has a list of 116 illustrations calculated to explain the text. It has a mine of precious information, such as is seldom gathered within the covers of such a volume. Illustrated, 8vo. \$2.50.

Given for 5 new subscriptions at \$1.00 each.

The Rose. By H. B. ELLWANGER. Revised edition. A treatise on the cultivation, history, family characteristics, etc., of the various groups of roses, with names and accurate descriptions of the varieties now generally grown, brought down to 1892. This work contains full directions for planting, pruning, propagating, and treating of diseases, and insect pests, and is particularly valuable for its classification and full alphabetical lists of one thousand and eighty-six varieties. \$1.25.

Given for 3 new subscriptions at \$1.00 each.

The Treasury of Botany. Edited by LINDLEY and MOORE. This is a popular Dictionary of the Vegetable Kingdom, with which is incorporated a glossary of botanical terms. Twenty steel plates and numerous wood cuts. Two parts, Fop-8vo., 1372 pp. \$3.50.

Given for 10 new subscriptions at \$1.00 each.

The Small Fruit Culturist and Nursery Directory. By A. S. FULLER. This is the first work devoted exclusively to small fruits, and completely covers the ground of propagating, culture, varieties, preparing for market, etc. Thoroughly illustrated, cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

The Art of Propagation. By J. JENKINS. A concise, practical treatise on the rapid multiplication of vines, plants, trees, etc., detailing the management in propagation of seeds, bulbs, cuttings, etc., and the manner of operating in grafting, budding, inarching, etc. Ample illustrated. 30 cents.

Given for 1 new subscription at \$1.00 each.

Tomato Culture. By J. W. DAY, D. CUMMINGS, and A. I. ROOT. In three parts. A valuable treatise, embracing field culture, forcing under glass, and raising plants for market. Of value to any one growing garden truck of any kind aside from tomatoes. 150 pages. Illustrated. Paper. 40 cents.

Given for 1 new subscription at \$1.00 each.

The Nursery Book. By PROF. L. H. BAILEY. This is a complete handbook of propagation of plants treating on seedage, separation and division, layerage, cutting, graftage, including grafting, budding, inarching, etc. It tells plainly and briefly what everyone who sows a seed, makes a cutting, sets a graft, or wants to know. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

The Amateur Orchid Cultivators' Guide Book. By H. A. BURBERRY, F. R. H. S., orchid grower to the Right Hon. Jos. Chamberlain, M. P. Tells how to grow Orchids, in cool, intermediate, or warm houses, successfully. There is a calendar of operations for each month, and full information as to the treatment required by all orchids mentioned in the book. Just published. New edition, colored plates. \$1.75.

Given for 5 new subscriptions at \$1.00 each.

Trees of the Northern United States. (Their Study, Description and Determination). By Prof. AUSTIN C. APGAR. This handbook is to the trees of its locality what Gray's well-known Manual of Botany is to the other plants. It furnishes a complete key to the wild and cultivated trees found east of the Rocky Mountains and north of the southern boundary of Virginia and Missouri. Preceding the key are chapters discussing the essential organs of trees and terms needed for their description, and the plans and models for tree description. The book is profusely illustrated, handsomely bound, and will be sent to any address on receipt of price. Nearly 500 illustrations, cloth, 12mo. \$1.25.

Given for 3 new subscriptions at \$1.00 each.

The Dictionary of Gardening. A Practical Encyclopedia of Horticulture. By GEORGE NICHOLSON, A. L. S., assisted by some of the most eminent writers in the botanical and horticultural world. The Dictionary of Gardening is the most complete work of the kind ever published; the practical information and botanical classification have been brought down to the latest date, and nothing has been neglected to make it in all respects the standard work on horticulture in all its branches, from the growing of the hardiest plants to the cultivation of the most delicate exotics. It is the recognized authority of the Society of American Florists on nomenclature of plants. Illustrated, with more than 2370 first-class engravings with numerous colored plates of exquisite finish and life-like exactness. 4 vols., cloth, large, 8vo. Prepaid, per volume, \$5.00; complete, \$20.00.

Given for 40 new subscriptions at \$1.00 each.

Vegetables, How to Grow them. By E. WATTS. 40 cents.

Given for 1 new subscription at \$1.00 each.

Vines and Vine Culture. (Considered the best book on Grapes). By ARCHIBALD F. BARRON, ex-superintendent of Royal Horticultural Society's Garden, Chiswick; Secretary of the Fruit Committee. Demy 8vo., handsomely bound in cloth. 3d edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

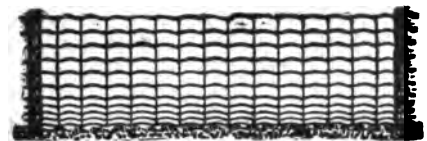
Wild Flowers in Art and Nature. By J. C. L. SPARKES, Principal of the National Art Training School, South Kensington, and F. W. BURBIDGE, Curator of the University Botanical Gardens, Dublin. With 21 full-page colored plates, by H. G. Moon. Handsomely bound, gilt edges. \$4.

Given for 7 new subscriptions at \$1.00 each.

INCUBATORS. Self-regulating. Catalogue free
G. S. SINGER, Cardington, O.
Mention American Gardening when you write.

FARMERS
you can make money by selling and using
HOLDFAST Corn Binders, used on every
shock. Pull and it's fast. Ties itself. Costs
less than string. Never wears out. Thousands
sold in a town. Good profits. Get
town agency. Samples, 3 sizes, mailed
6 cts. **TIE CO.**, Box 841, Uxbridge, N. Y.

Mention American Gardening when you write.



No Expense For Threshing.

There is a simple little machine on the market, which can be had for \$1.— with farm right to use it. This tool was named "flail," but if it is called "hurricane," the work will be easier. The farmer's time is nothing, and after threshing is finished, he can buy a little "pocket whirling" and build fence. Of course the progressive farmer will not try to compete with steam, either in threshing or fence building. He uses the **PAGE**.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.
CYPRESS
SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.
GREENHOUSE
AND OTHER BUILDING MATERIAL.
Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.
THE A. T. STEARNS Lumber Co.
Neposens, Boston, Mass.

Mention American Gardening when you write.

GLASS For Greenhouses, Grap-
eries, Conservatories, **GLASS**
Hothouses and Hotbeds.
VANHORNE, GRIFFEN & CO.
Importers of French Glass. 13, 15 & 17 LAIGHT ST., AND 62, 64 & 66 VARICK ST., **NEW YORK.**

Mention American Gardening when you write.

"JADOO" FIBRE. A New Potting Material
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid. BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and . . . **THE AMERICAN JADOO CO.**
Testimonials, Address

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

LORD & BURNHAM CO.,
HORTICULTURAL ARCHITECTS AND BUILDERS
STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York.

IN THE PRESS.

PRICE, \$1.00.

The Water Garden

(PROFUSELY ILLUSTRATED.)

BY WILLIAM TRICKER.

THIS volume, which has been prepared by the foremost aquaculturist of the country, and to whose efforts the present growing popularity of the Water Garden is largely due, is designed to serve as a **SOUND, PRACTICAL CULTURAL HANDBOOK** for amateur and professional alike.

The book will be freely illustrated with plates and illustrations in the text, and will describe all operations, from the growing of plants in tubs to construction of the large pond, planting, seed saving, propagation, wintering, and all other necessary details of cultivation.

— ORDERS RECEIVED NOW. —

A. T. DELAMARE PTG. & PUB. CO., Ltd.,

Box 1697, New York.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 134.
COMBINED SERIES VOL. LI.

NEW YORK, JULY 17, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Ants, To Destroy.....	507	Garden Work.....	503	Plant Notes.....	502	Era.....	510	Vegetable Garden.....	503
Aquilegias.....	507	Herbaceous Garden	502	Plants in my Greenhouse	507	Salvia Patena.....	502	Violets, Planting.....	505
Campanulas.....	502	Notes.....	502	Poultry Notes.....	512	Silenes.....	502	Window Garden, The...	512
Chrysanthemums.....	505	Home Plot, The.....	512	Private Gardeners.....	510	Societies, Reports of...	510	Weeds.....	503
City Lungs.....	506	Market Measures.....	505	Quinces Dropping.....	505	Spiraea A. Waterer	502		
Clematis Dying off.....	507	Market Reports: N. Y.,		Readers' Notes.....	507	Strawberries, Notes on..	504	Illustrations.	
Delphiniums.....	502	Phila., Boston.....	511	Rose Garden, A.....	503	Strawberries, Summer		Hartford, Conn., Views	
Fruit Garden.....	504	Parks of Hartford, Conn	501	Roses, Plea for Garden	508	Planting.....	507	in the Parks of 501, 503, 505	
Fruits of Experience.....	515	Pelargoniums.....	512	Roses of the Victorian		Sycamores, Disease of..	506	Strawberry Ridgeway..	504

The Parks of Hartford, Conn.

Nearly one year ago AMERICAN GARDENING had occasion to call attention to the public parks of this city, and then remarked on its good fortune in already having possession of 400 acres upon which improvements were being carried out and that the people were able to use the entire acre for recreation.

markable address illustrates plainly the sentiment which actuated the public men of the city of Hartford; the late Hon. Charles M. Pond donated and willed to the people forever a tract of land, covering 90 acres, to be known as Pond Park. This magnificent gift was closely followed by Col. Pope (of bicycle fame), who has given the city 73 acres. The city has also acquired 75



FIG. 139.—BUSHNELL PARK, HARTFORD, CONN.

The illustrations which we present on this occasion show views on the oldest and most advanced of this series of park lands which will eventually completely encircle the city, affording to the residents nearly 1500 acres of breathing space.

These figures show a remarkable increase of area since 1894; in November of that year, Mayor Leverett Brainard, recently showed that the population of the city was over 60,000 and that the park area only represented 60 acres. This gentleman's re-

acres on the river banks and which is unofficially known as Riverside Park. There is also the South End Park, of 150 acres, and as a grand climax when completed will be the Keney Park of 1000 acres, also made possible by the munificence of a deceased townsman, Mr. Henry Keney.

One noticeable and pleasing feature of this elaborate system is that the whole design is to make the parks in every shape and form "Peoples Parks," at the same time all possible skill

and taste are being brought to bear upon them to make them not one whit behind the show parks of other cities. In order to attain this result the best talent obtainable is at work upon them. A public man of the highest type of honor and usefulness is at the head of the Board of Commissioners in the person of the Rev. Francis Goodwin, and with the other commissioners is ably seconded by the direct work of Mr. Theodore Wirth, who is superintendent of the city parks. Guiding and planning the newer Keeney Park is Mr. G. A. Parker, Mr. Goodwin here again acting as president of the Board of Trustees, as this space is not to become city property until it is a complete park in all details of planting, grading and road making.

Notes From the Herbaceous Garden.

Delphiniums are among the most beautiful of hardy flowers and for the past two weeks *D. formosum* has been a most conspicuous feature in our borders. The leaves are large, palmate in outline and deeply lobed, while the lovely soft, blue flowers are arranged in terminal and sub-terminal panicles. It is a native of Siberia.

D. crassifolium has branching stems and thick leaves, as its specific name indicates, the flowers are of a dull purple color. It is also a native of Siberia.

D. nudicaule is a pretty species from California. It grows only about one foot high with small palmate leaves and racemes of bright scarlet flowers. It has proved perfectly hardy with us during the past two winters.

D. grandiflorum album grows about eighteen inches in height and the leaves are very much lobed. The flowers are larger than, but not nearly so freely produced as in most other species. It is a native of Siberia.

D. Uechtritzi is flowering here for the first time. The foliage and habit closely resemble the well-known *D. Ajacis*, and I suspect it is only a variety of that species. The flowers are of a peculiar purplish color and rather attractive. It grows about three feet high.

Aconitum Napellus is closely related to and closely resembles the Delphiniums. It is a good subject for the hardy border. The flowers are purple, the upper sepal forming a hood over the whole flower, hence the common name of Monkshood.

Thalictrum Fendleri, a Western species of meadow rue, is a most attractive plant and well worth a place in the hardy plant border. It grows to about four feet in height and has large, compound leaves and terminal panicles of bright yellow flowers, which are slightly fragrant.

In the Pink Family *Silene armeria* is just now a blaze of beauty. It grows about two feet in height and produces its corymbs of deep pink flowers in the greatest profusion. It is an annual and reproduces itself from self-sown seed. Very often plants which self-sow themselves so freely are inclined to be "weedy," but this plant is certainly an exception. It is a native of France and Switzerland and is known by the common name of "Sweet William Catchfly."

S. Pennsylvanica is another pretty annual. It is of bushy habit, growing only one foot in height. The lovely pink flowers are about one inch in diameter and freely produced.

S. Virginica, the "Fire Pink," is perhaps too well known to need description, but it is one of the most lovely of our native plants and should be in every garden.

S. viscaria splendens resembles the foregoing in habit, but the flowers are of a bright pink color, produced in terminal clusters, which rise well above the foliage. It is one of the very best species.

S. alpina is a pretty white-flowered species with linear leaves of a glaucous green color. It is a good subject for the

rock garden, where we have it growing.

S. pendula, a native of Southern Europe, while by no means the showiest species, has a very graceful habit and demands notice. The flowers are of a greenish yellow color and are produced on large panicles.

S. maritima and *S. stylosa* are grown here for botanical purposes. They are not nearly as attractive as the preceding, being of straggling habit, leaves of a sea-green color, small, white flowers and large, inflated calyxes.

No collection of hardy flowers is complete without one or more species of Campanula. According to Index Kewensis (the standard authority on nomenclature) there are 298 species; of this host a few are natives of this country while the majority are found in the region of the Mediterranean and in China and Japan. Although their range of color is not great, mostly blue and white, they are among the most attractive of garden flowers, the family containing few if any "poor relations." They are easily propagated from seed and grow well in any good garden soil, providing they have a sunny position. They are mostly perennials or biennials; very rarely annuals. Our collection here at present is not large, not more than eight or ten species, but the collection contains some of the very best.

Campanula persicifolia, the peach-leaved Campanula, we consider to be one of the best. The leaves are sessile, some six inches in length. The branching flower stalks are some two and one-half feet in height; the flowers are large, blue and white in color, and freely produced. It is fine for cutting purposes and its home is Europe and Northern Asia.

C. fragilis is also a beautiful species. It is perennial, of dwarf, bushy habit, while the white, soft lavender and blue flowers stand erect above the foliage, the individual flowers measuring some one and a half inches in diameter.

C. carpathica is similar in habit to the preceding, but the flowers are pure white and somewhat smaller. Both these two species are native of Southern Europe, but have proved quite hardy with us without protection.

C. glomerata is one of the best and one of the best-known species. The funnel-shaped blue flowers are produced in terminal and axillary clusters. It is a native of Europe and Central Asia.

C. garganica, a pretty little diminutive species from Italy and Greece, has been flowering in the rock-garden here for the past two weeks, where it is a most suitable subject. The racemes of sky-blue flowers are very attractive.

C. medium, the popular "Canterbury Bell," is perhaps too well known to need description. It is a biennial and produces very freely its large cup and saucer-shaped flowers. It is often grown in pots for cool greenhouse decoration and makes a most attractive pot plant.

Platycodon grandiflorum Mariesii, or as it is also called *Campanula grandiflora*, is among the finest of the whole genus. It is perennial, of somewhat stiff or erect habit, and produces freely its large blue and white flowers, which often measure three inches in diameter. Its home is the country where we get so many other good plants from—Japan.

EDWARD J. CANNING,
Botanic Garden, Smith College, Northampton, Mass.

Big Lice These!

Fruit trees in the neighborhood of Sioux City, Iowa, are literally overwhelmed with plant lice, says the Omaha Bee, and proceeding to give emphasis, remarks:

"In some instances the twigs and branches are so laden with the lice that they are so bent under the weight that it has been found necessary to place props under the limbs to keep them from being torn from the trees."

These lice must be very heavy.

Some Plant Notes.

The season thus far has been a really remarkable one—as a whole, very beneficial to herbaceous perennials, but bad for roses, the tender shoots being almost killed by the 8 or 10 degrees of frost about the 20th of April. Rosa Wichuriana, which had sprouted well, was killed back for a yard or more. Owing to the almost frosty June and the too abundant rains, Dahlias rotted in the ground where the soil was heavy, and tender bedding plants made no growth whatever, and this condition of affairs has not been improved by the three weeks' absence of rain with torrid heat.

Sweet Pea Cupid.—The promises held out in the spring catalogues regarding this dwarf pea seem again not to be justified. The same defects still exist—the small percentage of seeds germinating; the ugly, sprawling habit of the plant, and the very short flower stem. One may well ask of what use is a sweet pea that makes no show in the garden, and is of no value for cutting. The Pink Cupid, of which a few seeds were disseminated among a favored few, has all the faults of its progenitor.

Salvia Patens.—This is probably the most beautiful of all the Salvias. Its intense blue is only equaled by that of *Gentiana acaulis*. It does not make the brilliant showing in the garden that the common *splendens* does, but notwithstanding its sparser bloom, a mass would no doubt excite more admiration on account of the unusually beautiful color. If mulched deeply it would probably survive the winter, as *S. Picheri*, another handsome blue variety, has proved hardy under like conditions. Another blue member of the family, *S. pratensis*, hardly deserves the catalogue encomiums. It is coarse and weedy and the color is too dark to be effective in garden work. The one called "Golden-leaved Salvia," an introduction of this season, has not bloomed as yet. While the foliage is pleasing light green, it cannot by any means be called golden. A dozen plants are making satisfactory growth, and would seem that the exposure of them—they get only the morning sun—would be the proper one to bring out the coloring.

Spiraea Anthony Waterer.—This recent introduction is a neat shrub, with pretty foliage, in many instances variegated with white. The claims, of some high floricultural authorities that it is destined to replace the *ranium* as a bedding plant, or to make an equally successful show bed, is never, in the opinion of the writer, verified. On first coming into bloom the trusses are large and of a charming shade of red or deep pink. These fade very quickly, leaving the color a dingy pink, very unattractive. The plant will continue to bloom during the summer if the faded trusses are kept constantly cut off, but the successive clusters are small and in no way equal to the first June bloom. This has been the experience of the writer, but perhaps others may have something more encouraging to report.

Coleus.—Some of the recent introductions of Burpee in this line, especially the so-called copper-colored *Coleus*, are exceedingly handsome and entirely novel. They would be doing even much better in a less dry season.—L. C. L. JORDAN.

Inferior Wood Ashes.—Fred W. Morse, of the New Hampshire Experiment Station, states that the average Canada ashes contain about 12 per cent. of moisture, which renders them as damp as the average chemical fertilizer. Buyers of ashes should, therefore, look with suspicion on lots that appear excessively moist, because in such cases the potash is seldom equal to the proportion in average ashes. Ashes from paper are valueless, because the soluble mineral matter has been leached out of the paper stock during the process of paper making.

A Rose Garden.

I have sent you to-day some prints showing a section of the rose garden here that I made in 1893, where was originally a farm barnyard. The circle of roses is some twelve feet below the level of a carriage drive about 300 feet to the south, the general level on the west being nine feet, falling away towards the north, so that here it is two feet below the centre circle. This is 125 feet in diameter and contains about

No. 2, Charles Lawson, Coupe d'Hebe, Periere, Paul's Carmine and the Ramblers.

To the northeast a large bed is filled with a mixed crowd and a gay spot they make it all summer. Here are Polyantha hybrids and Hermosa, La France, Agrippina, American Beauty, Augusta Victoria, Meteor, Perle and such like.

The Prairie roses, with some of their strong-growing sisters, as rugosa, Benet's seedling, and Dundee Rambler,

are planted out. I have endeavored to give some idea of their appearance by the aid of a kodak, but the photographer (myself) is not an expert. I also enclosed a print showing the west side of the bank mentioned, showing a portion of *Rosa rugosa*, var. *Comte d'Epresmesnil*.—J. HOLLOWAY, L. I., N. Y.

—The photographs to which our correspondent refers shows that he has a rose garden worthy of the name. Mr. Holloway's method of using polyantha, rugosa and such like sections for bold effect is one which could well be followed by many of our readers. What has been done in this old barnyard in a year or two can be equally well done in others.

The Vegetable Garden.

Garden Work.—The work of the garden is never ended, as many imagine. There is always plenty to do for those who seek it and are interested in their work. The principal thing to do now is to keep the crops picked clean, and as soon as they are over to clear them away, carefully raking up and carting off all rubbish. At all times there may be found bits of stick, stones, paper, wire, tin cans, etc., to mar the appearance of the grounds; these are frequently carried there in the manure and should always be picked up and not thrown under the currant bushes or into some corners in the garden, as such cannot be hidden from the quick eye of the employer, and should be taken clean away.

Weeds.—Don't allow any docks, dandelions or plantains to go to seed. It is well to remember the old adage of "one year's seeding makes nine years' weeding," which I remember many years ago in one well-kept place in England, where I once worked, was painted in bold letters and hung up in a prominent position in one of the garden buildings, where every workman could see it daily.

All tools should be taken to their proper places before the work of the day is over, and not be allowed to lay around everywhere to rust and get lost. A suitable building should always be provided where all tools can be conveniently kept when not in use and there can always be found when needed without loss of time.

Keep on file all numbers of this journal for future reference, as many hints are constantly given that possibly may not appear again. And as we are not all endowed with a phenomenal memory enabling us to retain all points, and recall them just at the required moment, one glance at the notes at times would frequently save much inconvenience.

Take your notes now, as you find them. They will be useful to refer to another year. Note which varieties of the different vegetables have given the best satisfaction this year. The Juno pea is a new variety to us, and here it has proved to be remarkably productive, of good color and fine taste, and takes very little time to pick a basket of it. We intend to grow many more of this next season.

W. M. EDWARDS, Conn.

Tree Case in Court.—A tree agent in Baltimore sold a bill of goods to a party for \$77. After the goods had been received and paid for by check the party discovered that he had been humbugged and stopped payment of the check. The tree agent brought suit to recover. In the testimony it was proven that a Cape Myrtle was sold and a Ground Myrtle sent, at the cost of \$1.50. The stock otherwise was said to be overcharged and misrepresented. Expert testimony was heard for both sides, but the jury brought in a verdict granting the plaintiff \$30, he paying the costs. This amount had been offered by the purchaser before the case went on trial, but was refused.

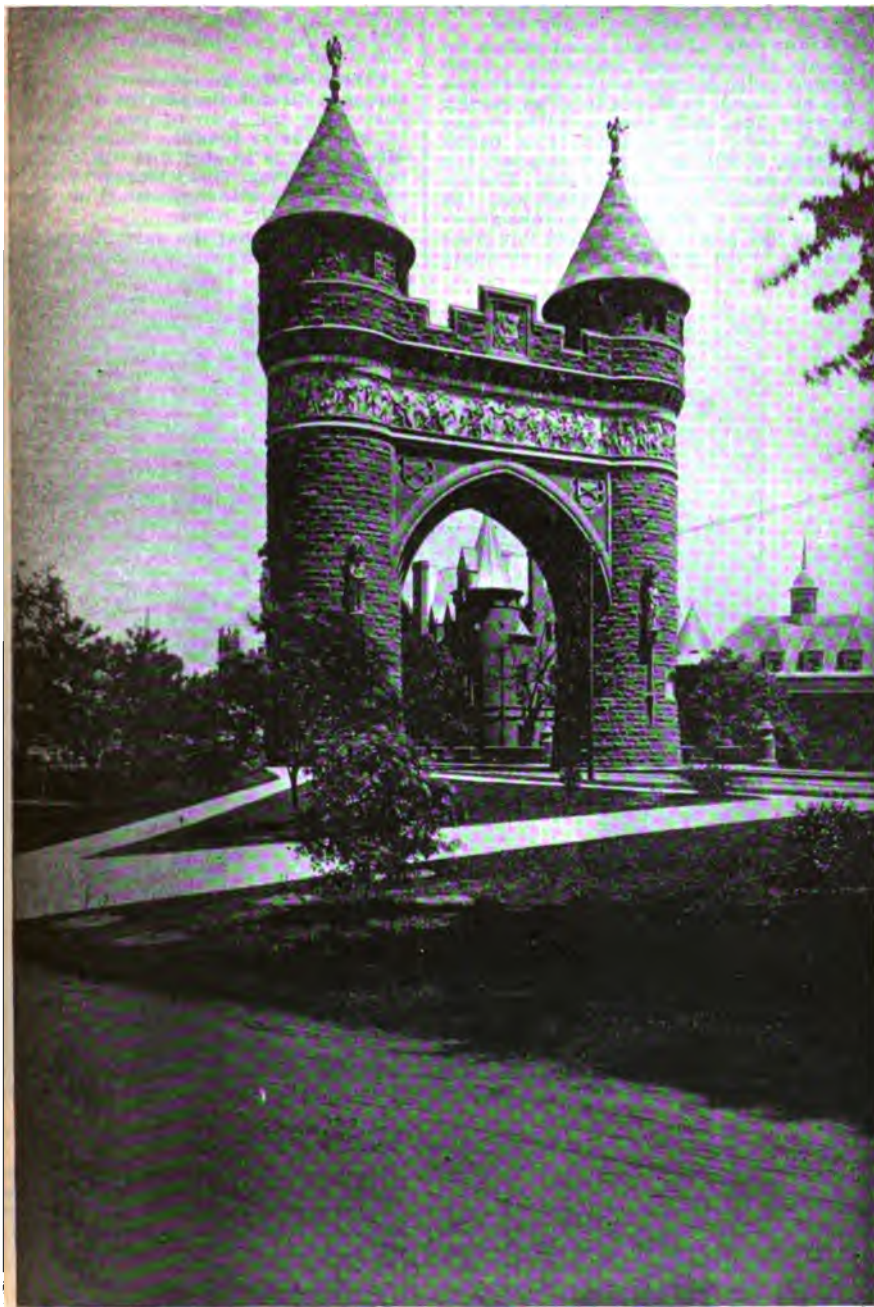


FIG. 140.—MEMORIAL ARCH, HARTFORD, CONN., MEETING HALL OF CONN., POMOLOGICAL SOCIETY IN THE BACKGROUND. (See page 501.)

800 plants of hybrid perpetuals in seventy-five varieties.

On the bank to the west is a collection of single-flowered sorts, among them multiflora, polyantha, grandiflora, Paul's single, lucida, etc., and including six varieties of *Rosa rugosa* (rubra, alba, Zuccariniana, Comte d'Epresmesnil, Madame Georges Bruant and Mrs. Charles Worth).

The Afghan yellow rose, *Ecæ*, is more of a curiosity than a beauty. Nearby are a dozen varieties of moss roses.

To the southeast are a number of pillar roses, including Mrs. Paul, Blairli

Glory of Cheshunt, Madame Isaac have less trim quarters given them where they can follow their own sweet will, while setigera and Wichuriana are doing their best at covering boulders, and for near-by companions at the same business have Grandiflora, Macartney simplex, with double-white and single-pink Brambles and Virginia creeper.

Perhaps before I tire you I had better switch off to the Hydrangeas grouped near. These hortensis, Otaska, ramulus coccineus, Thomas Hogg, Japonica and a variety styled Newport

Among the Strawberries.

The notes following are designed to point out some of the good and bad qualities of a few of the varieties grown here this season:

Beeder Wood.—Of good color and uniform size; a good variety to plant with Crescent or Warfield's No. 2. Foliage much affected with rust.

Bixler's Seedling.—A large, showy berry; sells for the highest price in market. Is a shy bearer, similar in productiveness to Sharpless.

Brandywine.—Desirable; holds its fruit up well from the ground; of large size; sells well; not of the highest quality.

Bubach.—For the past few years this berry has brought the highest price on the market here (with the exception of Michel's Early) on account of its large size and beautiful appearance. The foliage is healthy and of a deep green color; a strong grower. For it to do its best it should be grown in narrow rows and heavily mulched between the rows. It is not the best shipper, although it can be shipped short distances and arrive in good condition. This season it has been more productive than usual. Many like the flavor, but others dislike it, especially if it be "dead ripe" when used.

Clyde is promising, but has not been fully tested by us as yet.

Cumberland.—This is a perfect blossomed variety, which is worthy a place in every home garden; of beautiful color, much above medium in size.

Crescent.—Many growers still hold to the Crescent, as it can always be depended upon to bear plenty of berries even if most other varieties fail, and if not allowed to grow too thick together is of fair size. I have grown it in hills twelve to fifteen inches apart in the row and rows three feet apart, and it is astonishing what a crop can be raised from it thus treated. Its chief fault is in growing too much to runners, but that is no objection to the person who will keep the runners cut off—rather in its favor.

Enhance.—A good pollinizer for pistillate sorts, like Haverland; large size and good variety for canning, as it shows up well with its dark wine-colored juice. A fair shipper. Roots deeply in the soil, thus enabling it to carry out and mature a large crop of berries. With me it has ripened all the berries that it set. The color is against it in a market where a light-colored berry like Crescent or Haverland is preferred. One great fault is its not having plenty of foliage to cover the berries from the heat of the sun.

Gandy.—This is bringing in most money at present writing (June 30) on account of lateness and being of large size, while the last pickings of most other varieties are small; not as productive as would be desired.

Greenville.—Not too highly pleased with this.

Haverland.—This berry was in the largest demand from our wagon this season, many customers preferring it for table use. It is of good size, its color is attractive and it can be grown very large in narrow rows and hills; should be heavily mulched, as weight of fruit bends the slender fruit stem to the ground; very productive; does well on poor soil; too soft for shipping far; will not keep in good shape much over a day and night.

Marshall.—Strong grower; berry large; quality all right. Its chief fault is rusting of the foliage during the latter part of the growing season.

Michel's Early has given most excellent satisfaction. Its value seems to increase with age. Patches three years old bore a good crop. It was our earliest berry and came in for the best price; stems part readily from the hull; one of our best fertilizers, not as productive as many other varieties, but this year it has been more productive

than usual; does best on sandy soils. We shall not discard it for some time to come, although in the latter part of the season the rust affects the foliage badly.

Princess seems to be much larger and finer in every way than at any time in the past.

Parker Earle.—A first-class late variety; good, perfect blossomed sort to plant with late pistillates; grows but few runners; does not ripen all the berries to a fair size at last pickings; quality good; does best grown in hills; will mature more of its berries on clay or heavy loam than on sandy soil.

Ridgeway.—Judging from spring-set plants this is quite promising. I invested quite largely in the variety and see no reason to regret it. The quality is very fine; flesh meaty, without any tough core; an excellent table berry. I think it will be a good shipper, but cannot say for certain as yet. The foliage seems to be all right and the plant is one of the most vigorous growers on our place; is a perfect flowering variety, with occasionally a pistillate

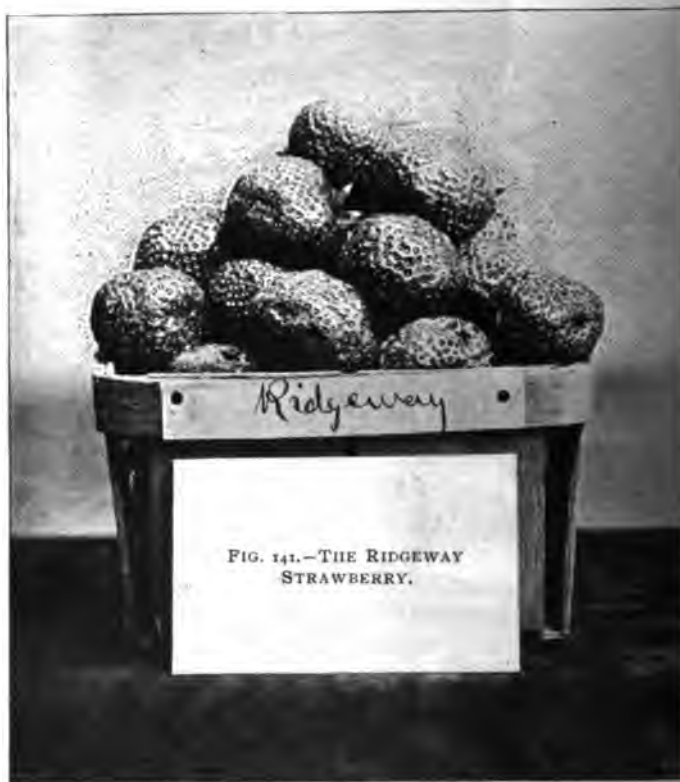
Wilson.—As a fruiting berry I prefer the Warfield to the Wilson, but the latter is now, as it always has been, a first-class sort for producing pollen. It is much affected with rust where grown on soil of too dry a nature.
CHARLES C. NASH, St. Joseph Co. Mich.

The Fruit Garden.

This has been so far the most trying of seasons as regards cleaning among fruit trees. I do not remember ever before doing so much spraying and getting so little apparent satisfaction from it.

Fire Blight.—To lovers of fruit trees this is a direful disease, in a few days destroying the labor of years. It may be vigorously fought. The mistake often made is to only cut out the dead parts, whereas every scrap cut off should have attached to it a liberal piece of healthy wood.

Pears.—See that the early kinds, as Beurre, Giffard, Manning's Elm



blossom, but does not give enough of the latter to keep it from being a good variety to set with pistillate sorts; shall plant largely of it next spring.

Sharpless.—Some very large berries were grown from this variety. It is one of the berries to grow when some very large samples are wanted. A shy bearer; blossoms often; injured by spring frosts; healthy plant and strong grower.

Timbrell is of good quality and size; makes a good table berry, but is of too blotchy an appearance to take well in market.

Warfield is one of our best shipping berries; used more for canning in this section than any other one variety. To obtain the largest fruits it should be grown in hills or narrow rows on rich soil; generally does best on heavy loam. At least every third row should be of a good fertilizing sort to keep Warfield from growing too much to buttons toward the last pickings, which also often run small; rather tart for regular table use, unless very ripe. The plants of this variety should not be allowed to take root any closer than four to six inches apart.

beth, etc., do not hang too long before being picked.

Apples.—A fairly good early one for a very small place is Tetofsky, one of the Russian kinds, it being a compact grower; tree five or six feet in height; quite showy, with fruit of medium size; yellow, striped red.

Cherries.—Belle Magnifique is a moderate grower. The fruit is one of the very best late kinds for cooking and for the table when fully ripe; season, middle of July. Napoleon Bigarreau is a good solid yellow fruit slightly shaded with red in the sun; season, first to middle of July; tree strong grower.

Strawberries.—The continuance of dry weather will make the planting of new beds late this year. Old plants of the early kinds are making few runners. This can be changed somewhat if water and labor can be had—two essentials rarely plentiful in gardens.

J. HOLLOWAY, L. I.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

Market Measures.

Will you please make your market report a little more explicit? I am at loss to know what is meant at plums per basket and peaches per carrier, etc. -OHIO.

—The question is a very natural and proper one to make, but unfortunately is a rather difficult one to comply with, owing to the immense amount of space which would be required week by week if size and details of packages are given in detail.

Generally in the New York market packages are uniform in size and certainly should be, but there are still a few sections and some shippers which have somehow adopted sizes of their own and have thus failed to fall in line with the great mass of their competitors.

The packages referred to in our market reports, viz.: plums and peaches in "baskets" and "carriers," are staple regular measures. The plums are

slats, the last-named is far the best, for the space between the slats allows some sunshine to enter and also provides for a free circulation of air, which is to the plants' advantage. If neither of these arrangements are possible fix open all doors and open all ventilators, shading the glass with white lead and naphtha.

Quinces Dropping.

Enclosed with this are some quinces which have dropped from my bushes. Will you please inform me (through paper) what the trouble is and how to prevent. The bushes have been sprayed with Bordeaux mixture three times and once for lice with kerosene emulsion (one to twenty); third spraying, Bordeaux mixture had Paris green mixed with a new formula.—FREDERIC A. WOODRUFF.

—The dropping of the fruit of your tree is due to the plant not having sufficient vigor to enable it to carry the

Chrysanthemums.

Watering.—The hot spell necessitates a good deal of attention with the hose, and plants must be closely looked after, particularly the pot plants, for if they get dry a few times the shoots get tough and wiry and the plant will, in gardening phraseology, get "stuck" and a serious check will result. If pot plants are inside the conditions of moisture can be more easily attended to, but plants that are outside, if they are fully exposed to the sun, would be greatly benefited if a piece of canvas shading could be fixed to spread over them at mid-day. The last week's heat is for July a scorcher on a down grade, without a brake attachment, and not a thought of back pedaling. The sun is certainly out to make his century run.



FIG. 142.—THE PARKS OF HARTFORD, CONN., SHOWING THE CAPITOL (See page 501)

packed lightly and weigh about four pounds each basket. It is a fairly safe rule to look upon a carrier as being about equal to a standard bushel in measurement, and as regards length it is made to accommodate eight baskets and is probably two inches longer than a regular bushel pear or tomato box.

Planting Violets.

Is it safe to plant violets in their permanent quarters where they are to grow? If so, will you kindly give a few hints how to proceed and oblige, A GARDENER.

—It is becoming the rule among commercial violet growers to plant their bushes early and this season such has been especially noticeable; we have already this season seen probably forty bushes planted and others we have heard of have already been planted. Some growers have taken the sash off the houses and covered with cheese cloth, while others have covered with

full set. It is not due to a disease nor to any insect attack. Excess of wood may be the cause in your case, but of course we can only suggest.

Plants Named.

(To C. M.)—*Syringa japonica*. (Sender's name lost; native elm accompanied.) *Celtis occidentalis*.

The true beauty of an evergreen lies in a vigorous, luxuriant growth, and yet not such as consists of only a few strong branches here and there, but a thick and full growth, strong and bushy—fat, as we may say—not a huge skeleton, remarkable only for its large bones, but well filled with firm flesh of a healthy hue. To get this and yet not interfere with the tree's vigor is the aim and object of evergreen pruning.—Thomas Meehan.

There is a great showing of fruit in certain sections of Long Island. Apples, pears and peaches are very abundant, especially in the neighborhood of Glen Cove and Seacliff.

Mulching.—Where the bench plants have made a good start they should now be mulched with tobacco stems. This will keep the roots cool and keep black and green fly at a respectful distance. It also has value as a fertilizing agent in addition. Examine the bed on a hot day where it is mulched and where the soil is bare and the difference in the temperature will speak for itself.

The army worm is putting in an appearance. Later on, if not caught now, this becomes probably the most destructive of all his fellows. He will bore right through a bud and sever every petal. His aspirations should, therefore, be "nipped in the bud," and before, if you can find him, and he generally leaves abundant evidence around, eating, as he does, from the ground up.

Specimen plants will need lots of attention now, tying and getting into shape. Give them all the care they need. They will repay you later on.

C. TOTTY, N. J.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1894.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 3154 Cortlandt.

P. O. Box 1897.

REGISTERED CABLE ADDRESS

Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

*** It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

History of the Sweet Pea.

In our next issue will be published the first part of the result of an exhaustive review of the history and development of this now most popular flower, together with references to and illustrations from historical works.

Sycamore Blight MANY complaints have been received this season of a serious disease of the sycamore. In affected trees, the leaves turn brown and dry up, and the young twigs in many cases die. The disease is caused by a fungus (*Glœosporium nervisequum*) closely related to the one which occurs on the grape, causing what is known as anthracnose. The fungus very commonly attacks the large veins of the leaves and in this way cuts off the supply of water and nourishment. As a result half of a leaf or frequently a whole leaf will wilt, then turn brown, and die. Trees badly affected have a ragged, thin appearance, in striking contrast to the usual vigorous, full-leaved, healthy specimens.

The disease is widely disseminated, occurring not only in Europe, but all through the eastern, southern, and western portions of this country. In Washington and elsewhere the oriental sycamore and also our native species suffer. It seems to be worse, however, on our native tree. From the character of the trees and the nature of the disease it is doubtful if any benefit would result from the use of fungicides. It is probable that by a judicious use of the pruning shears the disease might in a measure be held in check. All the young branches of affected trees should be shortened in and the trimmings burned. Possibly by following this treatment for two or three seasons, pruning early in the spring, the disease could be largely eliminated. The evidence strongly indicates that a tree once attacked becomes more and more affected each year, and this furnishes additional weight to the importance of destroying the parts containing the fungus.—B. T. GALLOWAY.

SEVERAL things combine at this moment to cause the City. us to ask: "What are parks for?" The answer will no doubt very much depend upon circumstances almost as varying as the location of the tracts of park lands concerned. If the question be put to the average man or woman, the reply will be that a park is designed as a lung for an over-populated area, a breathing space for the toilers of the city, and as a recreation ground for the little ones. Our own feelings are heartily in accord with the sentiment thus expressed, and it is sad, indeed, to see the Board of Commissioners (always composed of men of comparative wealth) sometimes wasting its energies in squabbles on the "artistic" fancies of their own imagining. Art certainly has a place in a park, but it should be that art which is so subtle as not to be glaringly paraded to the complete occultation of the more utilitarian aspect of city park lands.

Every facility should be given to attract the youth of a city to the parks. Instead of asking how little can be done, the question should be: How better can we attract them?

It is, in the present social condition, the height of folly to provide the park as a fashionable carriage drive and riding ground for "Society." In New York City such a tendency as regards Central Park has long been apparent. If a pedestrian happen to set foot on a roadway, except at a specified crossing, he is liable to arrest. How much better they manage these affairs elsewhere. In the city of Hartford, Conn., to whose system of park lands we refer elsewhere, is seen a nobility of aspiration which reflects credit upon its residents. Example is a great factor for good, and would that other cities had such a public spirited man to lead them as Mayor Brainard. We quote from his message a few sentences which we should like to see put up in large letters in all the city halls of this land.

"Pure air, pleasant surroundings, and a change of scenery are acknowledged and important factors in the promotion of health and good order among the denizens of cities; and for these reasons many families are accustomed to leave their city homes in summer time for a period of rest and recreation at the seashore, the mountains, or elsewhere. Unfortunately, the

circumstances of a large proportion of city residents do not admit of such change. Many are compelled to live in small tenements, not always well ventilated, nor healthfully located. It is not enough that the people of one section of the city should be enabled to occupy and enjoy healthy and beautiful surroundings; but it is clearly the duty of those in authority to provide, if possible, pleasant and salutary grounds near to the neglected portions, which shall be open and accessible to everyone, and by their sanitary influence tend to prevent disease which might originate and jeopardize the health and lives of all our citizens.

"It is for the benefit of those who cannot seek recreation elsewhere that public spirited and more fortunate citizens in most cities favor the acquisition of outlying lands to be used as public parks or pleasure grounds and places of resort."

As to the unique position of New York it is to be noted as a fact for consideration that some of the daily press regretted the issuing of a recent order throwing open the lawns to the children during the hot weather. As a matter of fact, these lawns never ought to have been closed; they are held by the representatives of the people for the people, then in all fairness, let the public have the use of its own.

To the Fruit Growers of Eastern New York.

At a meeting of the Eastern New York Horticultural Society, held in Poughkeepsie last March, a committee was appointed to look after plant diseases. The work of the committee consists in making observations on the amount of damage done by various diseases of fruits in Eastern New York and on the effect of spraying or other treatment for these diseases.

In order that the report of the committee may be as complete as possible, fruit growers are earnestly requested to notify the committee of any unusual outbreak of fruit diseases. Any information will be gladly received.

Correspondence may be addressed to any of the committee, as follows: F. C. Stewart, Jamaica, N. Y.; P. W. King, Athens, N. Y.; F. A. Taber, Poughkeepsie, N. Y.; L. E. Covert, Clintondale, N. Y.; E. W. Barnes, Middle Hope, N. Y.

The Value of a Reputation.

A gentleman from a neighboring city, while purchasing some strawberries of a dealer in Pittsfield, said to the dealer: "Those are fine berries. I can occasionally get as nice at home, but am not always sure of them." The dealer replied that he had not received a crate of soft or dirty fruit from that grower for ten years, and he could guarantee just such the season through. Thereupon the gentleman ordered six boxes sent him by express three times a week for the whole season.

Passing through the Boston market I noticed some neatly-put-up fruit at one of the best stands in the New Faneuil Hall Market. I said to the dealer: "There must be money in that fruit for you." He smiled and replied: "Well, it is fine fruit and nicely put up. I always give it the preference, for I can depend upon it. If the grower telegraphs a shipment made I sometimes sell it all before it reaches me. There is not so very much money in it for me, but I like to see it front of my store. I consider it an honor to any man in Boston to handle those goods."

—Massachusetts Ploughman.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send stamp for our new catalogue.

Strawberries.

Mr. Dwyer upholds summer planting.

Your issue of July 10 at hand and I have carefully read Mr. Hale's comment on my recent address on strawberries at the American Institute, New York City. I am always pleased to have Mr. Hale or any one else join issue with me on anything I have to say on horticultural matters. Good, fair, honest discussions are valuable and often a great deal of knowledge is obtained in this way; however, I will always insist on being fought fairly. Mr. Hale either did not read my address as printed in your paper or else he did not get the correct meaning from it. In no part of that address is there any reference whatever to the number of plants required to plant an acre of land.

I have never, either by advice or in my articles, recommended any one to plant 20,000 plants to the acre. It is absurd for Mr. Hale to take such a meaning from my remarks and in so doing he (no doubt unintentionally) places me in a false position. "Let us have the truth if the heavens fall."

I advised setting these pot-grown plants eighteen inches apart in the row and four feet apart between the rows. To set an acre of plants these distances apart would require about 7,500 plants, not 20,000 plants, as stated by Mr. Hale. You see there is a great exaggeration to start with. We did put the price of pot-grown plants at 2½ cents each and of course were thinking of retail prices. As a matter of fact, most any producer of pot-grown plants will furnish them in lots of 3,000 and upwards at \$13 per 1,000.

Now these are all facts. Instead of an acre set with pot-grown plants costing, at Mr. Hale's figure, \$500, they really would cost less than \$100, and then Mr. Hale's estimate of \$18 to \$25 for 20,000 layer plants in the spring is entirely too low. Good plants cannot be profitably grown, dug and packed for this money, and I presume Mr. Hale knows this, for his catalogue prices run (about the same as do those of other reliable dealers) from \$2.50 to \$4 per 1,000 for the standard varieties.

I did say, and I repeat it, that every pot-grown plant set in July or August would produce this season eight or ten young plants, and that each of these plants would produce one-half pint of fruit each next season. In other words, they will form the proper width of matted row for fruiting next season for profitable results. If Mr. Hale understands pot-grown plants he knows that this can be done and that when this result is not obtained it is either the fault of the land or of the grower. We have always advised planting in the spring, and still advise it; but we know from the experience of ourselves and others that, where you have already taken a crop of early vegetables from your land with conditions favorable, good market, etc., you can plant pot-grown plants at the prices I have named and will find them a profitable investment and get more money from them than from any other crop you can plant on this land.

I will have but little to say at this time about varieties. I have found the Marshall the finest berry I have ever grown. It is productive enough for us to make more money from it than any other variety we have. The Brandywine is a close second and I will keep right on planting these.

Trial beds are very uncertain, more especially so when judgment is formed from plants set in them the autumn or fall before fruiting. Many of our best varieties, like the Downing and Cumberland Triumph, make a poor showing of fruit the first season after being planted. The Marshall variety is somewhat of the same order. Like some of our friends all these improve on long acquaintance. T. J. DWYER.

Our publishers will supply any book wanted. Send your orders.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Clematis Dying Off.—I have read with much interest H. J. Bothe's letter on this subject in your last issue. The point raised is a most important one and I am glad it is brought to your notice. A thorough investigation should be made, since I am positive there are not only hundreds of amateurs, but also florists and nurserymen who could tell the same story of failure as is related by your correspondent. It may seem somewhat queer to your readers for me to have to say that I have for a number of years met with exactly the same misfortune as did H. J. Bothe, and though I have had theories as to the causes which led to such failures and losses, I have not, as yet, been able to decide what causes Clematis, after starting into what would seem a successful growth, to all of a sudden "go back" and rarely ever amount to anything. My opinion now is that Clematis should be transplanted in the autumn instead of in the spring and I purpose to plant a number of them this autumn into permanent position. I have a very fine stock of plants, both from root divisions as well as grafted plants (our own propagation), and also imported plants. I find that the home-grown plants grafted upon our native sorts are less subjected to this unfortunate collapse than the imported ones, which are from division and grown in rich, marshy soil. I hope that all who have similar experience with Clematis and any who have found a remedy will kindly let the lovers of this beautiful plant have their experience through your columns.—H. A. SIEBRECHT.

Aquelegias.—I, for one, desire to thank Mr. Canning for the recent article in *American Gardening* on the Aquelegias. To me it was very interesting and would have been more so had it continued the subject farther. I have several very beautiful varieties, the spurs of which shade off to purple, lilac and a brownish shade. I do not know the names of any of them, but they are very beautiful.—JOS. M. WADE, Mass.

Plants in My Greenhouse.—Mr. N. Butterbach, Oceanic, N. J., is curious to know what plants I raise in the greenhouse. A complete list would occupy more space than I fancy the editor would care to allow. The 40 to 80 degrees mentioned on page 427 are extreme limits. Having no market for cut flowers, roses and such like are grown only for personal satisfaction. Red spider is unknown in my house, aphids seldom appears and I have no "damping off" to speak of, but do have the healthiest, thriftiest lot of flowers and vegetables that can be grown, even in the open ground in summer. Blistered glass will injure some tender foliaged plants without a doubt; but when a field of potatoes is injured in foliage by a light summer shower, followed by direct rays of bright sunshine, the glass cuts no figure. If Mr. Butterbach wishes some of the delusions of greenhouse work corrected and will visit or correspond with me perhaps a "Maryland Gardener" can give him points of value, having gained all my knowledge from experiments. I have no old-fashioned ideas to combat nor prejudices to overcome. My methods are intended to reduce cost to a minimum. With this I mail to the editor, under separate cover, some strawberries that are undergoing an experiment to secure "lateness." The varieties are Clyde and Crawford. They were fruited in the house in February and March and were a partial failure (in size), were rested

and transferred to the open ground. Some are still blooming at this date, July 7. Another experiment of transplanting poppies and blooming them in the house was successfully done. Callas are had in bloom from Christmas till now. Location, form of house and peculiar potting soils have their effect, with the minor points of handling, etc.—HENRY SNYDER, Oxford, Md.

—The ripe berries were of moderate size; others, unripe, were plentiful. It is certainly late for strawberries in Maryland.—Ed.

An Ant Destroyer.

Having heard of many remedies for divesting lawns of ants, I will add my personal experience to the number, as, possibly, it may help others. I have experimented with many things to get rid of the pests and their depredations. For a long time fortune hung in the balance. Now I can cry, Eureka!

Our lawns and walks were infested with immense colonies of ants. Their nests were enormous, honeycombing the turf, killing the grass and running four or more feet into the ground, as I found out by digging. They even swarmed over my cherished plants, showing great partiality for peonias, just as the buds were swelling. These puny antagonists, after a warfare waged against them for years, made me almost despair of victory.

I tried such well-known remedies as tobacco, hellebore, whale oil soap, kerosene, Paris green, quassia, camphor, in fact everything I could think or had ever heard of—all without success. One day, when the case seemed almost hopeless, I procured several pound cans of Carbonel Disulphidum, or, as it is generally known, Carbon Bisulphide, and made another attack on a great ant nest, which had given us much trouble. The apertures of the nest were numerous, and near one another. Seeking out every vent to their haunts, and gently pouring a spoonful or two of the compound into each opening, then covering the latter quietly with a little soil, when all were charged I applied a match to one hole, keeping my face turned away to avoid the expected fumes. Drawing back, I awaited results.

In a second or two I had before me a miniature earthquake. There were subterranean sounds of a rumbling nature, slight upheavals of the soil, puffs of smoke issuing from all the near-by openings, accompanied by the most indescribably disgusting odor. But oh, the ants! The poor ants! The maimed, the dead and dying, were thrown out and heaped about the doorsides and hatchways of their domiciles. Amidst the bodies of the slain I was cruel enough to exult over their discomfiture; for, if I had not discovered how to rid lawns of ants, at least I had found an agent that would exterminate them en masse.

Now, with a little vigilance, in blowing up or fumigating new abodes, they are so kept in check that one would hardly realize their existence. I was fearful at first that the chemical might injure neighboring plants; but they have not been in the least affected.

L. P. HILLHOUSE.

—Bisulphide of carbon is undoubtedly the best substance for the destruction of ants. It is quite unnecessary to explode it; indeed, better not. Full particulars on the use of this article were given in last week's issue.—Ed.

Fruit for Covent Garden.—It is estimated that on Monday, June 21, 200 tons of strawberries, 500 tons of cherries, 10 tons of apricots, 10 tons of plums, between 10 and 20 tons each of red and black currants, and 200 tons of green gooseberries arrived at Covent Garden. In addition to these 31,000 cases of oranges, about 10,000 cases of lemons, and 3,000 bunches of bananas came to hand.

A Plea for Garden Roses.*

(Concluded from page 492.)

And now comes the most difficult question to decide, viz.: What varieties to plant? This is where the doctors are sure to differ. There are in existence at the present time say in round numbers, two thousand five hundred varieties of roses—an embarrassment of riches. If I had the space every one of them would be planted. The real pleasure of a rose garden does not consist so much in comparing reds with whites, yellows and pinks as in studying the nice distinctions and individual characteristics. Many we learn to love for their faults. The late Mr. Peter Henderson related an amusing story in "Gardening for Pleasure" bearing upon this question, which is worth repetition: An old German florist said to him once: "I haf so mooch droobles mit de ladies ven dey comes to buy mine rose. Dey all vants him hardy; dey vants him dooble; dey vants him nice gooler; dey vants him schmell goot; dey vants him moonldy; dey vants him to be everyding in von rose. Now, I haf to say to dose ladies dat I sees not dat lady dat is rich, dat is young, dat is goot demper, dat is bootiful, dat is healdy, dat is schmart, dat is eferydings in von lady. I sees her not mooch." There is more truth than poetry in the German's petulance. And what rose lover would want all the good qualities in one rose? Not many, at all events. The variation is the charm. We would wish that the fragrance of La France was bestowed on Crimson Rambler, or that Persian Yellow was devoid of its villainous odor; but we will not part with them on that account. We may wish that the little Polyantha or Multiflora Roses were allotted a perfume equal to the teas or hybrid perpetuals; but they are, nevertheless, charming without it. Some day, perhaps, our hybridizers will give us roses with qualities now lacking in our present favorites, for which we thank them in advance. Some day, too, we may have a nomenclature committee, who will meet the French roses at the portals of our country and rechristen them with a pronounceable name before presenting them, for which we all most devoutly thank them in advance. A rose by any other name than Mademoiselle Suzanne Marie de Rodocanachi would smell just as sweet and we would not miss our train trying to tell our neighbor what it is called. It is to be hoped that the young lady changed her name and that it was a shorter one. Provision should be made in such a case for a like change in the name of the rose. The man who called a rose "Grande Duchesse Heritiere Marie Anne de Luxembourg" had no consideration for the poor gardener or florist who would have to write it on a four-inch label with a stump of a pencil. They don't write it. They simply say the rose is no good; it is relegated to obscurity and so they have their revenge. It is a pity that the French raisers cannot see the absurdity of calling roses such long names, and above all, calling them after every member of a family, resulting in unlimited confusion.

The last five years have been most prolific in new roses; in fact, almost a revolution has taken place; and the planter to-day has vastly improved material to select from. That grand rose, the Crimson Rambler, has added an entirely new feature to the garden and must be reckoned with for a complete rose garden, either trained in pillar form on an arbor, or on the house. No garden is complete without it. Following in its wake we have the Yellow Rambler (Aglala), and the dream of years is realized in it. Then we have the Pink Rambler (Euphrosyne), and the White Rambler (Thalia). It is, perhaps, too early yet to say that these latter are of ironclad hardness,

but they promise well. Another beautiful pillar rose is Carmine Pillar, unique in its magnificent shade of rosy carmine. Rosa Wichuriana has added another charming feature to the rose garden, and I do not know a more pleasing sight than to see it trained up to a post as a single specimen, or trained to form an archway. Its foliage alone will repay for the trouble, but its flowers are most charming in their grace and beauty. The double varieties of this are a great advance, equally beautiful foliage, flowers exquisitely fragrant. The Pink Roamer, one of the hybrids, has the charming color of Carmine Pillar and is a most useful rose. For covering terraces or low boundary walls, these roses are of inestimable value.

The new hybrid Sweet Briars add another feature to our garden roses.

The hybrid tea section has been wonderfully developed, particularly by J. Pernet-Ducher, who has given us Mme. Caroline Testout, Mlle. Germaine Trochon, a yellow variety like Sunset, which has proved hardy at New York; Mme. Abel Chatenay, a beautiful pink rose, and Souvenir du President Carnot. These are all fine garden roses and come very near to supplying what the German florist so vainly wished for. Belle Siebrecht must not be overlooked as a summer rose, and that grand acquisition, Kaiserin Augusta Victoria, supplies the finest white flowers it is possible to get.

For those who like novelty in roses that taste can be satisfied with Roger Lambelin, crimson and white, just like Gen. Jacqueminot, after being treated with a sulphur match as we did when boys. Then we have that wonder, the Inconstant Beauty, with its many-colored flowers, another and a lovely "freak."

In hybrid perpetuals the year is made memorable by the introduction of Jubilee, the rose that won for its raiser the gold medal of the Massachusetts Horticultural Society—peerless in its magnificent velvety crimson and pure red. And before I forget it, let me whisper in your ear that there is another American rose which is coming out soon and which will be worth having in the garden, viz.: Mrs. Robert Garrett, a hybrid tea of the largest size—long, pointed buds, a beautiful clear pink—as yet it is without a rival in sight. And so as not to create a wrong impression, let me say that it is likely to lead all the pink forcing roses, as well because of its size and magnificent color.

And what garden is complete without the Rosa Rugosa? None. A rose garden without a representative is like the play of "Hamlet" without the moody Dane. If there is room at all put in a plant of that beautiful child of the Rugosas, Mme. Georges Bruant.

Don't forget to save a corner for the moss roses, as moist and cool as you can get it. There is nothing on earth prettier than a perfect bud of the Old English, Glory of Mosses or Crested Moss, not forgetting that pale beauty, Comtesse de Murinais. It is a pity our climate is not more in accord with their

(Continued on next page.)

Beware of Ointments for Catarrh that Contain Mercury,

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O., contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally and is made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free.

Sold by Druggists, price 75c. per bottle.

AGENTS WANTED.

Read this partial description of the best book of the kind for women which has ever been published, then write us for terms and territory.

HOUSE PLANTS

AND

HOW TO SUCCEED WITH THEM.

BY

LIZZIE PAGE HILLHOUSE.

Scores of books have been written on flowers and their cultivation, but it has been reserved to Mrs. Hillhouse to cover a field of highest interest to women hitherto untouched, and to provide a reference book and complete guide for all her sisters who, loving plants, would ever be surrounded by them did they but know where to turn for such advice as to their preservation and instruction in their culture as would be open to them to follow, easily understood, yet thoroughly practical.

"I have bought book after book," the author says, "in a vain search for that knowledge which would enlighten me as to how to prolong the lives of my precious pets, when noting with alarm their distressed appearance, only to find them all a delusion and a snare, so technical or ambiguous as to befar beyond my reach or apprehension. Therefore, for the benefit of fellow sufferers, I have determined to put down what little I have found out from bitter experience, knowing it will be practical and true, as far as it goes."

"HOUSE PLANTS" has been written by a woman for the countless thousands of women who have no conservatory or hothouse, and are compelled to grow their plants in the home, and it gives freely of the knowledge which the author has been gathering through many years of observation.

Recognizing the fact that no book adequately covering the subject has ever been published, Mrs. Hillhouse has undertaken to fill the deficiency, and most ably and effectively has she accomplished the task. The result is a book of information and instruction, written in simple language, which will be prized and consulted by every woman so fortunate as to become its possessor. Of all books of reference issued for domesticated women, "House Plants" will take its position second only to the much prized and everhandy family cook book.

The amateur will be both surprised and delighted with the great range of plants which this book tells us it is possible to successfully raise in the house. Chapters are devoted to Bulbs, Cacti, Ferns, Flowering Plants, Foliage Plants, Lilies, Palms, Shrubs, Vines, Creepers and Basket Plants, and one on plants unclassified. A separate chapter on the propagation of plants is extremely interesting, as it is here so many fail.

Again quoting from the author, "In writing this little book, I have endeavored to keep strictly within the lines of my personal experience, and to select for description and suggestion as to treatment only those plants which I knew could be grown successfully in our living rooms or houses. This, undoubtedly, may be done, if my instructions are followed."

"How little most people—bright people, too—know of the marvelous and amazing creations of the plant world. Those silent monitors, the flowers, are not dumb, but speak to us through the delicacy of their scents, their intricate shapes, complex habits, and the glorious penciling of their heavenly colors, that no human artist can command."

HOUSE PLANTS, 12mo., 220 pages, cloth, profusely illustrated, and with complete and ready reference index to all plants mentioned. Price \$1.00. A. T. De La Mare Ptg. and Pub. Co., 2 to 8 Duane St., New York, publishers.

*Paper read by Mr. P. O'Mara, at the Annandale (N. Y.) Rose Show, June 16, 1897.

unts; and I, for one, would surrender
matoses so that we could have them
their perfection.
Speaking of climate reminds me that
ople will hanker after standard roses,
the face of the prohibition nature
s set against them here. There may
beauty in a standard rose—"I'm not
nigin of it"—but it is associated in
7 mind with the circus clown on
its, the difference being that he gets
spindles and looks ridiculous for
ney, while the poor rose is perched
a stork's leg for a whim, or as e
bute to laziness.
f you have room at all, put in a
unt of Rosa setigera where it will
ve room to scramble. 'Tis patriotic
do it and you will never be ashamed
it. And near by put in a plant or
o of Rosa rubiginosa; but not too
or, its American cousin is apt to
ottle it. A little farther on put in
rsian Yellow and its paler sister,
rrison's Yellow. By way of variety,
t in the old Austrian Copper, the
itiflora Japonica, the Dawson rose.
re them plenty of room and let them
re their own way to a great extent,
n no one can cavil at them on ac-
unt of stiffness.
here is no limit, apparently, when
e we start to individualize in roses,
t the little Polyantha roses must not
forgotten as an edging for your beds
tea roses, and above all, Clothilde
apert. One of the newer tea roses I
st not forget to mention, viz.:
incess Alice de Monaca, somewhat
the order of Duchesse de Brabant
ntesse de Labarthe), but more com-
t and even more free in blooming.
low, any one who attempts to talk
out roses is sure to be asked which
the best. In the bush roses, if I
s limited to a selection, I would
ne the following: In hybrid per-
uals, Jubilee, Mrs. John Laing, Ul-
h Brunner, Dinmore, Anna de Dies-
sh, Paul Neyron, Mme. Gabriel Lui-
Helen Keller, Gen. Jacqueminot,
ron de Bonstettin, Baroness Rotha-
ld, Mabel Morrison, Margaret Dick-
i, Victor Hugo, S. M. de Rodol-
achi, Alfred Colomb.
a hybrid teas, La France, Souvenir
President Carnot, Captain Christy,
iserin Augusta Victoria, Mme. Car-
ie Testout, Souvenir de Wootton,
gustine Guinoiseau, Mlle. Germaine
chon, Madame Abel Chatenay, Belle

Potash.

Too little Potash in
the fertilizer used pro-
duces a "scrubby"
crop, just as a lack
of sufficient grain fed

to stock means a "scrubby" animal.

Free

An illustrated book which tells what Potash is, how it
should be used, and how much Potash a well-balanced
fertilizer should contain, is sent free to all applicants.
Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write.



THREE NEW CANNAS.

40 NEW IRIS.

SIEBRECHT & SON, - 409 Fifth Avenue, New York.

Mention American Gardening when you write.

Bay Trees,
Hardy Palms,

AND EVERYTHING
FOR DECORATING

Delaware-Grown
Crimson Clover.

Absolutely pure.
New crop.
Now ready.
BROWN SEED CO.,
Wyoming, Del.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO.
Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

A YARD OF ROSES.



Copyright, 1896, by O. D. Gray, New York.

The illustration but faintly represents the beauty of this celebrated painting by the well-known artist, Mr. Newton A. Iles. The grouping and coloring has been performed with exquisite taste, and the reproduction we offer is worthy a frame, a position on the wall of any one's room. This sketch, in eleven colors, is 36 inches long and ten inches wide, on heavy wing paper, and sells in the art stores of New York for fifty cents. We will send "A Yard of Roses," securely packed in a box to prevent injury, postpaid, as follows:

To all renewing their subscription and adding five cents to pay postage and packing.

To all sending us \$1.00 for their own renewal subscription and 75 cents for the subscription of a friend, we will send "A Yard of Roses" free and postpaid, as a premium to both addresses.

AMERICAN GARDENING, P. O. Box 1697, New York.

For Present Sowing.

TURNIP SEED. We have all the best varieties.

CUCUMBER SEED FOR PICKLES. Our STOCKS are the Finest.

The first Consignment of our **SURE CROP, Mushroom Spawn**, just arrived.

Quality! BETTER!! than ever!!!

Descriptive Catalogue Free, by mail.
WEEBER & SON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

Crimson Clover Seed.

DERBY'S GROWS. Pedigree dates back to 1887.
Crop of 1897 for Sale. Address
SAM H. DERBY, Woodside, Del.

Mention American Gardening when you write.

New Crop 1897 Crimson Clover.

READY NOW. Sample for 2c. stamp. My own growing.
E. G. PACKARD, Dover, Del.

Mention American Gardening when you write.

Offer No. 80.

FOR ONE NEW SUBSCRIPTION

200 CELERY PLANTS

AS FOLLOWS:

50 Plants
White Plume.

50 Plants
New Rose.

50 Plants
Golden Self-
Blanching.

50 Plants
Giant Pascal.



This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to **AMERICAN GARDENING**. Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P. O. Box 1697, N. Y.

Built to Sit On, Not to Straddle.



THE WHEELER BIOVOLE SADDLE.

Every rider who has given the **WHEELER REFORM** a trial prefers it to all other saddles. Endorsed by physicians. Especially recommended for ladies.

We will send a Wheeler Bicycle Saddle as a Premium for Three New Subscriptions at \$1.00 each. Purchaser pays express.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

J. Davies, formerly with H. McK. Twombly, Madison, N. J., has been engaged as gardener for A. R. Whitney, Esq., Morristown, N. J.

Mount Kisco, N. Y.

The Westchester County Horticultural Society held its regular monthly meeting in the Mount Kisco Opera House on Friday night, June 25. Two new members were elected. There was a fine exhibit of roses and hardy flowers. President A. L. Marshall exhibited some fine strawberries, tomato Ignatum, and Snowball cauliflower; Mr. George Barton a collection of hardy flowers; Mr. George Carpenter a bunch of sweet peas; Mr. James Wood some fine Baroness Rothschild Roses and Sweet Peas; Mr. J. O. Miller a dish of fine gooseberries.

Mr. George Barton gave a talk on hardy plants, suitable for cottage gardens, which was very interesting, as he told about the Sweet William, hardy Phlox and its many varieties, producing flowers from early spring till late fall; the Delphinium, with its various shades of blue, and Coreopsis, with its bright golden yellow, and the many colored Rhododendrons, which can be grown in any garden.

The meetings fixed for July and August will be omitted, the next meeting coming on September 24.

Boston.

A fine exhibition was presented at the rooms of the Massachusetts Horticultural Society on Saturday July 5. Wm. Thatcher carried off the honors on Iris Kämpferi and Campanula media. Miss M. S. Walker receiving one prize for Iris, and the Bussey Institution one for campanulas. The Society's silver medal was awarded to J. E. Rothwell for *Miltonia vexillaria*, and W. E. Coburn received honorable mention for *pelargonium "Dorothy."* Certificate of Merit was awarded to T. C. Thurlow for *Rhus cotinus atropurpurea*, and a similar award to W. H. Cowling for *Rosa lucida var. alba*.

A Burlesque?

What must be seriously intended as a burlesque schedule for a November show has lately been circulated among the several horticultural societies around New York. The demand for flowering shrubs when the land is all frost-bound is charmingly naive and so, too, is the provision of a class for the luscious peach and nectarine fruits of the summer's sun. But the compiler soars into the sublimely ridiculous in his subtle allusions to "specimen" Lageria, Epacris, Fuchsia, Mimosa, fancy Caladium and "a vine in a pot." The proposed show of Chrysanthemums is drawn on lines of grandeur indeed—fancy a close competition in a vase of 100 blooms!

But, ye gardeners, here is a chance for you to win laurels; you are asked to bring forth "bush plants grown to one stem." Many members of the craft are thankful to the shining wit for having had such a lightsome frolic offered them at this dull time.

Roses of the Victorian Era.

The "Gardener's Chronicle," London, in its issue of June 12, publishes an interesting account of the progress made in the rose world during the reign of Queen Victoria. The writer of the article says: "During the period of the last sixty years, it is very difficult to say how many roses have been sent out into the world, but if we take the average of forty each year, there cannot have been fewer than between 2,000 and 3,000 roses sent forth by raisers abroad and at home."

"The three classes of roses whose improvement has been so remarkable during the past sixty years are hybrid perpetual tea scented, and Noisettes. The origin of the former is a matter of considerable doubt; but I believe that the hybrid China crossed with Damask, hybrid Bourbois and other roses, have produced some of the magnificent flowers which we now possess. Two of the most celebrated raisers in older days were Laffay and Vibert; but do not think any of their productions have survived to the present day, except in a few garden roses such as Gloire des Rosoman and Almée Vibert. The origin of the tea and Noisettes is somewhat better known; they are the product of the China rose crossed with the yellow China or Tea rose and I believe that all the fine varieties that we possess are traceable to this combination. The Noisette rose was raised in America by M. Philippe Noisette; it was produced from Old Musk fertilized with the common China rose, and from the first has been a great favorite with French rose growers; but its earlier mirrors could never have anticipated the glorious results which have followed during recent years."

"In the hybrid perpetual class there are no roses that go back to the period of H. Majesty's accession, and by far the greatest number of roses date back to the sixteenth and seventeenth centuries. How prolific the seed were in good roses may be seen by the following list, and which still maintain the position as exhibition roses:—Alfred Colomb, Annie Wood, Baroness Rothschild, Camille Bernardin, Charles Lefebvre, Comte Raimbaud, Comtesse d'Orléans, Devienne Lamy, Dr. Andry, Duchesse de Morny, Duc de Wellington, Dupuy Jamet, Eugénie Verdier, Fisher Holmes, Horace Vernet, Louis Van Houtte, Madame Victor Verdier, Marguerite de St. Amand, Mar. Baumann, Marie Rady, Marquise de Castellane, Maurice Bernardin, Mons. Noms, Pierre Notting, Prince Camille de Rohan and Xavier Olibo.

"The seventies produced much fewer, the most noticeable among them being A. J. Williams and Madame Gabrielle Luitet."

"In Tea roses nearly all of the most valued varieties came from France. A the grand Teas from Niphetos sent out in 1843, down to Maman Cochet in 1893, have come from abroad; some from America but they have been mainly sports."

"In garden roses also there have been charming additions in the class of Noisettes."

"Other classes of roses have, during the latter portion of this period, come in much notice: one is the class of hybrid tea and to which some good additions have latterly been made, although I quite think that the fewer the divisions, and the more simple the classification, the better; if they serve the purpose of keeping the decided tea and Noisette roses in a class themselves. It is somewhat remarkable that no attempt has been made in what is called summer roses, hybrid Chinas, hybrid Bourbons, Gallicas, etc."

"There is yet another class which has received some remarkable additions during the past few years, that ordinarily called polyantha; the Japanese rose multiflora simplex has been crossed with some of the teas, and has produced a delightful class of dwarf double polyanthas, and flowers as Cecile Brunner, Ma Paquet, Gloire de Polyanthas, Perle d'Or, and others, form a class which we cannot afford to neglect, blooming, as they do, in large clusters, and of a bright and pleasing color. To these must be added the remarkable rose, Crimson Rambler."

"To the Japanese we also owe the roses of the ferox or rugosa character, which, whether in flower or fruit are valuable, and which may probably yet give under the hands of the hybridizer, a class; the attempt has already been made and the double-flowering one, Mad. Georges Bruant, may be the avant-coureur of many others."

Died.

George W. Park, a pioneer nurseryman, died at Lansing, Mich., recently aged 65 years.

Charles Le Cluse, a nurseryman Bayport, L. I., was found dead in home recently. It is thought that he was murdered by tramps. The wife is also dead, presumably from shock.

WHOLESALE MARKETS.

New York.

The cut-flower business is about as poor as it can possibly be; the supply of roses, and in fact, of all stock is unusually heavy for this season of the year, consequently prices are very low. Sweet peas are being sent in enormous quantities, and as a general thing do not average more than 50c. per 100 bunches; figures vary from 35c. to \$1 per 100, these quotations are only for peas of exceptional quality. It may reasonably be stated that peas never were better than they are this season.

Fruits and vegetables are being received in tremendous bulk just now, but withal are being cleared out just as fast, although there is no boom in values, and sometimes low figures are taken with the object of keeping the market cleared up.

Long Island potatoes are in splendid condition, and prices are steady at from \$2.12, with a tendency to stiffen to \$2.25.

Georgia peaches are arriving in quantities; quality fair and prices vary from \$2.50 to \$4 per crate, a fair average being \$3 for high grade fruit.

Current growers are very much disgusted with the prevailing low price realized, and many are said to be doing away with their bushes as a consequence.

Pears have done well during the past week, and this week up to time of report, continue good.

Hot-house grapes are dull, and 50c. per pound makes the average for special stock.

Hot-house tomatoes have had quite a boom for two weeks, and a few shipments of special quality have reached 20c. per pound, the average being from 10c to 15c., this has been due to the poor condition of outdoor grown of late, but will probably change very shortly when Jersey and other local crops come in.

But few mushrooms are arriving, good quality makes 75c. per pound.

Apples—Jersey, windfall, per barrel, 75c. @ \$1.25; Virginia and North Carolina, green, per barrel, \$1 @ \$2; Maryland and Delaware, good to prime, per crate, 60c. @ \$1 common, per crate, 30 @ 40c.

Strawberries—Western New York, com. to good, quart, 3 @ 8c.

Raspberries—Up-river, red, per pint, 3 @ 4c.; per 3-to-quar cup, 2 @ 24c.; 4-to-quar cup, 1 @ 2c.; Upper Jersey, red, per pint, 2 @ 34c.; Lower Jersey, red, per pint, 2 @ 3c.; Blackcap, up-river, fancy, per pint, 2 @ 34c.; Jersey, per pint, 2 @ 28c.

Gooseberries—Large, per quart, 4 @ 6c.; small to medium, green, per quart, 2 @ 4c.

Huckleberries—Shawangunk Mountains, per quart, 7 @ 8c.; Pennsylvania, blue, per quart, 7 @ 8c.; Jersey, per quart, 5 @ 7c.; Maryland per quart, 4 @ 6c.

Blackberries—South Jersey, cultivated, per quart, 4 @ 6c.; Maryland and Delaware, cultivated, per quart, 3 @ 5c.; cultivated, inferior, 2 @ 3c.; Early Harvest, per quart, 2 @ 3c.

Currents—Large, red, per quart, 3 @ 4c.; small, red, per quart, 1 1/2 @ 2 1/2c.; bulk stock, per pound, 2 @ 3c.

Cherries—Sweet, per pound, 3 @ 7c.; sour, per pound, 3 @ 6c.; eight-pound baskets, as to size and condition, 15 @ 50c.

Melons—Watermelons, by rail, per car, \$200 @ \$300; by steamer, per car, \$125 @ \$300; medium to large, per 100, \$20 @ \$30; small or inferior, 100, \$10 @ \$15. Muskmelons—Fancy, per bushel basket, \$1.50; poor to fair, per basket, 50c. @ \$1; per barrel or barrel crate, \$1 @ \$2.50.

Peaches—Southern, fancy, late, per carrier, \$2.50; late, good to choice, \$1.50 @ \$2; poor to fair, per carrier, 50c. @ \$1; Maryland and Delaware, early, per crate, 75c. @ \$1.

Pears—Le Conte, medium to fancy, per barrel, \$2.50 @ \$3.25; inferior, per barrel, \$1.75 @ \$2.25; per barrel crate, \$2 @ \$2.50.

Asparagus—Near by, large, per dozen, \$1.25 @ \$1.50; ordinary per dozen, 75c. @ \$1.

Corn—Jersey, per 100, 50 @ 75c.; North Carolina, per 100, 50 @ 75c.

Cabbages—Jersey and Long Island, per 100, \$2 @ \$3.50.

Cucumbers—Jersey, per bushel box, \$1 @ \$1.50; Philadelphia, per 1/2 barrel basket, \$1.50; Baltimore, per bushel basket, \$1 @ \$1.25; Norfolk, per barrel, \$1.50 @ \$2.25.

Egg Plants—Florida, per 1/2 barrel box, 75c. @ \$1.25; Florida, per basket, 50c. @ \$1; Jersey, per bushel box, \$1 @ \$1.25.

Onions—Maryland, per 1/2 barrel basket, 30 @ 90c.; Eastern Shore, per 1/2 barrel basket, 65 @ 75c.; North Carolina and Virginia, per barrel, \$1.75 @ \$1.87; Kentucky, per barrel, \$1.75 @ \$2; Jersey, per barrel, \$2 @ \$2.25; Orange County, red, per barrel, \$1 @ \$1.75.

Peppers—South Jersey, per crate, \$1 @ \$1.25.

Squash—Southern, marrow, per barrel

crate, 75c. @ \$1.25; yellow, per barrel, 50 @ 75c.; white, per barrel crate, 50 @ 75c.

Tomatoes—Monmouth County, Jersey, per crate, \$1.50 @ \$2; South Jersey, per crate, \$1 @ \$1.50; Maryland, per carrier, \$1.50 @ \$2.50; Norfolk, per carrier, \$1.50 @ \$2.25; Savannah, per carrier, \$1 @ \$1.50; Savannah, unwrapped, per crate, 75c. @ \$1; Florida, poor to fair, per carrier, 75c. @ \$1.25.

Turnips—Russia, per barrel, 75c. @ \$1.

Philadelphia.

This market has been well cleaned up every day, but prices have been low; a large percentage of fruit arrives in poor condition, owing to the extremely warm weather. On Monday the market opened very slow and much stock was left on hand, very few storemen were buying and but few hucksters were on hand.

Strawberries are almost over and this week will probably be the last for the New York berries, which, during the last few days, have been selling from 5 @ 10c. per quart.

Raspberries have been small and inferior all around and but few crates realized over 3c. per quart.

Blackberries are very plentiful and keep low in price. Maryland, cultivated, are selling 4 @ 6c. per quart; Early Harvest, 3 @ 4c. per quart.

Currents are arriving in large quantities. One house received two cars on Monday, but the demand is small. Early red are held at 5 @ 6c. per quart; fair to good, 2 1/2 @ 4c. per quart. Large shipments in bulk are offered at 2 1/2 @ 6c. per pound, but these prices were seldom obtained. Dealers are holding for a better market.

Cherries—Sweet, 4 @ 5c. per pound; sour, 3 @ 4c. per pound.

Pineapples—Indian River, red, choice, 24 to crate, \$2.50 @ \$3; 30 to crate, \$2 @ \$2.50; smaller fruit, \$1.50 @ \$1.75 per crate.

Beets—Jersey, per 100 bunches, \$1.50 @ \$2.

Cabbages—Jersey, per 100, \$2 @ \$2.25.

Cucumbers—Norfolk, per barrel, \$1.25 @ \$1.75; per basket, 40 @ 60c.

Egg Plants—Florida, one-half-barrel box, \$1.25 @ \$1.50.

Onions—Maryland, one-half-barrel basket, 90c. @ \$1.25; these were very good and sold quickly; Jersey, per barrel, \$2 @ \$2.25.

String Beans—Jersey, wax, 60 @ 90c. per basket; Pennsylvania, wax, 75 @ \$1 per basket; Norfolk, green, one-half-barrel, 50 @ 60c.

Tomatoes—Jersey, choice, per basket, 60 @ 80c.; fair to good, 40 @ 60c.

Potatoes are moving more slowly. Jersey Rose are held at \$1.75 @ \$2.25 per barrel.

Watermelons are moving more freely; choice stock selling at \$25 @ \$30 per 100.

Boston.

The strawberry season is now getting towards its end. A few home-grown Belmonts appear every morning and sell at about 15c. per quart, while Western Central New York sends three to five cars daily. Some very fine Atlantics bringing 14 @ 15c. As a range Atlantics would bring say 11 @ 15c. because some of the berries are not as large as others, and some arrive in softer condition. Some of their Bubachs sell 11 @ 13c., while the common small varieties bring all the way from 7 @ 10c.

A little Jersey corn shows up, but there is no sale for it because with every ear there are a few worms.

Mississippi tomatoes firmer, \$1 @ \$1.25 a crate; hot-house stock very steady, 15 @ 20c. a pound. Some Norfolks appearing bringing about \$1.50 a bushel.

Summer squash arrives in good condition, and meets with an excellent demand, 3 @ 4c. each. Strictly fancy marrow squash brings \$2 a barrel, while the inferior stock which arrives has a hard sale at \$1 @ \$1.25.

Currents can be quoted 3 @ 4c. per quart, or if in bulk 2 @ 3c. per pound. The "oldest inhabitant" cannot remember when there was so little demand for currents as appears this year.

Native red raspberries bring 10c. per pound, while Hudson River bring 3 @ 4c. for thirds.

Long Island beans and cabbage out of the market; home-grown beans, 75c. @ \$1 a bushel, with cabbage 5 @ 6c. a head.

Watermelons 25 @ 30c. each. Asparagus gone by; native beets or turnips, 50c. a bushel. Parsley, 50c.

Virginia potatoes, whether from Norfolk County or Eastern Shore, are in excellent condition, well matured, and good sized, quick sale, \$2.50 a barrel; red varieties sell as easily at about \$2.

Jersey Irish potatoes arriving and show fine size, bringing \$2.50 per barrel. Some Maryland early Harvests arriving, they supply a certain want and sell at wholesale, \$2.75 per barrel.

Le Conte pears bring all the way from

50c. to \$3 a barrel. Their condition varies more than these prices. Old apples are far gone, no need of mentioning.

Mushrooms steady, 65 @ 70c. per barrel; with Black Hamburgh grapes as steady at 50 @ 75c. a pound.

Kalamazoo celery unchanged, 40 @ 50c. a bunch; egg plants remain as last quoted; cauliflower, \$1.40 @ \$1.75 a barrel.

Hot-house cucumbers one and three-quarters of a cent apiece; peppers good demand, \$1 a bushel; peas, 30 @ 60c. a bushel.

Probably the last week was the busiest Fourth of July week Boston has seen for a long time. Intensely hot and large arrivals of most everything. The bulk of the crops in New England are looking well, considering the late spring, with the exception of corn, and that is very backward, but if the hot weather continues it will "catch up" before the middle of August. Rhode Island Irish potatoes will be dug this week, and it is claimed they are in excellent condition and a large yield.

The huckleberry harvest promises this year to amount to many thousands of bushels from the bushes which cover the mountain tops of Ulster, Orange, Sullivan and Greene Counties. The berries now coming to market sell at 15 cents a quart, but in a week or so the markets will be flooded with berries and 6 cents a quart will be considered a good price.

Old Berry Boxes.—The San Francisco Health Department has issued a circular to shippers of fruit, cautioning them against using berry baskets and other fruit packages a second time upon the penalty of confiscation.

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished Mention American Gardening when you write.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 600 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1897, New York City

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

LOWEST PRICES on earth. Trees and Plants. Neil the Nurseryman, La Porte, Ind.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 454 W. Broadway, New York

TRANSPLANTED CELERY PLANTS, all the leading kinds. John A. Smethers & Son, P. O. Box 104, Berwick, Pa.

CELERY PLANTS, strong and stocky, \$1.00 per 1000, \$5.00 per 10,000, satisfaction and arrival guaranteed; special low express rates. The most practical and complete book on celery culture, 75c. Peter J. Schuur, Kalamazoo, Mich.

CELERY PLANTS. Transplanted only. First-class, leading kinds. Greatly superior to seed-bed plants. Carefully packed; good for two weeks' transit. 40c. per 100, \$3.00 per 1000. R. M. Welles, Towanda, Pa.

CABBAGE PLANTS, strong and healthy, Flat Dutch, Fottler's Brunswick, Early Winnigstadt, Drumhead Savoy, \$1.50 per 1000. Special prices on large orders. Cauliflower, Early Paris, 40c. per 100. W. W. Nash, Montrose, Pa.

WANTED.

[Rates, etc., same as in "For Sale" column.]

WANTED—A bright respectable young man, used to growing roses and carnations for commercial purposes, wages 15 dollars a month and board. Address Robt. Potfield, Castle Grove Greenhouses, Danville, Pa.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION as gardener's assistant, Scotch-American, age 21, thoroughly familiar with work of gentleman's place. Assistant Gardener, care American Gardening.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

A Fine New Rose.

Prominent among the roses which are giving a good account of themselves is the hybrid tea, known as Madam Abel Chatenay. It is one of the best of growers, with broad, glossy leaves, and an appearance of vigor throughout. It is giving the most perfect flowers of any of the young plants received this season. The coloring is unique and most attractive. The catalogue description names this coloring as creamy rose, shaded with rose vermillion, and tinged with salmon. The general effect is of a pink, so yellow as to make the old Duchess de Brabant seem almost a pure rose color, by comparison. The reverse of the petals is a very deep carmine, and as the petals recurve the contrasting shade in the beautiful heart of the rose is very deep and strong. No rose seen since Madam Cochet has been so pleasing.

The Fancy for Pelargoniums.

These beautiful flowers seem to be advancing in public estimation. That is, the fancy section known popularly as Lady Washington Geraniums is so advancing. They are much more often seen than formerly, and the exquisite colorings and immense size call forth ardent expressions of admiration. One firm offers the Lady Washington or Pansy Geranium and pictures a Geranium plant heavily covered with the similitude of Pansies. Our friends abroad consider us very much mixed on Pelargoniums. One horticultural paper in particular never uses the word Geraniums except in quotation marks, showing its popular misuse.

Forty Dollars a Year Per Hen.

One of the most successful poultry keepers in this country has said that one can make \$40 a year profit from a single hen by setting all her eggs and raising the chickens. At first thought this sounds a good deal like the "\$500 a year from 12 hens" story, but it does not take a great mind to see that 80 chicks at 50 cents each would bring in the \$40. Hence, it is by no means an impossibility. But there are numberless problems and plenty of labor ahead of the market-size chicks that bring in \$40 above the cost of raising. There must be capital, too; for, if all the eggs are set all expenses must come out of the pocket, directly, until the chicks are ready to sell. Taken altogether, however, perhaps one could not get a better, or, in the end, a cheaper idea of the pros and cons of poultry raising than by setting aside one hen and attempting to turn all her eggs for a year into chickens. It would certainly be great fun, or else—great misery!

Sliding Prices.

A certain poultry raiser had settled upon a scale of prices. Ten cents was named for baby chicks, fifteen cents for those three weeks old, twenty-five cents for those at five weeks. Mrs. A. contracted for twenty of the three weeks' chickens at fifteen cents each. She waited three full weeks, then called for the chickens, still expecting to buy them at fifteen cents each. She departed very much aggrieved at finding that the seller had advanced his price. Query: Where is the world's sense of justice? Why should any buyer expect three weeks' additional care and feed, and possible losses thrown in, when he has already bought at a fairly low price?

"Poultry Houses" for Women.

A prominent poultry paper refuses to devote a special department to women, on the ground that there is no difference in poultry raising in itself, whether it be man or woman that does the work. Yet a contributor to the

same paper makes a pretty good case in advocating small poultry houses for women, because they do not have to go inside such houses. Women's dress skirts are certainly a hindrance in the business. And if, as one correspondent says, "the idea of cleaning a poultry house twice a week and sweeping out the corners is enough to disgust any decent working man," what may be said of the delicate and often invalid women who drag their long skirts about "those dreadfully mannish" poultry houses?

Baked Surface Soils.

The word "baked" may be considered a general term, including surface hardening through whatever means. Fierce sun heat, heavy rains upon outside potted plants or continuous daily waterings upon the soil surface of those indoors may have very similar effects. The roots of the plants become smothered for lack of air. Green mold is allowed to fill the pores of both surface soil and pots, and it, too, works to choke the struggling plant or plantlet. No one state is worse for the plant than that of being smothered. Open the pores by all means, even as you would cleanse the pores of the body for its health and proper nutrition. Both body and plant take in from and give out to the air. Open the pores!

Moss for Surfacing.

A practical aid toward this work of keeping open pores is the use of moss. Laid upon the surface of the pots it not only renders the calls for water less frequent, but it prevents the mechanical hardening from the con-

stant falling of water on the surface. Still, there is need of warning those who may make an initial attempt at its use. It may cause either drought or overwatering, in certain cases. That is, one must make sure, by touch or sight, that the soil below the moss is in the proper condition; giving water or withholding, according to this sign. In a hot exposure the soil may be drier than one has supposed; in another it may be water-soaked, though several days have elapsed since the application of water.

Water as a Ration.

"Little and often" seems to be the constant motto of the fowl creation, both as to food and drink. The urgent need of a constant water supply for thirsty birds can be appreciated only by studying them. To go a step farther and assert that water plays, in some sense, the part of food, and really helps to build up the body, would seem foolish to many; how is it easily proven? But there are those who assert positively that to mankind water is really a food. If this be true it can hardly fail to be true, in degree, that it is food for fowls also. Fowls are greatly like human beings in many of the most important particulars.

MYRA V. NORRIS.

One of the best exchanges that comes to our desk is American Gardening. It is a live, up-to-date horticultural weekly, and while designed for the amateur and private gardener, is worthy of a careful reading by professionals.—New England Florist.

A Life Saved.

A FOND DAUGHTER WAS NIGH TO DEATH.

Frank B. Trout Tells a Reporter of How His Daughter's Life Was Saved. All Parents Should be Interested in This Narrative.

From the Evening News, Detroit, Mich.

Using as a nucleus for his investigation the rumor that the life of the daughter of Frank B. Trout, well known in Detroit, Mich. real estate circles, had been saved, a reporter called on Mr. Trout at his office, 103 Griswold Avenue. Mr. Trout showed some hesitancy in giving his opinion for publication, but finally said: "Circumstances and a father's love for his child forced me to try Dr. Williams' Pink Pills for Pale People, but not until the whole medical profession had exhausted their skill. At the age of fourteen we had to take our daughter from school owing to her health. Before this she had been in the best of health, happy and in the best of spirits. She began to fall away and became pale and languid. She was so weak that she would fall down in a faint everytime she tried to walk unsupported. The best of physicians attended her, but she continued to grow weaker and seemed to be gradually fading away.

"When she was fifteen she weighed only ninety pounds, and the doctors said it was anemia. Several physicians said she might outgrow it, but that it would no doubt terminate in consumption. No doctor we had could help her, and we concluded ourselves, we must lose our child, as she was growing weaker every day.

"We had tried all the well known remedies, and finally about a year ago I bought a box of Dr. Williams' Pink Pills for Pale People and took them home. That day I had read of a case about the same as my daughter's, and decided to give them a trial, though I must confess I did not have much faith. Before she had taken all of the first box we noticed a change for the better. She, however, gained strength daily and looked brighter. Everyone

noticed the change, and I bought two more boxes for her.

"When she had taken two boxes she was strong enough to leave her bed, and in less than six months was something like herself. To-day she is entirely cured, and is a big, strong, healthy girl, weighing 130 pounds, and has never had a sick day since.

"I do not think she uses them now, though I always keep them in the house. My wife and I have recommended them to our neighbors, and sent a few to another young girl who seems to be in the same condition as my daughter. Had not Dr. Williams' Pink Pills saved my daughter's life, I would not recommend them to any one. I know they do all and more than is claimed for them, and I am glad to recommend them to the world. I know Dr. Williams' Pink Pills for Pale People saved my daughter's life, and that is enough for me."

F. B. TROUT.

Subscribed and sworn to before me this fourth day of March, 1897.

ROBERT E. HULL, JR., Notary Public.
Wayne County, Michigan.

Dr. Williams' Pink Pills for Pale People contain, in a condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. In men they effect a radical cure in all cases arising from mental worry, overwork or excesses of whatever nature. Pink Pills are sold in boxes (never in loose bulk) at 50 cents a box or six boxes for \$2.50, and may be had of all druggists, or direct by mail from Dr. Williams' Medicine Co., Schenectady, N. Y.

We Believe every reader of AMERICAN GARDENING feels proud of his paper and the practical, uplifting work it is engaged in; it is raising the standard of Gardening, and maintains the dignity of all engaged in the profession.

We Believe the cause of good Gardening to be eminently a missionary one; from which it follows that the circulation of AMERICAN GARDENING can most readily be enlarged through the efforts of its subscribers. Our circulation, therefore, is an index of our subscribers' interest in the paper.

We Believe our readers are anxious to see AMERICAN GARDENING reach the highest possible development in its work of horticultural education. The legitimate aim of a class paper is to increase its influence through an extension of its circulation.

American Gardening is the most successful of all, and has the largest circulation of any weekly Journal devoted to Gardening and Fruit Culture, but has scope and the disposition to add to its list tens of thousands of patrons. "Come with us and we will do you good," is a living truth in our case; all our new friends are loud in their praise of the value of the paper to them. The cause of "AMERICAN GARDENING" is the cause of American Horticulture.

We Believe that our friends are the ones on whom to call to push circulation. Understanding thoroughly the value of the paper to every one interested in gardening, they can best express its spirit and comprehensiveness and succeed in making subscribers.

With a View to obtaining the assistance of our friends in the propaganda for new subscriptions, and in order that they may have something tangible whereby to remember their successful efforts, we have compiled the following list of

SUMMER

PREMIUMS

SUMMER

To which we invite your attention in the hope that each and every reader of the paper will endeavor to send us **AT LEAST** one new subscriber before the close of the season.

American Gardening for 1896. Containing 832 pages of text and illustrations, with complete index. The most full, complete, and desirable volume on Gardening, Fruit Growing, and kindred subjects ever issued. Few works on horticulture can compare with this in value to the student or the practical man. *Handsomely bound in cloth, with leather back and edges.*

This most desirable volume will be forwarded, express paid, to any address, for only **seven new subscriptions at \$1.00 each.**

American Carnation Culture. By L. L. LAMBORN. A work on the Classification, History, Propagation, Varieties, Care, Culture, etc., of the Divine Flower. Nothing has been left unsaid from which any practical benefit could be obtained. Illustrated. Third edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Beautifying Country Homes. By J. WEIDEMANN. A handbook of landscape gardening. This is the most elegant and useful work on the subject ever issued in this country. It is beautifully illustrated with numerous fine wood engravings, and with 17 full-page and 7 double-page colored lithographs of places already improved. It contains general directions for lawns, roads and drives, walks, hedges, trees and shrubs, gardens, ornamental grounds, hints on burial lots, etc., etc. The beautifully colored plans of improved places are accompanied by descriptions giving the names and positions of the various trees and shrubs employed in planting, thus providing a complete planting map. Cloth, 4to. Reduced from \$15.00 to \$10.00.

Given for 20 new subscriptions at \$1.00 each.

Bulb Culture (Henderson's). By PETER HENDERSON. Contains special cultural directions for over 200 varieties of Bulbs. Compiled with great care, and its information is accurate, reliable and up to the latest. 25 cents.

Given for 1 new subscription at \$1.00 each.

Bulbs and Tuberous-Rooted Plants. (Their History, Description, Methods of Propagation and Complete Directions for their Successful Culture in the Garden, Dwelling and Greenhouse). By C. L. ALLEN. The author of this book has for many years made bulb growing a specialty, and is a recognized authority on their cultivation and management. He has taken the initiative to make bulb growing a special industry in this country, and writes from his own long and extensive experience. The subject is treated in a very exhaustive manner. Handsomely illustrated, cloth, 12mo. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

Canning and Preserving Fruits and Vegetables, and Preparing Fruit Pastes and Syrups. By ERMENTINE YOUNG. This work gives a full account of the best methods by which the surplus fruits may well be saved for home use and for the large market demand, and a handsome profit accrues

to the home workers. A practical chapter on evaporation of fruits is embodied in the book. Paper, 20 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemums and Their Culture. By EDWIN MOLINEUX. Sixth Edition. By far the best practical work yet written on this subject. 50 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemum Culture for America. By JAMES MORTON. This is the only 'Mum book published for American use, and is an excellent and thorough work; especially adapted to the culture of Chrysanthemums in America. The field is fully covered. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Elliott's Practical Handbook of Landscape Gardening. By F. R. ELLIOTT. Designed for city and suburban residences and country schoolhouses, containing designs for lots and grounds, from a lot 30x100 feet, to a 40 acre plat. Cloth, 8vo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Ferns and Fern Culture. By J. BIRKENHEAD, F. R. H. S. How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, Wardian cases, dwelling houses, etc. A thorough and complete work by a renowned specialist. 128 pp., thoroughly illustrated, 16mo., cloth. 75 cents.

Given for 2 new subscriptions at \$1.00 each.

Fruit Culture, and The Laying Out and Management of a Country Home. By W. C. STRONG, ex-president of the Massachusetts Horticultural Society, and vice-president of the American Pomological Society. Illustrated. New revised edition, with many new additions, making it the latest and freshest book on the subject. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Fruit and Fruit Trees of America, or the culture, Propagation and Management in the Garden and Orchard of Fruit Trees generally. By A. J. DOWNING. Second revision and correction, with large additions. By CHARLES DOWNING. This work has no equal in the country, and deserves a place in the library of every pomologist. It gives descriptions of all the finest varieties of fruit, native and foreign, cultivated in America, and contains the names and synonyms of over 10,000 varieties. Over 1100 pp., with several hundred outline engravings, including supplements. 8vo., cloth. \$5.00.

Given for 12 new subscriptions at \$1.00 each.

Grape Culturist. By A. S. FULLER. New and revised edition, 1894. One of the best works on the culture of hardy grapes, with full directions for all departments of propagation, culture, etc. Illus., cloth, 12mo., \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Grape Growers' Manual. (The Bushberg). An exhaustive work on the cultivation of the grape, with accounts of diseases, insects, etc., by specialists. The descriptive list of varieties is specially useful and complete; the typographical method of designating importance of varieties is a feature. Pp., 200. Royal 8vo. Illustrated. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Gardening for Pleasure. By PETER HENDERSON. New and enlarged edition. A Guide to the Amateur in the Fruit, Vegetable and Flower Garden, with full directions for the Greenhouse, Conservatory and Window Garden. This is a complete encyclopedia of horticultural information, treating on soils, fertilizers, the lawn, garden designs, culture and care of plants, greenhouse building, heating, cottage and window gardening, the orchard, and many other important subjects. A monthly calendar of operations is also appended, which will act as a first-class guide to the amateur horticulturist. Illus., cloth, 12mo. \$2.00.

Given for 4 new subscriptions at \$1.00 each.

Gardening for Profit. By PETER HENDERSON. A guide to the successful culture of the Market and Family garden, profusely illustrated. Although written mainly for the market gardener, the amateur interested in vegetables or fruits can easily adapt its teachings to the smallest requirements. Cloth, 12mo. \$2.00.

Given for 4 new subscriptions at \$1.00 each.

Greenhouse Construction. By PROF. L. B. TAFT. A complete treatise on Greenhouse structures and arrangements of the various forms and styles of Plant Houses for professional florists as well as amateurs. All the best and most approved structures are so fully and clearly described that anyone who desires to build a greenhouse will have no difficulty in determining the kind best suited to his purpose. The modern and most successful methods of heating and ventilating are fully treated upon. Special chapters are devoted to houses used for the growing of one kind of plants exclusively. The construction of hotbeds and frames receive appropriate attention. Over one hundred excellent illustrations, specially engraved for this work, make every point clear to the reader and add considerably to the artistic appearance of the book. Cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

How to Grow Cut Flowers. By M. A. HUNT. A thoroughly practical treatise on the cultivation of the Rose and other flowering plants for cut flowers. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

How to Know the Wild Flowers. By MRS. WILLIAM STARR DANA. A guide to the names, haunts, and habits of our common wild flowers. The most handy and easy reference book for amateurs. With 100 illustrations by Marion Satterlee. 12mo. \$1.75.

Given for 5 new subscriptions at \$1.00 each.

Henderson's Handbook of Plants and General Horticulture. By PETER HENDERSON. This has long been acknowledged as the standard American work on general horticulture, giving history geographical distribution and cultural directions for all cultivated fruits and flowers. Illustrated. Cloth, 8vo. \$4.00.

Given for 9 new subscriptions at \$1.00 each.

Insects Injurious to Fruit. By PROF. WM. SAUNDERS. A work of great value to all fruit growers, written by a man of science as well as a practical agriculturist, and the result of careful and minute observations and experience. It treats, under separate chapters, of the injurious insects which prey upon our fruit trees, vines and bushes, together with their mode of operation, and contains careful directions as to the best means of destroying them. With over 400 pages, 440 illustrations. 12 mo. Cloth. \$2.00.

Given for 5 new subscriptions at \$2.00 each.

Johnson's Gardener's Dictionary. This is a new and revised edition, greatly enlarged, of "Johnson's Cottage Gardener's Dictionary," first published in 1846; containing a full and reliable list of every plant in cultivation, names printed in bold type, rendering reference easy. An important feature of the work is the placing of synonyms alongside the correct name, instead of in a separate list. The habitat of each variety is given along with the date of its introduction. The cultural directions are brief and to the point. Insect foes, diseases and their remedies are fully described, and figures of some of the former have been given. Handsomely bound in one volume. \$4.00.

Given for 9 new subscriptions at \$1.00 each.

Landscape Gardening or How to Lay out a Garden. By EDWARD KEMP. Intended as a guide in choosing, forming or improving an estate (from a quarter of an acre to a hundred acres in extent), with reference to both design and execution, with numerous fine wood engravings. Cloth, 12mo. \$2.50.

Given for 6 new subscriptions at \$1.00 each.

Parsons on the Rose. By SAMUEL B. PARSONS. New and revised. A treatise on the propagation, culture, and history of the Rose. Illustrated. \$1.00.

Given for 3 new subscriptions at \$1.00 each.

Peach Culture. By JAMES ALEX. FULTON. New, revised, and enlarged edition. The only practical guide to Peach Culture as followed on the Delaware Peninsula, but essential to those cultivating this fruit in any other part in the United States. Fine cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Popular Flowers and How to Cultivate Them. By E. S. RAND, JR. Illustrated. New edition, with appendix, revised and enlarged. Crown, 8vo. \$2.00

Given for 5 new subscriptions at \$1.00 each.

Poultry Culture. By K. FELCH. How to raise, manage, mate and judge thoroughbred Fowls. Cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Practical Floriculture. By PETER HENDERSON. A guide to the successful propagation and cultivation of Florists' Plants. As in every work from this gifted author's pen nothing has been left unsaid that bears on the subject. Illustrated. Cloth, 12mo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Profits in Poultry. Useful and ornamental breeds and their profitable management. This excellent work contains the combined experience of a number of practical men in all departments of poultry raising. It is profusely illustrated and forms a unique and important addition to our poultry literature. Cloth, 12mo. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Secrets of Rose Culture. By W. J. HATTON. In this neat volume are described all the newest and most improved designs for building rose houses, heating, ventilation, management, and much other valuable information on rose culture. The latest and best varieties of roses for every purpose and condition are named, and their special values pointed out. 162 pp. Illustrated, 12mo., paper. 50 cents.

Given for 1 new subscription at \$1.00 each.

Strawberry Cultivist. By A. S. FULLER. Containing the history, sexuality, field and garden culture of strawberries, forcing or pot culture, etc., fully illustrated. Flexible cloth, 12mo. 25 cts.

Given for 1 new subscription at \$1.00 each.

Success in Market Gardening. By W. W. RAWSON. Illustrated. This work is written by one of the most successful market gardeners in New England, who gives here the results of his life-long experience in the growing of vegetables out-of-doors and under glass, with special adaptation to the climate of New England. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

The Art of Propagation. By J. JENKINS. A concise, practical treatise on the rapid multiplication of vines, plants, trees, etc., detailing the management in propagation of seeds, bulbs, cuttings, etc., and the manner of operating in grafting, budding, inarching, etc. Ample illustrated. 30 cents.

Given for 1 new subscription at \$1.00 each.

The Amateur Orchid Cultivators' Guide Book. By H. A. BURBERRY, F. R. H. S., orchid grower to the Right Hon. Jos. Chamberlain, M. P. Tells how to grow Orchids, in cool, intermediate, or warm houses, successfully. There is a calendar of operations for each month, and full information as to the treatment required by all orchids mentioned in the book. Just published. New edition, colored plates. \$1.75.

Given for 5 new subscriptions at \$1.00 each.

The Nursery Book. By PROF. L. H. BAILEY. This is a complete handbook of propagation of plants treating on seedage, separation and division, layerage, cuttage, graftage, including grafting, budding, inarching, etc. It tells plainly and briefly what everyone who sows a seed, makes a cutting, sets a graft, or wants to know. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

The Dictionary of Gardening. A Practical Encyclopedia of Horticulture. By GEORGE NICHOLSON, A. L. S., assisted by some of the most eminent writers in the botanical and horticultural world. The Dictionary of Gardening is the most complete work of the kind ever published; the practical information and botanical classification have been brought down to the latest date, and nothing has been neglected to make it in all respects the standard work on horticulture in all its branches, from the growing of the hardiest plants to the cultivation of the most delicate exotics. It is the recognized authority of the Society of American Florists on nomenclature of plants. Illustrated, with more than 2370 first-class engravings with numerous colored plates of exquisite finish and life-like exactness. 4 vols., cloth, large, 8vo. Prepaid, per volume, \$5.00; complete, \$20.00.

Given for 40 new subscriptions at \$1.00 each.

The Horticulturist's Rule Book. By L. H. BAILEY, Professor of Horticulture in the Cornell University. This volume is the only attempt ever made in this country to codify and condense all the scattered rules, practices, receipts, figures and histories relating to horticultural practice, in its broadest sense. All the approved methods of fighting insects and plant diseases used and discovered by all the experiment stations are set forth in shape for instant reference. This feature alone is worth the making of the book. Among the additions to the volume, in the present edition, are the following: A chapter upon "Greenhouse and Window-Garden Work and Estimates," comprising full estimates and tables of heating glass-houses, list of plants for forcing, for cut-flowers, for window-gardens, aquaria, and the like, with temperatures at which many plants are grown, directions for making potting-earth and of caring for plants, etc. A chapter on "Literature," giving classified lists of the leading current writings on American horticulture, with publishers' addresses and prices, and a list of periodicals, and directories of officers of whom the bulletins of the various experiment stations may be obtained; lists of self-fertile and self-sterile fruits; a full account of the method of predicting frosts and of averting their injuries; a discussion of the aims and methods of phenology, or the record of climate on the blooming and leafing of trees; the rules of nomenclature adopted by botanists and by various horticultural societies; score cards and scales of points for judging various fruits, vegetables, and flowers; a full statement of the metric system, and tables of foreign money. Third edition, thoroughly revised and recast, with many additions. 12mo., 302 pp. Limp cloth. 75 cents.

Given for 2 new subscriptions at \$1.00 each.

The New Onion Culture. By T. GREINER. This new work is written by one of our most successful agriculturists, and is full of new, original, and highly valuable matter of material interest to every one who raises onions in the family garden, or by the acre for market. By the process here described a crop of 2,000 bushels per acre can be as easily raised as 500 or 600 bushels in the old way. 50 cents.

Given for 1 new subscription at \$1.00 each.

The Rose. By H. B. ELLWANGER. Revised edition. A treatise on the cultivation, history, family characteristics, etc., of the various groups of roses, with names and accurate descriptions of the varieties now generally grown, brought down to 1892. This work contains full directions for planting, pruning, propagating, and treating of diseases, and insect pests, and is particularly valuable for its classification and full alphabetical lists of one thousand and eighty-six varieties. \$1.25.

Given for 3 new subscriptions at \$1.00 each.

The Shrubs of Northeastern America. By CHAS. S. NEWHALL, author of "The Trees of Northeastern America," etc. This volume is beautifully printed on beautiful paper, and has a list of 116 illustrations calculated to explain the text. It has a mine of precious information, such as is seldom gathered within the covers of such a volume. Illustrated, 8vo. \$2.50.

Given for 5 new subscriptions at \$1.00 each.

The Small Fruit Culturist and Nursery Directory. By A. S. FULLER. This is the first work devoted exclusively to small fruits, and completely covers the ground of propagating, culture, varieties, preparing for market, etc. Thoroughly illustrated, cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

The Treasury of Botany. Edited by LINDLEY and MOORE. This is a popular Dictionary of the Vegetable Kingdom, with which is incorporated a glossary of botanical terms. Twenty steel plates and numerous wood cuts. Two parts, Fcp-8vo., 1372 pp. \$3.50.

Given for 10 new subscriptions at \$1.00 each.

Tomato Culture. By J. W. DAY, D. CUMMINGS, and A. I. ROOT. In three parts. A valuable treatise, embracing field culture, forcing under glass, and raising plants for market. Of value to any one growing garden truck of any kind aside from tomatoes. 150 pages. Illustrated. Paper. 40 cents.

Given for 1 new subscription at \$1.00 each.

Trees of the Northern United States. (Their Study, Description and Determination). By Prof. AUSTIN C. APGAR. This handbook is to the trees of its locality what Gray's well-known Manual of Botany is to the other plants. It furnishes a complete key to the wild and cultivated trees found east of the Rocky Mountains and north of the southern boundary of Virginia and Missouri. Preceding the key are chapters discussing the essential organs of trees and terms needed for their description, and the plans and models for tree description. The book is profusely illustrated, handsomely bound, and will be sent to any address on receipt of price. Nearly 500 illustrations, cloth, 12mo. \$1.25.

Given for 3 new subscriptions at \$1.00 each.

Vegetable Gardening. By PROF. S. B. GREEN. This is a manual on the growing of vegetables for home use and marketing. It is brimful of practical information and is carefully and cleverly written. The chapter on manures is of especial value. Cloth, 224 pp., profusely illustrated. \$1.25.

Given for 3 new subscriptions at \$1.00 each.

Vegetables, How to Grow them. By E. WATTS. 40 cents.

Given for 1 new subscription at \$1.00 each.

Vines and Vine Culture. (Considered the best book on Grapes). By ARCHIBALD F. BARRON, ex-superintendent of Royal Horticultural Society's Garden, Chiswick; Secretary of the Fruit Committee. Demy 8vo., handsomely bound in cloth. 3d edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Wild Flowers in Art and Nature. By J. C. L. SPARKES, Principal of the National Art Training School, South Kensington, and F. W. BURBIDGE, Curator of the University Botanical Gardens, Dublin. With 21 full-page colored plates, by H. G. Moon. Handsomely bound, gilt edges. \$4.

Given for 7 new subscriptions at \$1.00 each.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Gandy strawberry has given good satisfaction as a late variety this season.

Varieties have much to do with success in fruit growing.

We like to go over a young orchard every week or ten days to examine the trees and see that they are all right in every respect.

The successful fruit grower must keep up with the times.

If not already done the stakes and other support for the tomato vines should be attended to at once.

For training his tall-growing varieties of peas one grower drives stakes about twenty feet apart along the rows and to them fastens two strands of heavy manilla binding twine, one about twelve to fifteen inches above the ground, the other about two and one-half to three feet from the ground.

This makes a good support for peas where there is not plenty of brush.

If we do not use system in our work how can we expect to accomplish best results?

In towns where there is a number of small fruit growers who generally have considerable fruit go to waste why not organize a stock company among themselves to evaporate what is left over?

It does not look now as though apples would be very plentiful this season.

In the new peach orchard the young shoots which make the most vigorous growth are cut back considerably, so that those which have made less vigorous growth can come up with them, thus making a well-balanced tree.

Six to eight inches of straw mulch will carry a raspberry crop through a dry season quite successfully, but twelve inches would be still better.

A good-sized building should be on every large-sized berry plantation for convenience in storing boxes, crates, tools, etc.

Many berry growers have come to believe that irrigation will be a more necessary factor in the production of fine fruit than improvement in varieties.

Among both large and small fruits those which are given the highest sounding names are generally the surest to be a failure.

There is still considerable money in dwarf pear growing if on the right soil and the grower is a good pruner.

Judging from present indications, the Gregg raspberry is, as it has been in the past, a good standby with a large crop of very fine marketable berries.

The young chickens are being "pushed" with good, hearty food to get them off to market before the "drop" in price comes.

Freeman is quite desirable as an early potato for the table, but has one fault—the dry rot. Often a peck will have to be thrown away in selecting out a mess of perfect ones.

CHARLES NASH.

INCUBATORS. Self-regulating. Catalogue free
G. S. SINGER, Cardington, O.
Mention American Gardening when you write.

FARMERS
you can make money by selling and using
HOLDFAST Corn Binders, used on every
shock. Pull and it's fast. Ties itself. Costs
less than string. Never wears out. Thousands
sold in a town. Good profits. Get
town agency. Samples, 3 sizes, mailed
5 cts. **TIE CO.**, Box 441, Unadilla, N. Y.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

Celery and Cabbage Plants.

Celery—Giant Pascal, White Plume, New Rose, and
other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000
Cabbage—Succession, Flat Dutch, Drumhead, and
other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000.

For prices on large quantities, please apply to
R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

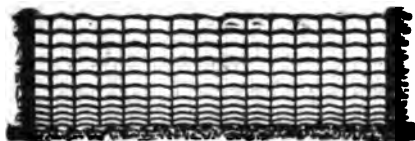
NEW CREATIONS IN FLOWERS.

If you want to know about them send
10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful
Flowers.

Many New Begonias, New Cosmos,
Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.
Mention American Gardening when you write.



A Fence Not Made By Hand.

The average farmer can not afford to indulge in
hand made fence, nor hand painted pictures. Even
if he does the work himself, a "botch" and a "daub"
will likely be the result, while the time consumed,
if properly applied in his regular business, would
provide means for beautiful photographs, engravings,
etc., and lots of the "old, reliable" Page fence.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write



If we could teach the
Indians **to USE SAPOLIO**
it would quickly civilize them

Mention American Gardening when you write.

"JADOO" FIBRE.

A New Potting Material
A Perfect Substitute
Earth.

Revived "Jadoo" Liquid. BOTH MEAT AND
DRINK TO PLANTS

Revives and strengthens the weak and nourishes the strong; above all
increases the size, lengthens the weak and nourishes the strong; above all
increases the size, lengthens the weak and nourishes the strong; above all

VALUABLE IN POT CULTURE.

For Prices and Testimonials, Address **THE AMERICAN JADOO CO.**

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

IN THE PRESS.

PRICE, \$1.00.

The Water Garden

(PROFUSELY ILLUSTRATED.)

BY WILLIAM TRICKER.

THIS volume, which has been prepared by the foremost aquaculturist of the country, and to
whose efforts the present growing popularity of the Water Garden is largely due, is designed
to serve as a **SOUND, PRACTICAL CULTURAL HANDBOOK** for amateur and professional alike.

The book will be freely illustrated with plates and illustrations in the text, and will
describe all operations, from the growing of plants in tubs to construction of the large pond,
planting, seed saving, propagation, wintering, and all other necessary details of cultivation.

— ORDERS RECEIVED NOW. —

A. T. DELAMARE PTG. & PUB. CO., Ltd., - - - - - Box 1697, New York.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No 135.
COMBINED SERIES VOL. LI.

NEW YORK, JULY 24, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Blackberries Drying Up.....	523	Fruit, the Early Ripen- ing of.....	522	Phila., Boston.....	511	Seedlings.....	521	Vegetable Garden.....	523
Carbon Bisulphide.....	525	Fruit Garden.....	521	Microscopes.....	523	Societies' Meetings.....	526	Verbenas, Rust on.....	530
Carnations.....	521	Grapes.....	521	Onion Blast.....	523	Spiders.....	525	Violets.....	521
Cherries.....	521	Grapes, Bagging of.....	530	Orchids, Manuring of.....	522	Strawberries, Large Fruited.....	525		
Crimson Clover.....	525	Green Fly and Ants.....	530	Peaches.....	521	Strawberries, Summer Planting.....	525	Illustrations.	
Crop Conditions.....	524	Home Plot, All About the.....	527	Poultry Notes.....	528	Sweet Pea Garden, A.....	523	Sweet Pea, Types of Ancient and Modern	
Cuttings for Winter.....	521	Hydrangeas.....	521	Private Gardeners.....	526	Sweet Pea, Early His- tory of the.....	517-521	527, 518, 519, 520, 521	
Cyclamen.....	524	Lungs of a City.....	525	Readers' Notes.....	525	Sweet Peas, Success with.....	523		
Dwarf Fruit Trees.....	521	Market Reports: N. Y., Phila., Boston.....	511	Roses Under Glass.....	522				
Flower Garden.....	521								

The Early History of Sweet Peas.

BY S. B. DICKS.

Copyrighted 1897 by the A. T. DeLaMare Printing and Publishing Co. Ltd.,
Rhineland Building, New York.

So widespread and intelligent an interest is now felt in America in all that concerns Sweet Peas, that no excuse is necessary for presenting a few facts connected with their origin and early history.

Hitherto the Botanical Dictionary of Curtis has been the authority usually cited, but it should be borne in mind that Curtis was a trader as well as a botanist, and that the apparent object of his valuable work is to present such facts relating to the subject treated of, as would be connected with the introduction of the plant into Great Britain, and in particular that part of it which comprised his own Botanical Garden.

EARLIEST MENTION OF THE PLANT.

The earliest mention of the plant that I have been able to discover is in the *Historia Plantarum* of Joannes Bauhinus, Ebroduni 1630-51 where (on the authority of Jas. Justice), it is catalogued as *Lathyrus angustifolius, flore ex albo and rubro variegato, odorato*. In the *Hortus Blesensis* of Robert Morrison, London, 1669, I find *Lathyrus latifolius annuus, siliqua hirsuta*. This in some respects resembles the Sweet Pea, but if this surmise be correct it must be the purple variety that is referred to. Conjecture gives place to certainty when we turn to the *Historia Plantarum* of John Ray, London, 1686-1704, where we find in Book XVII. "*Lathyrus major à Siciliæ; a very sweet-scented Sicilian flower, with red standard; the lip-like petals surrounding the keel are pale blue. Its seed pod is hairy.*" In another part of the same work the plant is quoted as "*Lathyrus distoplatyphyllos, hirsutis, mollis, magno et perameno flore odoratissimo purpureo,*" but the latter word has been added to Cupani's descriptive name on the authority of Domenico Sheard.

The next and by far the most important work is the *Hortus Catholicus* of Father Franciscus Cupani, Neapoli, 1696. The reverend Father was not only a very devout Italian monk, as a

perusal of his book amply testifies, but also a most enthusiastic botanist. Pickering in his *Chronological History of Plants*, Boston, 1873, states that Cupani was "the first cultivator of the Sweet Pea," at Panormus, in Sicily, in 1699; but of this we shall speak later. The work is merely a catalogue of names, and the Sweet Pea appears simply as quoted above from Ray. No color is given, neither is anything said as to the country of its origin.

CUPANI AND HIS WORK.

Since the foregoing was written, I have been able to examine the first work published by Cupani, viz.: "*Syllabus Plantarum*

Siciliæ-nuper detectarum à P. F. Franciscus Cupani, Panormi, 1695." It is a very small work, 12 mo., and among the plants newly discovered in Sicily by Cupani, is the *Lathyrus distoplatyphyllos*, etc., afterwards transferred to the Hort. Cathol. published in 1696.

As the name of Cupani naturally occupies such an important place in the early history of Sweet Peas, the following facts in connection with his history may be of interest to the reader: Franciscus Cupani was born in 1657, and in the year 1691 became a monk, his order having their location in the neighborhood of Panormi. In addition to the two purely botanical works referred to in this article, and which were published in his lifetime, he had prepared for the press his *Pamphytum Siculum*, an illustrated natural history of plants, animals, fishes, etc. Cupani died in 1711 and the work was first published in the following year.

The interest taken by Cupani in the sweet pea is evidenced by the zeal with which it was distributed by him. In 1699 some seed was sent to Dr. Uvedale at Enfield, England, where the plants were visited by many eminent botanists. Some seed was also sent by Cupani to Caspar Commelin and the result was an illustration of the plant in the *Horti-Medici Amstelodamensis*, published in 1697-1701. It is a fine folio work and in Vol. II. tableau 80 is given a full page drawing, very well executed, showing the foliage as we now know it; the heavy footstalks mostly carrying two flowers. (See fig. 144.) The individual flowers are large, with the standards



FIG. 143.—SWEET PEA BLANCHE BURPEE.—FINEST TYPE OF THE MODERN SWEET PEA.

mostly rounded and well developed, but among them are a few monstrous forms; these, however, are very variable in character. The name given on the head line is *Lathyrus distoplatyphyllus*, *hirsutis*, *mollis* et *odorus*.

In a very elaborate article which appears on the opposite page the following passage occurs: "I am sowing seeds of this most elegant and very pleasant plant lately received from the Reverend admodum Patri Francisco Cupani, who was pleased to communicate with me, and to send me these from Panormo, together with other somewhat rare seeds, in the beginning of 1799; which being sown, in the same year produced flowers and seeds, of which plant for the sake of the elegance and pleasantness which it possesses, I have wished to set forth a delineation and description by that name which the Reverend Pater Cupani has proposed for it in the catalogue of the most learned and excellent Catholic Prince.

"This *Lathyrus*, an annual, rises to a height of 6 or 7 feet; the root is thin, the stalks compressed, solitary, projecting from both sides, on these stand two wide and oblong leaves on a footstalk, which is compressed, foliated and raised, which footstalk ends in tendrils. From the wings of the leaves on longer pedicles spring butterfly like flowers which are large and have a purple standard, the remaining petals are sky-blue. These flowers have a very pleasant smell."

Rivini, whose *Introductio Generalis* (Lipsiæ 1690-99) is cited by Ruppil as an authority for the name, figures *Lathyrus siliquis hirsutis*, A. Annual, which is doubtless intended for a plant of the sweet pea, but as the object of the author is simply to call attention to the hairy pods no illustration of the flower is given.

LINNAEUS' DESCRIPTION.

Before referring to the numerous botanical works published in the early part of the 18th century it may be well to introduce here the description of the plant as given by Linnæus in his *Systema Plantarum Europæ*. Under *Lathyrus pedunculis* section *bifloris* we find *Lathyrus odoratus*:

a. *Lathyrus siculus*. Rupp. Ien. 210. *Lathyrus distoplatyphyllus*. Comm. hort. 2, p. 219.

b. *Lathyrus Zeylanicus*, odorato flore amœno ex albo et rubro vario, Burm. Zeyl. 138 Knip. Cent. IV. N. 37.

Habitat: (a) In Sicilia; (b) in Zeylona (Ceylon).

Of the authorities cited by Linnæus, the first is of very great importance because from it we learn that the white variety is of Sicilian origin.

In the *Flora Jenensis* (Francfort, 1718), H. B. Ruppil places in the class for plants with irregular flowers, *Lathyrus siculus*, Rivini (see above) and states: "In gardens they generally call it the musk-scented *Lathyrus* (*L. moschatum*). Sometimes it varies with a white flower."

The reference to the Hort. Amstel. of Commelin has already been fully dealt with.

THE SWEET PEA OF CEYLON.

Respecting the *Lathyrus Zeylanicus*, Burm. Zeyl. is the *Thesaurus Zeylanicus*, setting forth the plants native to the Island of Ceylon, published at Amsterdam 1737 by Joannis Burmannus, Med. Doct. et Botanices Professoris in Horto Medico Amstelodamensis.

In this work the plant appears as follows: "(a) *Lathyrus Zeylanicus*, flore amœno ex albo et rubro vario. Nobis.

"(b) *Lathyrus Zeyl. hirsutis* flore variegato odorato Hert. Hart.

"This plant differs from the *Lath. odorato* of Cupani only in the variety of the flower, and since it has been well described and set forth in Hort. Amst. part 2, we do not further describe it here, since also, in addition, these

plants are well known to all since they frequently occur in our gardens."

The reference to Nobis I have not been able to verify, but regarding Hert. Hart. Burmannus says: "Hartog or Hertog is a herbarium which I keep and which it is certain contains very many most elegant Zeylanian plants, and was sent once by him from Zeylana to Cornelius Vossus, the gardener at Amsterdam."

In the same work also appears a variety, *Lathyrus Zeylanicus*, rubro pul-

published at Magdeburg a work entitled

"Botanico in Originali Sev. Herbarium vivum; Linnæi et Ludwigi."

The work is in several volumes of folio size and in Vols. II. and V. are given colored illustrations of pressed flowers of the Painted Lady sweet pea.

In Vol. II. the stalks carry two flowers (see Fig. 145), while in Vol. V. they are one-flowered only (see Fig. 146). I



FIG. 144.—*LATHYRUS DISTOPLATYPHYLLUS hirsutis mollis et odorus. LATHYRUS odoratus Siculus et LINN.*

(Reproduced from *Horti Medici Amstelædamensis* Vol 2, Fig. 80, 1697-1701.)

From a sketch made from the original engraving by Mr. G. H. Dicks (son of the writer of this article), by special permission of the Principal Librarian of the British Museum, London.

cher. The omission of the word *odorato* may be accidental; if so, we have here the red variety, also ascribed to Ceylon. This is cited by Burmannus on the authority of the *Prodrum* of Breynius, published at Gedani, 1680. If this surmise be correct these two varieties were known at the same time as Cupani was calling attention to those of Sicilian origin.

The reference to Knip. Cent. IV is a very important one. In 1757-1763 Johann Hieronymus Kniphof, a celebrated Professor of Medicine at Erfurt,

am of opinion that the first picture represents a cultivated plant and the second represents a dried specimen sent to the artist from Ceylon. Both illustrations are thus named:

"*Lathyrus pedunculis*, *bifloris*, *cirrhosis*, *diphyllis*, *folio-ovatus* *oblongis*, *leguminibus* *hirsutis*. Linn S. P. 732.

"— *odoratus* *Zeylanicus*."

It is remarkable that Kniphof should give the barbarously descriptive title on the authority of Linnæus, and that at a later date Linnæus should adopt

in his "Systema Plantarum" the shorter name on the authority of Kniphof. The two illustrations vary slightly in some minor details, but they are evidently meant for the same plant. The colors are those of the Painted Lady, as now grown, but the standards are small and of poor substance, the wings being in each case the most prominent parts of the flower.

AN IMPORTANT DISCOVERY.

During the summer of 1896, while inspecting for Cooper, Taber & Co., a field of the Mrs. Sankey growing on a strong, rich loam, I discovered a plant identical in every respect with Kniphof's illustrations. I dried the plant as carefully as possible and have had much pleasure in handing it over to the editor of American Gardening,

coloring is a uniform greyish-purple, shaded with brick red, but the latter is evidently added from artistic motives.

FIRST TRADE OFFER OF SWEET PEAS.

The first trade offer of sweet peas is contained in the explanatory catalogue of the aforesaid Robert Furber, but only the purple variety is quoted. This had evidently come into his possession through Dr. Uvedale, to whom it had been sent by Cupani.

In the "Universal Gardener and Botanist," published a few years later under Lathyrus, we find: "Varieties of, are, purple-flowered sweet pea, white-flowered sweet pea, variegated or Painted Lady sweet-scented pea." The careful reader will note a slight difference in the description of the latter va-

"No. 176. Lathyrus odorate flore albo et rubro variegato.

"No. 177. Lathyrus odorate flore purp. et rubro variegato."

"The first-named," says Justice, "is the Lathyrus angustifolius flore ex albo et rubro variegato odorato, mentioned by J. Bauhinus, 1650. (Any person carefully examining the dried specimen now in the hands of the editor of Am. Gardening will recognize the appropriateness of the name). This is the Painted Lady pea vulgo, a variety seminal of the 177, but not so sweet smelled." Respecting 177 he says: "This is the Lathyrus distoplatyphylus of Hort. Cathol., the sweet-scented pea vulgo; of this kind of pea there is both the purple and the white-flowered."

THE PARENT OF THE RACE.

Before resuming our consideration of the works of later writers I may here remark that the opinion of Justice that the Painted Lady is the parent of the race is shared by Mr. Eckford, who, in a complete list, with which he has kindly furnished me, styles the Painted Lady "the original variety." There seems no reasonable doubt that it was known to botanists before the Sicilian purple. One singular fact in connection with it is that while Pickering states on the authority of C. C. Sprengel, whose work, "Gehimniss der Natur," was published at Berlin in 1793, that "Linnæus received the sweet pea from Ceylon and on this account calls it the Lathyrus odoratus of Ceylon," the plant is not mentioned under any name by Linnæus in his "Flora Zeylanica," published in 1747. The absence of the plant from this important work may have caused other botanists to bring it under the notice of the illustrious Swede, for very shortly after, in his "Systema Plantarum," we find him adopting the name from the work of Burmannus, published 1737.

THE SWEET PEA OF SICILY.

If the sweet pea is truly of Sicilian origin it is very remarkable that no mention is made of it in that very complete work by Paolo Bocconi, "Icones Plantarum Siciliæ, etc.," published 1674.

During my visit to Naples in 1896 I brought these facts to the notice of that eminent authority, Mr. G. Sprenger. He courteously undertook to investigate the matter during his approaching trip in Sicily and has, since his return, written me as follows:

"I retain that the plant is really a native of the two most important Italian islands, Sicily and Sardinia. I have just come from Sicily, where I could see the plant in the neighborhood of Corleone, a town lying in the interior on a range of hills, and in several other wild regions round about, together with other papilionaceæ. The plant has all the appearance of being of spontaneous form and not an imported one. The above locality has been but very rarely visited and it is apparently to be excluded that L. od. was brought there. It is surprising that the Lathyrus has been found in but a few places, but this does not mean much. From what I could deduct the plant grows in three or four places in Sicily and it has also been found in Sardinia. Our most learned men retain that the Lathyrus is really an indigenous kind in Sicily, because it presents all the characters of being of spontaneous growth. The flowers of our kind are purple (purpurea) while those of Ceylon are rose-colored. This could be a variation due to the climate, but I was unable to find out if the Lathyrus varies or if the white-flowered variety is found growing spontaneously."

The statements of Mr. Sprenger are in full accord with the quotations from Cupani's Syllabus given above, and until further evidence is forthcoming I am compelled to question the correctness of the position taken up by Justice and Eckford. The evidence of the authorities quoted in this article leads me to the conclusion that the purple and

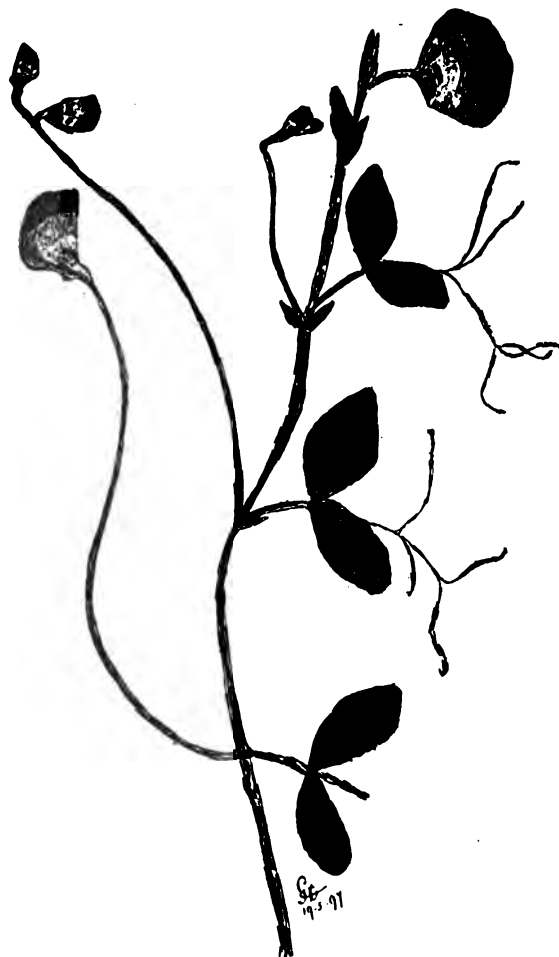


FIG. 145.—*LATHYRUS pedunculis bifloris*, cirrhis diphyllis, foliis ovato-oblongis, leguminibus hirsutis. LINN. S., P. 732. LUDW. D. G., P. 488.
odoratus zeylanicus.

(Reproduced from Kniphoffii Vol. 2, 1757-1763.)

From a sketch from the original engraving, made by Mr. G. H. Dicks (son of the writer of this article), by special permission of the authorities of the Patent Office Museum Library, London, England.

and he will doubtless be very pleased to show it to any caller interested in this subject.

FIRST COLORED ILLUSTRATION OF THE FLOWER.

Retracing our steps to the year 1730 the first colored illustration of sweet peas that I have been able to discover is contained in a set of very fine engravings afterwards painted by hand and entitled, "Twelve Months of Flowers," designed by Peter Casteels, from the collection of Robert Furber, gardener at Kensington, and engraved by H. Fletcher. The flowers of the various months are arranged in the form of bouquets and in the June number appears the purple sweet pea. The form of the flower is very loose and straggling; the standard small and reflexed and the wings very large and

riety, but the point to which particular attention is here directed is that at this awkwardly arranged (see Fig. 147). The time three quite distinct varieties were known and cultivated in ordinary gardens in England. This naturally leads us to "The Scots Gardiners' Director," by James Justice, F. R. S., Edinburgh, 1754. At that time a great effort was made by the Dutch dealers to capture the British trade in flower seeds and their catalogues were sent broadcast through the land. Referring to these catalogues, the said Justice observes that "they are neither rightly named botanically or otherwise." He then proceeds to quote from the

"Catalogus van Schoone Bloem-Zaaden te vinden by
Dirk and Pierre Voorhelm
Bloemists te Haarlem.

white varieties are of Sicilian origin, while the Painted Lady and most probably the red have their origin in Ceylon.

As no history of sweet peas would be complete without a reference to "Curtis's Botanical Magazine," 1788, I copy the following from Vol. II., p. 80. After giving the Latin descriptive name, as it appears in the Kniphoff, he writes: "There is scarcely a plant more generally grown than the sweet pea, and no wonder, since, with the most delicate blossoms, it unites an agreeable perfume. Several varieties of this plant are enumerated by authors, but general cultivation extends to two only; the one with blossoms perfectly white, the other white and rose-colored, commonly called the Painted Lady pea."

The sweet pea is described as a native of Sicily, the Painted Lady as an inhabitant of Ceylon. The colored plate accompanying this description is a little too red in tone for the purple, as now grown. A reproduction of it with the same fault appears in the "Ladies' Manual of Botany," published 1798. It is possible that the deep purple shade is a development, for in Ray's work, before referred to (pub. 1686) the standard is described as red, which term might be used for a reddish purple.

THE SWEET PEA IN FRANCE.

The early French botanists do not appear to have taken very kindly to sweet peas, for the earliest reference I have been able to discover is in a work entitled "Plantes de la France. Décrites et peintes d'après nature par M. Jaume Saint Hilaire, Paris, 1809." The French name is given as "Gesse odorante" and the known "variétés" are described as follows:

- 1ere. étandard de couleur rose, ailes et carène blanchâtres.
 - 2e. étandard de couleur pourpre-violet ou violet-noirâtre, ailes et carène de couleur bleu.
- Fleurit; durant les mois de Juillet et d'Aout.
- Habite: la 1ere. variété est originale de l'île de Cellan; la 2e. se trouve en Sicile.

The accompanying colored plate shows a complete branch with two blossoms on each stem. The coloring has been done entirely at the artist's fancy, as different colored flowers appear on the same stem; while the colorings of the unopened buds would, could they be discovered in nature, drive those enthusiasts, Eckford and Hutchins, wild with joy.

AS AN ARTICLE OF COMMERCE.

With this as a final reference to literary authorities, we may leave this branch of our subject and very briefly touch upon the seedsmen's connection with the sweet pea as an article of commerce. Reference has already been made to the offer of Robert Furber, in 1730, and also that of Dirk and Voorhelm, in 1754. Next in order is the catalogue for 1793 of John Mason at the sign of the Orange Tree in Fleet Street, London (the original founder of the business of Cooper, Taber & Co.), wherein I find quoted: Black, purple, scarlet, white, and Painted Lady. This list shows that some intelligent work had been done during the previous thirty-nine years, but by whom I am unable to discover. The catalogues issued by this firm did not exhibit any change for many years, but in 1837 James Carter founded his business in Holborn, and in his first catalogue quoted black, Painted Lady, purple, scarlet, white, striped, and yellow. To the foregoing Noble, Cooper and Bolton, in 1850, added new large, dark purple, and mixed, showing that two selections had been made from the parent purple variety.

Shortly after this date it became customary for the wholesale seed merchants to quote in their vegetable seed list *Nasturtiums*, *Mignonette* and *Sweet*

Peas, and in 1873 Robert Cooper quoted the latter in this way:

- Sweet Peas, mixed.
do. do. named.
do. do. white.

This style continued until 1881, when they were simply offered as sweet peas mixed and named.

This fact is of interest, as it records a peculiarity in the treatment of sweet peas at that time. For some reason, which I never clearly understood, several of the wholesale seedsmen did not include the white variety in their mixtures unless it was specially ordered, but in the 70's the practice was generally abandoned. The indifferent germination of the brown-seeded white varieties has always been a source of trouble to the seedsmen and this may in some measure account for the custom.

Going back as far as 1860, James Carter offered blue-edged, to which the

The seeds of this variety were sold at two pence (4 cents) each, but no word of complaint came from the purchaser, for its character had been thoroughly fixed before it was placed upon the market.

About 1868 the Crown Princess of Prussia appeared in Germany, an introduction as distinct and valuable as any that had been offered. Who really was the raiser of this variety I have not been able to discover. It has generally been assigned to Mr. Ernst Benary, but that gentleman writes me disclaiming the honor, although it was offered in his catalogue for 1870.

(Since the foregoing was written I have learned from Messrs. Haage & Schmidt, Erfurt, that Crown Princess of Prussia was sent out by them in 1863-69. The same firm also sent out Fairy Queen in 1873-74 and in the same year offered a lilac variety which they claimed to be superior to Captain



FIG. 146.—*LATHYRUS pedunculis bifloris*, cirrhis diphyllis, foliis ovato-oblongis, leguminibus hirsutis. LINN. S., P. 732. LUDW. D. G., P. 488.
odoratus zeylanicus.

(Reproduced from Kniphoffii Vol. 5, 1757-1763.)

From a sketch from the original engraving, made by Mr. G. H. Dicks (son of the writer of this article), by special permission of the authorities of the Patent Office Museum Library, London, England.

Royal Horticultural Society gave a first-class certificate many years later. On August 22, 1883, this novelty was first named Blue Hybrid, and it was understood to have been a true hybrid between the annual white sweet pea and the perennial Lord Anson's blue. It was the outcome of a series of experiments made with the object of raising a real blue-flowered variety by Colonel Trevor Clarke, of Daventry (vide Gard. Chron., Mar. 6, 1897). The Butterfly offered by Sutton & Sons, in 1880, is practically identical with this variety.

On July 11, 1865, a first-class certificate was awarded to Stephen Brown for Invincible Scarlet, which, if properly grown, is one of our very best varieties to-day, and is undoubtedly the parent of the brilliant-colored class.

Clarke; later on this variety was omitted from their list and Captain Clarke retains possession of the field. A very pretty and distinct variety named Bronze King is the latest introduction of this well-known firm.—S. B. D.)

In 1880 Carters offered Violet Queen, an entirely new color, but a very poor flower. Adonis was offered by the same firm in 1882, but this was displaced in 1883 by the New Carmine Rose of Muskett & Sons, afterwards renamed Princess Beatrice, and, to this day, one of the most popular and beautiful of the rose section. From this time onwards the purely descriptive names appear to have been discontinued and the questionable practice of naming new varieties of this lovely flower after titled and untitled nobodies came into vogue.

ADVENT OF ECKFORD.

In 1882 Eckford entered the field with *Bronze Prince* and the history of sweet peas from that time has mainly consisted of a record of his triumphs. Of the other European growers Laxton undoubtedly occupies the foremost place, but the good work by J. C. Schmidt, Haage & Schmidt and Lorenz, in Germany, ought not to be ignored. France has been content to occupy a back seat, for no variety now in commerce is of French origin.

THE "CUPANI OF THE WEST."

The work of Eckford has been so fully placed before the American public by the Rev. W. T. Hutchins that it is only necessary for me to record here my unstinted praise for the foresight, patience and skill he has all along displayed. Whether he will be able to maintain his position as leader in the face of the great wave of Western competition, the close of another decade will show. Of the work done by that

The Flower Garden.

We are now between seasons—a time for weeds.

Violets will need attention if we desire good strong crowns. We know the result of neglecting this work; at planting time we shall have clumps too large, made so by a useless growth of runners. It seems a pity to cut these runners away, as so little will be left, but if the plants had been trimmed from time to time during the summer this would have been unnecessary, and what is more important, larger and stronger crowns would have been secured. The California violet did so well with us last winter that we shall put in more this season; it is remarkable for long stems, fragrance, and fine color. Every time we go over our plants we break up the soil to half an inch; dry soil acts as a mulch. It is the same with all crops, and we always aim to run through the garden after a rain.

Carnations need topping frequently to keep the plants bushy.



FIG. 147.—THE PURPLE SWEET PEA. (No. 33.)

As it appears in the set of engravings published under the title of "Twelve Months of Flowers," by Robert Furber, Gardener at Kensington, in 1730.

Photo-engraved from a set of engravings in the possession of Harry Simpson, Esq., F.R.H.S. 90 Southwark Street, London, England.

"Cupani of the West," the Rev. W. T. Hutchins, this is not the place to write; but a passing reference may be permitted to the remarkable parallel existing between the position and work of the Eastern and Western enthusiasts. I trust that the spirit of the true botanist which animated Cupani will continue to animate the work of Mr. Hutchins.

Cambridge, Mass.—A petition has been presented to the Park Commissioners calling their attention to an effort now being made by a representative committee to secure 140,000 square feet of land in Cambridge adjoining the homestead lot and the residence of "the late James Russell Lowell, poet, statesman and scholar," in whose memory it is proposed to create and perpetuate a public park, to be known as the Lowell Memorial Park.

Fenimore Cooper, the novelist, is to be commemorated in Cooperstown, N. Y., by the throwing open as a park of the property which once was his. The area is five acres. The expense is being borne by the Clark family.

Cyclamen old corms, or roots ought to be potted up now. They are usually slow to start. We have not rested our plants as much as usual, and at potting time find a goodly number of green leaves on them. Leafy plants have better roots, and though they lose these leaves, I allow them to stay on as long as any vitality is left. Opinions differ as to the best soil to use. My experience is that ordinary good loam suits; more depends upon the condition the plants are in when started, and old corms with few live roots seldom make good plants. The roots should be potted firmly and not over watered. Generally cold frames shaded with laths are used and answer well, better, I think, than when shaded sash are used. Ours are grown in a cool greenhouse with top and bottom air continually on.

Seedlings should be making nice growth, and be ready for four-inch pots. Chinese Primulas will soon be ready to move from the seed pans, using light soil, —half leaf-soil and loam with a dash of sand. It is not too late now to sow Primula seed.

The first batch of *Cineraria* seed may

go in at anytime, they germinate readily enough, but are hard to take care of when up, during hot weather; and no satisfactory growth is made until cool weather comes.

Coreopsis Drummondii makes a useful plant for winter blooming, and seeds are sown now to have plants early.

It will soon be time Pansies are sown. The seed often gets badly washed by heavy summer rains, or even by frequent watering, to avoid this we put on a light covering of straw, removing it little by little until the plants are large enough to care for themselves.

Chrysanthemums are making good growth; they will need frequent stopping, and, in fact, should be looked over daily. It is important the plants be kept in shapely form. Such as were put into the final pots in May will be ready for a top dressing of rich soil. These will take liquid manure from now forward. Dregs from the barnyard, diluted to about one-eighth strength is a good safe article.

Those who were fortunate enough to have a stock of the semi-double Ragged Robin, *Lychnis flos-cuculi*, will find it a splendid plant for cut flowers during late winter. It is seldom out of bloom—those forced last winter are blooming nicely now.

Antirrhinums are useful for cut flowers in winter; if we get a good strain, we may grow them from seed for winter flowers, but most growers propagate from cuttings. We have a nice even lot of seedlings all saved from one plant—a white variety. About 25 per cent. have come lemon-yellow, and we are pleased, if anything.

It is quite time to put in cuttings of fancy *Pelargoniums* and *Geraniums*, cuttings from *Poinsettias*, taken with a heel from old plants, are being put in as fast as we can get them. This is a better way I think, than taking pipings. We shall take cuttings until late, in order to get a variety of sizes. Nice plants a foot or so high can be grown in five-inch pots.

Hydrangeas must be closely pruned after blooming and only the healthiest shoots left. T. D. HATFIELD, Mass.

The Fruit Garden.

Peaches should have an abundance of water given them now and until the first fruits begin to color. The trees do not take kindly to many sprayings of Bordeaux or insecticides; therefore, endeavor to promote a healthy growth, which will act as a foil for diseases. Watch for any sign of fruit rot, and pick it in the early stages, instead of leaving it to mummify, and hang on the trees until the spring pruning, or later. Too often, even then, it is only considered as an old dried peach, it being forgotten, or perhaps, not known that it is often very much alive then with fungous spores all ready for another season's work.

Plums.—The above remarks as to rot apply here also.

Cherries.—Sometimes when the picking is finished, there are still many rotten fruits hanging. Try to shake or thrash them off when damp; then rake up and bury.

Cherry or Pear Slugs.—I note that there are a few of these at work again. They can be easily stopped with one of the insecticides. (See page 491, issue of July 10, 1897.)

Grapes.—Some time ago I called attention to a bug somewhat like the rose bug, but broader. These are now on hand and so is the grape curculio. The last, on bright days, is smart enough to be almost amusing, for at the slightest movement of the hand in sight, down it drops far more quickly than the hand can get under it. Where numerous, jar as for plum curculio, using a catcher if necessary. If the bags are on this won't worry you, and the other bug will eat its fill of insecticide when the vines are sprayed. Don't run off with the idea that because the bunches are bagged, everything is right, for it won't be so if the foliage is allowed to mildew. JAS. HOLLOWAY, L. I.

Roses Under Glass.

Work for the Hot Weather.—Disbudding.

We lately had one of the hottest weeks I have ever known; still, in going through the unshaded houses, I found but very few traces of burning. At the same time what few plants were slightly affected with mildew are now entirely free from it. It has been my experience, when the young stock commences to take hold of the new soil, and we get bright, warm weather, so long as they receive their proper syringings, this disease is thoroughly checkmated.

There is now lots of work to be done in the houses, and as the heat is almost unbearable during mid-day we should make the most of the early morning hours and during dull periods to accomplish it. With the constant syringings the soil will soon begin to turn green and sour, preventing the air working through it, and making it almost an impossibility to water properly.

To get the best results from plants growing outdoors frequent cultivation is resorted to and it is just as important, and a little more so, that the same should be practised inside. Once a week is none too frequent to stir the surface soil. It should be superfluous for me to mention that weeds should not be allowed to gain any headway at any time; if they do the soil will very soon become greatly impoverished. It is surprising how rapidly and what a large amount of early available matter they take out of the soil.

Disbudding should not be neglected on any account. There seems to be a little difference of opinion as regards the stage of development when the bud should be picked off. We always make it a practise to go over the houses twice a week and pinch off every tip wherein a bud is discernible. My experience is, where buds are left to develop almost to opening the wood becomes very hard and the next growths are not only slower in coming, but are not so strong as when disbudded earlier. In other words, the substance which goes to build up bud and flower, if stopped in time, is directed to other channels, which are more desirable at the present—wood and foliage. If we wish to get the best returns during winter there is no greater mistake than to let our plants flower, even if they are cut with a short stem. All roses will crop more or less and I find the oftener we go over the plants and disbud the more it tends to prolong the crop.

Drip from the roof may seem to some a very trifling item, especially if there is very little of it; but not only is the health of the plants with which it comes in contact seriously impaired, making them an easy prey for fungus diseases, which contaminate the healthier ones surrounding, but it is invariably a starting point for black spot, which is so disastrous to the varieties susceptible to it. Remedying drip is time and money well spent.

While mentioning black spot, now is the time for us to use every means in our power to get entirely rid of it before fall arrives. Every leaf or part of one on which is found a particle of black spot should be picked off.

In regard to insects, we have a few at this season that must be looked after. Butterflies should be killed or the caterpillars they breed will quickly disfigure the plants by chewing up the young foliage. The May bug larva, a large, fat, ugly grub, with brown head, is oftentimes very troublesome, killing some of our finest plants before we are aware of its presence. Be as careful as we may to watch for these pests, while turning our soil and putting it in the houses, we are almost certain to leave some remaining. It is no difficult matter to detect a plant attacked by one of them, as when its base is reached it takes them but a very short time to cut the roots clean off and girdle the bark just above the callous,

causing the plant to wilt badly during sunshine. Most generally a plant attacked is of no further use, so lose no time in putting it up and replanting another in its place. Before doing so, however, be sure you work the soil over until you catch the grub; otherwise, you can be assured of losing another plant in the immediate vicinity very shortly. They generally work from one plant to another.

During the hottest weather green fly is not very troublesome, but if we get a short spell of cool weather it most generally puts in an appearance. I am very adverse to fumigating a rose house, but it is about the only practical course open to us just now for the extermination of green fly. If carefully done no harmful effects need be feared. It is best to fumigate when the houses are cool. I don't like the temperature to stand over 70 degrees. This oftentimes necessitates the fumigating being done in the evening, so just before quitting time we place in the houses, thirty-five feet apart, a wisp of stems the size of a six-inch pot with a pinch of shavings to each. It is then an easy matter to close the ventilators and light the piles, about 8 o'clock, leaving in the smoke for a couple of hours, after which time ventilation is again resumed. Very little tobacco smoke is needed at this season to kill green fly, so fumigating should be lightly done. A thorough, sharp spray from the hose early next morning will clean the flies out entirely.

Early Ripening of Fruit.

Inducing Fruitfulness.

It is not difficult to so manipulate a branch of a peach, pear or apple tree as to cause it not only to ripen its fruit ten days or more in advance of the ordinary season but to greatly increase its size.

Trees take in their food from the soil; minerals dissolved in water, which passes from cell to cell through the centre of the tree until the leaves are reached, where it is digested, so to speak, and is combined with carbon from the atmosphere and the assimilated food passes downward immediately under the bark, building up the wood cells and developing the fruit.

Now if we check the downward flow of the sap by pressing the bark it throws the food back and the fruit appropriates it, causing an abnormal growth and speedy maturity. This can be readily done by twisting a small wire tightly around the limb just below the fruit. It is better to remove all but the one specimen and great care must be exercised not to get the wire so tight as to rupture the bark and thus destroy the branch. It only requires a slight compression to accomplish the work. After the fruit has matured the wire must be removed.

Grape growers who practise "ringing" understand this to perfection. They cut out a band of the bark about a quarter of an inch long just below the cluster to be affected. It then appropriates all the resources of the shoot and often more than doubles its size, but the limb must be cut out at the next pruning, as the girdling kills it.

It often happens that a young tree will not develop fruit buds, but such can be made to do so by suddenly checking its growth when its wood buds are about half formed so as to cause them to develop into fruit buds. A fine wire is twisted around the body of the tree only once and left two or three weeks in July and August so as to cut off the downward flow of sap.

The same effect can be accomplished by a straight, thin cut directly around the tree, merely severing the bark. It will draw apart and fill with gum, quickly healing; but the check is secured and a good crop of fruit sure for the next season. This should be done not later than the middle of July.

R. M. KELLOGG, Three Rivers, Mich.

The Manuring of Orchids.

Experiments on Cattleyas.

Some interesting experiments, says the *Gardeners' Chronicle*, have recently been made with a view to determine the gradual degeneration that takes place in some cattleyas. For this purpose the expedient of analyzing cattleyas at the time of importation, and after some years when degeneration had set in, was resorted to. It was noted also that the production of flowers is an exhaustive process and that little is done to compensate for the loss.

"The result of these experiments shows that cattleyas, when degenerate, contain less dry matter, organic substances, nitrates and ash. Among these elements, diminution is evident in the amount of potash, lime, magnesia and phosphoric acid—that is to say, in the principal fertilizing elements. The cattleyas were grown in a soil almost destitute of fertilizing matter, and their weakness is attributable to the production of the flowers for which they were cultivated. To verify this the experimenters proceeded to analyze the flowers and discovered what amount of loss of fertilizing elements these plants sustained as a consequence of flowering. It may be said that the organic matter of the flowers contains a considerable quantity of nitrogen, and that the ashes are particularly rich in potash, lime, magnesia and phosphoric acid. The dwindling of cattleyas in respect of these elements is, therefore, explained very clearly in this way, the results plainly showing that degeneration of these plants is attributable to the exhaustion caused by the production of flowers.

"From the standpoint of practical horticulture we may conclude from this investigation that cattleyas should receive, to counteract this degeneration, a mixture of suitable manures, containing nitrogen, phosphoric acid, potash, lime and magnesia."

The following information on the same subject, furnished to the Orchid Committee of the Royal Horticultural Society by Mr. A. H. Smee, is very interesting. Mr. Smee experimented with an old and starved variety of *Cattleya Trianae*. He says:

"I fed this plant once a week, during the growing season, with two or three ounces of water, which contained nitrate of potash, nitrate of ammonia, phosphate of ammonia and carbonate of magnesia, of the strength of half an ounce of nitrate of potash and half an ounce of nitrate of ammonia, with a small quantity of the other salts, with the result that the plant made stronger growth and produced a greater number of flowers, which were brighter in color. In 1896 I tried a larger number of plants and I was so satisfied with the result that in 1896 I added nitrate of potash and nitrate of ammonia each week during the summer to the rain water tanks of the cattleya house. The total quantity used during the summer was one pound of the nitrate of ammonia and one pound of the nitrate of potash. This worked out at the rate of 2.5 grains per gallon. Many of the flowers of the cattleya this year were larger, brighter and had more substance than in previous years.

"This year I intend to increase the amount to five grains per gallon during the summer, that is to say, from May to September. I also propose to treat some of the plants with small quantities of phosphate of ammonia and carbonate of magnesia, in addition to the nitrate of ammonia and potash. I expect that I shall be able to make a favorable report on a future occasion on the results of these experiments.

"I expect further observations will prove that the assimilation of phosphates by plants sets free the phosphorus, which combining with the nitro-hydro-carbons of the tissues will tend to promote inflorescence, and will probably increase the germinating power of the seed of epiphytal orchids."

Success With Sweet Peas.

For several seasons the majority of those planting Sweet Peas in this part of the country (Central Illinois) have grown more disappointment and even discouragement, than they have flowers. Only those who had clayey soil, with plenty of water, have been fully successful, thus proving the statement of all the books that a clayey soil, made rich, is best for Sweet Peas. The summer of 1896 was particularly unsatisfactory. An early spring permitted unusually early planting, and the plants came up well, but though apparently vigorous and healthy, they died in the most discouraging way.

The writer thought at first that the frightful mortality was due to rank manure. It was learned, however, that others who had used no manure suffered in the same way. It was, apparently, the blight peculiar to Sweet Peas that has been spoken of as appearing in different parts of the country.

That spring the Peas were planted exactly according to the method most approved up to that time. Two inches of year-old manure was spaded in deeply; the soil was known to be unfavorable, being an old driveway of cinders three inches deep over light loam, but it was thought great care would offset the extreme lightness of the soil. The seed was,

failed with it, and that loose soil might have caused the blight in many places, an entirely different plan was taken. As the soil had been so little occupied last summer, owing to the epidemic that had cleaned out the Sweet Pea population, exactly the same ground was used.

No spading was done, the soil being simply loosened about two inches deep with a hoe, and the seed planted less than two inches down in two double rows north and south, the single rows being six inches apart. Two of these double rows were put in, each thirty feet long, and with four feet between the double rows, just the same length and number of rows as last year. Nineteen varieties were planted, and the soil was pressed firmly over the seed. Owing to rain in March the planting was later, being on the 16th and 22d. The seed germinated well, as it did before, and by April 20 this note was made:

"All up well, and growing well. All thick. No failures anywhere. Good, stocky plants. Weather has been cloudy, wet, and cold, but with little freezing."

The vines all grew thriftily and rapidly from the start. They were hoed once, but there was no pulling of the soil towards them as before. The only sign of the blight has been the death of one vine after it had got nearly four feet tall, and it may have been damaged at the root in some way.



FIG. 148.—A SWEET PEA PATCH.

on March 10, put under two inches of soil, so that a three-inch trench was left after planting. In two weeks the plants were coming up finely and in the cool spring weather made rapid and vigorous growth. When about six inches high they began dying; a plant would wither at the top, and in a day or two be dead to the roots. No cause could be found. The manure was blamed at first, but others who suffered the same way had used no manure. Then, too, it would seem that all the plants would have died about the same time. But they did not. The rows got taller fast, but all the time individuals were falling by the wayside, sometimes two or three in a foot. They kept it up until the last, even after they had been blooming well. The first ones blossomed May 10, remarkably early for this section, but the vines were so thin by this time that there were few blossoms. The most picked in any one week was 1,284 from July 12 to 19. The vines died rapidly after that, and by August 10 were all dead. It should be stated that they had all summer been watered with a spray nozzle whenever the ground at the roots began to get dry, and that by June the soil had been pulled up, so that the trench was filled.

This spring (1897), acting on a suggestion by Rev. W. T. Hutchins of Indian Orchard, Mass., who, in a circular letter on Sweet Pea planting, said the trench system must be abandoned by those who

There have been frequent rains so that but one watering was necessary. The vines are on poultry netting five feet high, and now, July 10, are near the top and a mass of the delicate Sweet Pea green, surmounted by the dainty blossoms of white pink, lavender, maroon—a picture that delights the eye and heart of all who see it.

The first blossom came out on Extra Early Blanche Ferry on June 6. That was later than last year, but earlier than any one else here. The season has been three weeks later than in 1896. A week later twenty Extra Early Blanche Ferry were picked. Blanche Burpee and Stanley came out on the 14th; Kate Tracy and Emily Henderson on the 15th; Brilliant on the 16th; and New Countess, Alice Eckford, Crown Jewell, and Mikado on the 17th. By June 18 all were in bloom and 200 blossoms a day were being picked. The number of blossoms has increased steadily. In the week from July 1 to 7 the total of stems (two and three blossoms on a stem), was 3,944. All were large and fine, with most of the stems six and eight inches long. This was in spite of the fact that the hottest weather in this section in many years began about July 1. The last half of the week it was daily 98 and 99 degrees in the shade. The vines are now showing the effects of heat and drought, but it has turned cooler and rained, and it is thought the great productiveness will be kept up for some time.

The conclusion is that we must do as Mr. Hutchins says, experiment until the method best adapted to our particular locality and soil is found, and then to follow it with care and patience, and some success is sure.—H. C. SCHAUB, Decatur, Ill.

The Vegetable Garden.

Onion Blast.—Last year our onion crop was attacked by a comparatively new disease, now known as the "White Blast;" many of the tops were covered with white spots and the tips withered away. The patch was kept thoroughly cultivated, and the ground was well prepared, the onions had till this date grown vigorously, but they became a sick-looking lot, and nearly all the leaves bent entirely over at the middle. My impression at first, was, that it was an attack of some onion blight, for which I frequently sprayed them with the copper fungicides, but apparently to no purpose. Being at that time a near neighbor of the Rhode Island Agricultural Experiment Station, I sent them samples of the trouble and sought a remedy for it. I also sent at the same time a sample to Prof. Slingerland of Cornell, a well-known authority on insect life. He said the disease was new, and that it had given much trouble over a wide extent of the country. The disease is caused by one of the Thrips (Thrips tabaci), a very minute yellow insect, scarcely visible to the naked eye; these small insects may be found in the axils of the leaves, and also in the underside of the bend of the tops, where they hang down. Several generations of the pest occur during the season. Prof. Slingerland recommended spraying with kerosene emulsion diluted with ten parts of water. I applied this remedy to a portion of the crop, and it proved quite effective, and the result was a fine crop of onions, and I took several premiums with them at the Agricultural Fair. The definition of the trouble by the Professor of Horticulture at the Rhode Island Institution was wrong, he claiming it to be the onion blight, recommending the use of the Bordeaux mixture. This, as already explained, I had already used frequently, without effect, but on another portion of the crop I continued its use without any satisfactory result. After reading Prof. Slingerland's description of the trouble, I hunted up the little yellow insects, and with the aid of a small microscope, I could clearly see them. The two diseases are quite distinct, though similar in effect and general appearance; the White Blast is caused by a diminutive insect, the onion rust, or blight, by a species of fungus, and is more of a decayed brown color; it is, therefore, important the distinction should be understood, before any successful remedy can be intelligently applied.

Microscope.—All such cases as the above tend to show the absolute need of a convenient microscope to every cultivator, as an aid towards the fighting of the many insect and fungous enemies of the garden. A knowledge of these, and best method of keeping them in check is requisite before successful results can be attained. W. M. EDWARDS, Conn.

Blackberries Drying Up.

I have some Snyder blackberries planted on the west side of a tight board fence. They bear heavily, but quite a number of the berries turn black and dry up before reaching maturity. What is the cause of this and is there a remedy?—CONRAD BOLINGER.

—If there is no evidence of disease on the wood or foliage, the cause is probably heavy cropping with lack of moisture at the roots. Blackberries will stand almost any quantity of water in July. More details might have shown more light on the trouble.

Saul's Nurseries.

The greenhouses and nurseries of the late J. Saul at Washington, D. C., have been disposed of. The grounds are taken by W. S. Clark. The greenhouses are taken by J. Boyle, superintendent of the zoological gardens; he will raise Violets, Carnations, and Vegetables.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 12, 1904.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE BLDG.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1897.

REGISTERED CABLE ADDRESS

Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Dwarf Fruit Trees. WE have on more than one occasion before this taken the opportunity of advocating the use of dwarf fruit trees under certain conditions, and despite what may be said to the contrary by certain other teachers we continue in our course. The mistake that is usually made whenever the subject is brought up for discussion is that the participants argue from severally different standpoints, and instead of debating the adaptability of dwarfs in special cases, assume that the question is the wholesale planting of dwarfs for commercial purposes. Then again, for their successful culture, dwarf fruit trees demand an amount of care and constant attention that would be much grudging by the ordinary being, one who has not an absorbing passion for gardening.

On the other hand, for those who desire to become acquainted with the various varieties of a fruit, and who have not the space to spare for large orchards, the

dwarf tree is a practical solution of the difficulty.

A correspondent writes to us in these words:

So little is given in general fruit literature about dwarfing fruit trees, their care, trimming, etc., in fact, very little attention seems to be given to the subject in this country. Can you tell me of any places near New York with dwarfs? Dwarf fruit trees in Germany and England have been a great delight to me. I have been in hopes that some of your correspondents would treat of the subject, for I believe it would be of great interest to a great number of gentlemen who raise fruit for the love of it. The owner of a very small place could have all the fruits known, and would find an endless source of pleasure in the care of dwarf trees. And I believe the raising of fruit, with a growing love of it, will do more for humanity than all the preachers.

While it is true that dwarf fruit trees are not extensively grown in the vicinity of New York, there are, however, a few estates having them, among which may be mentioned W. Rockefeller's, Tarrytown, N. Y., at this establishment may be found a nice lot of standard and half-standard trees which are fruiting profitably, and of still more interest in these same gardens is the cool orchard house, where pears, plums, peaches, nectarines, cherries, apricots, etc., are being grown in pots, the pears and plums once seen will never be forgotten. (Further reference will be made to this house in a later issue.)

There are several other homes on the Hudson River where a few trees may be found.

At Portchester, N. Y., at the new home of Mr. Quintard, Jr., are some dwarf fruit trees, but the garden is new as yet, so but little can be said about the trees at this date. On the walls are variously trained trees of pears, peaches, etc. The pears are mostly vertical cordons, trained on wires very near to the wall, and it is evident that for best results the trees will have to be trained on frame wires much further out from the wall, for the trees show signs of burning. The kitchen garden here is bordered with dwarf bush pear trees that are fruiting well, and near the garden paths are standard gooseberry and red currant bushes; these are worked upon standards about three feet from the ground, and their bushy heads, laden with fruit present a novel appearance. The trees and bushes, we believe, were imported direct from France.

That French gardeners are adepts at this art is well known, and that their example encourages its extension may be seen by crossing the Long Island Sound to Glen Cove and district. In the gardens of Charles A. Dana are to be found quite an assortment of cordon, espaller, and bush-trained trees, which, this season are carrying a very heavy crop of clean, healthy-looking fruit, especially the pears.

Near by on what was the old Barlow estate, now occupied by E. R. Ladew, are also to be found a large assortment of similarly trained trees; cherries in quantities have this season borne a heavy crop of fine fruit. All the garden paths are lined in some such a manner with the various fruit trees, and all are cropping well.

Near by again, on the Perkins' estate, under the care of F. G. Menze, is another old established garden where trained fruit trees may be found; while in the adjoining town, Sea Cliffe, is a veritable home,

a nursery where such trees are made and may be seen at all stages and in all sizes and styles. Mr. Ferdinand Boulon has for years been working up this stock, and while he is a commercial florist, he amply demonstrates the "intensive" possibilities of dwarf fruit growing in limited areas, his seven acres of land being edged and spaced out with hosts of fruit trees in endless profusion. The "Miniature Fruit Garden" of Rivers is about the only work to which our readers can be referred for detailed instructions upon this very interesting phase of intensive fruit culture—and that we believe is out of print.

Fruit Prospects THE crop report just issued by the U. S. Department of Agriculture shows as a whole that prospects for peaches, apples, and grapes are not so good as they were the same time last year.

With few exceptions, the reports on the peach crop are unfavorable. In New York it is said to be in rather poor condition; in New Jersey not very good; in Pennsylvania only moderate; in Delaware less than 10 per cent. of the average crop; in Maryland a small crop; in Georgia less than half a crop; in Kentucky average below last year; in Ohio almost an entire failure. The peach crop of Arkansas, on the other hand, is reported as good; the California crop fair; the Washington crop never better, and that of Oregon more promising than it was last season.

Of apples it is said that the crop is below the average, except in the far West and on the Pacific Coast. From all the North Atlantic States the reports are more or less unfavorable. In Ohio the fruit is dropping off badly, and indications are that the present condition of 46 per cent. will prove to be too high rather than too low. Michigan has an average of only 58 as compared with 99 at this time last year.

As to grapes, the crop in New York is said to be in poor condition; that of New Jersey fairly good; the crop of Pennsylvania, only moderate; while the crop in Delaware is generally fine; grapes in Virginia are reported as abundant and free from rot so far; in Georgia the crop promises well; Kentucky reports the grape crop in good condition; Ohio, as having suffered less than other fruits, but still not indicating an unusually large yield; in Indiana the crop has been injured by late frost; Missouri, nearly a normal crop of good quality; Kansas, the crop is very satisfactory; Nebraska, above the average, both as to yield and quality.—B. T. G.

National Apple Shippers' Assn.—The third annual meeting of this society is to be held at Hotel Iroquois, Buffalo, N. Y., on August 5, 6, 7. The Secretary of the association is A. W. Patch, 17 North Market Street, Boston, Mass.

After One Year.

I have been a subscriber and close reader of AMERICAN GARDENING for nearly a year, and have this to say: AMERICAN GARDENING is an encyclopedia of information for everything pertaining to the cultivation and commerce of useful plants of every kind. After a year's perusal it must be proven an almost indispensable aid to the progressive professional or amateur horticulturist.—GEORGE B. ROBINSON, Bangor, Me.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Strawberries Henry and Mary.—We have grown almost all varieties of berries, but have only found two really large fruited ones. The one is Mary, originated by the late H. Alley of this village, the other is called, here on Boyden Farm, Henry. We grow tens of thousands of quarts from each variety every year, and they are without doubt the largest and best of all grown in the whole world. I have had this season thousands of quarts of Mary, where from five to ten berries would make a heaping wooden quart, and I have preserved several in glass jars with formalin, so that all who doubt can come here and see for themselves. Some of these berries in the jars measure thirteen inches around. I am the present owner of the Seth Boyden farm. Seth Boyden originated the first large strawberry, perhaps, in the world (Agriculturist and others); he died in 1870. I then bought his farm, and have continued to grow strawberries from that time to this, and will say that I am positive the plant called Henry is beyond all doubt, not only the strongest plant, but the largest, best, hardest, and sweetest strawberry ever yet produced; color dark crimson; it is perfect (staminate), very large, round, and no coxcombs grow on it. I have grown it for the past four years for market in a small way, and this season nearly one-half of all that I grew was Henry; it will out-produce any strawberry plant that I have ever known, four year old plants giving very large, and just as fine berries as plants one year old. The plants as yet have shown no disease, while all other varieties, such as Great American, Jersey Queen, and nearly all varieties except those soft berries not good for market (Sharpless, Bubach, and others), have shown disease in the plant. The Mary this season could not stand the hot sun, and nearly one-half of all the plants burnt and dried up while full of berries. Mary will not bear the second season, but must be set every year, while of Henry, not a single plant has died, either old or young; it is the first berry ripe and the last. I am picking large berries from the Henry to-day, July 15.—H. JEROLAMAN, Hilton, N. J.

To Destroy Spiders.—Your article in issue of July 10, upon various uses of bisulphide of carbon is excellent. I wish to inquire if it will not be effective in killing spiders, and how much is required for a room twelve feet square. I tried fumes of burning sulphur, but the spiders were unharmed. If placed in the house in the early morning, could we occupy it at night? I trust this may be the means of removing the one bugbear of country life in an unplastered summer cottage.—J. W. B., Mass.

—Will some one with experience reply? We have never had occasion to use the bisulphide in a dwelling; it seems, however, that there would be considerable difficulty in using it, owing to the heaviness of the vapor. Hydrocyanic acid gas suggests itself to us.—Ed.

Carbon Bisulphide.—In your issue of July 10, page 488, was an article on "Bisulphide of Carbon," by G. M. Stratton, it was mentioned among other things that it was sure death to the phylloxera, a small insect that worked on the roots of grape vines. As I have been troubled with the phylloxera on my vines, under glass, and have tried all the remedies I could hear of, I would like to know of some one who has applied this carbon bisulphide, and with what results. The way to apply it for insects in the ground is very clearly given in the article referred to, but I would like to know more fully of the results.—GEORGE THOMAS, Chester Co., Penn.

Tomatoes Under Glass.—In your issue of May 29, Subscriber, Lowellville, O., states that he has had a Livingstone's Beauty tomato in his house for more than a year, and that it was then bearing 245 tomatoes. As I had never such a success with greenhouse tomatoes, I would like to learn his modus operandi.—SUBSCRIBER, Springfield, Mo.

Dodecatheon Meadia.—In reply to C. S. Doggett, Mass., he can obtain plants from me, for postage. They are not abundant here, but good plants may be had.—S. T. STERLING, Camden, Ind.

Crimson Clover was introduced in this country several years ago by the late Dr. Harzadine, a florist of Delaware; being a great lover of flowers he was attracted to this plant by its beauty. The rich deep green foliage which may be seen all through the winter when not entirely covered with snow, grows deeper and brighter as spring advances, until early in May when the flowers appear and the field changes from a deep green to a brilliant crimson, making a sight to behold and to remember. At first the value as a forage plant was not understood, and as a soil restorer was unknown. Every one admired its beauty and numerous plots were grown for ornamental purposes, but years elapsed before farmers awoke to its value as a regular rotation crop. Crimson Clover is now successfully grown in almost every state in the union. It will yield two to three tons of hay to the acre; or eight to ten bushels of seed; it makes a good fall and winter pasture, and is also a good honey plant, the honey being of light color and excellent flavor. Crimson Clover as a fertilizer has no equal; it sends its deep-feeding roots far into the subsoil to gather and bring to the surface elements of fertility that would be otherwise lost. Crimson Clover is an annual and must be sown in its proper season, this extends from the first of July until the last of September. About one peck of seed is required to sow an acre. I would advise sowing the seed in July, or not later than the 15th of August, if the ground can be got ready.—CARL B. CLINE, Columbus, Ohio.

The Lungs of the City.—From my point of view, there are two distinct objects in the setting aside of land for public uses in the form known as parks or public squares. One object is that of educating the taste of the owners of private places by the creation of model landscape effects, together with the gratification of the æsthetic taste of the community, and the other is the setting aside of land for the use of the public as a playground or for recreation. The one makes a park as a picture to be admired and studied, to be looked at, but not to be poked with a cane or an umbrella; while the other would make a park something more tangible—a thing to be handled and played with; the one would create lawns, vistas, and landscapes to be looked at only; the other would make playgrounds for children, trees for shade, paths and roads for the convenience and comfort of the public. It seems strange that most experts lean to one side or the other and see no merit in the claims of those who hold to the opposite theory. Some gardeners would put signs at every prominent point, warning trespassers of the dire penalty of using that which others would say was created for them; others would open everything to the public, laughing at the theories and fine philosophy of the æsthetic cranks, as they call them, who would make pictures of trees, shrubs, and lawns, regardless of the rights of the individual in them. There is surely a golden mean between these two extremes, especially if the people comprising the "public" which patronizes the parks can be made to realize that when they injure a park they are injuring their own property. It is a waste of time and money to set aside a large area of land in the form of a park and then exclude the public from it; on the other hand, it is possible to make the park so common that it is not appreciated even by those who overrun it. To exclude children from the lawns or the cool secluded nooks of a park is as bad on the one hand, as is the desecration of a bit of fine landscape by an incongruous building on the other. The parks are paid for by the people, and they should have the use

of them, not as artists, or gardeners, but as every day working men, women, and children. The rich can create and own their own parks, but the poor must rely upon the public breathing places or stifle and die in the crowded tenements. What our parks need is not more landscape architecture, but more individual freedom for visitors, and a higher and more conscientious regard for the privileges which should be allowed the individual.—PRO BONO PUBLICO.

Strawberries.

Mr. Hale on Summer Planting Again.

Your issue of the 17th at hand, and I note Mr. Dwyer's article upholding the summer planting of strawberries. I admire his pluck, more than his discretion, for it certainly does take pluck to advocate the profitability of buying and planting potted strawberry plants in midsummer, with the hope of any profit the next season.

My thirty years' experience in strawberry growing has taught me that the thing cannot be done except in rare instances.

My statement, in a former letter, that it would require 20,000 plants per acre to secure a profitable crop the next year, did not pretend to be a quotation from Mr. Dwyer, but a definite statement of my own; and I still hold to it, that if one is planting in midsummer, 20,000 plants are as few as it would be advisable to put out on an acre.

As to the cost of spring planting, perhaps I did not make myself clear, but the average planters of the country use from six to eight thousand plants per acre and these can be had at from \$20 to \$25, while with Mr. Dwyer's reduced price of \$13 per thousand for his potted strawberry plants, the cost would be \$260 per acre. Mr. Dwyer may be able to sell potted plants in July at \$13 per thousand, but no one else in America that I know of can do so, and I doubt that he would want to accept many orders at those prices. I think a call for plants for an acre or two in July would probably swamp him.

Mr. Dwyer says "let us have the truth if the heavens fall," and then says, "I did say, and I repeat it, that every pot-grown plant set in July or August would produce this season eight or ten plants, and that each of these plants would produce one-half pint of fruit each the next season."

Now let us figure a little to come to "the truth": of eight or ten plants the average would be 9, multiply the original 7,500 plants put out by 9, and we have 67,500 new plants, and, with the original 7,500 plants, we have 75,000 plants in all; half a pint to each one would give the next year 18,750 quarts, or 585 bushels. In most parts of the country this sort of "truth" would make a tumbling in the heavens. Now, as a matter of fact, has Mr. Dwyer ever produced that number of bushels of strawberries from an acre of pot-grown plants? Or can he tell us of any one in the country who has? I would not insinuate that there was any wilful misrepresentation on his part, but simply when one gets to imagining that there is a profit in the planting of potted strawberry plants, things begin to run wild. A man who will put out 7,500 potted strawberry plants in midsummer and secure one-fourth as much fruit as Mr. Dwyer estimates will have a crop that will astonish the natives.

The only way I know of to get a big crop of strawberries from summer planting is to crowd a great number of plants to the acre at the original setting, and as the cost of plants, if they have to be bought potted, practically eats up all the profit, I am still firmly convinced that an average market planter should always do his strawberry planting in the spring, unless his plants can be had for nothing from close about his home grounds.—J. H. HALE.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send ac. stamp for our new catalogue.

For Present Sowing.

TURNIP SEED. We have all the best varieties.

CUCUMBER SEED FOR PICKLES. Our STOCKS are the Finest.

The first Consignment of our **SURE CROP, Mushroom Spaw,** just arrived.

Quality! BETTER!! than ever!!!

Descriptive Catalogue Free, by mail.

WEEBER & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

Crimson Clover Seed.

DERBY'S GROWS. Pedigree dates back to 1887. Crop of 1897 for Sale. Address
SAM H. DERBY, Woodside, Del.

Mention American Gardening when you write.

Delaware-Grown Crimson Clover.

Absolutely pure.
New crop.
Now ready.
BROWN SEED CO.,
Wyoming, Del.

Mention American Gardening when you write.

Offer No. 80.

FOR ONE NEW SUBSCRIPTION

200 CELERY PLANTS

AS FOLLOWS:

50 Plants
White Plume.

50 Plants
New Rose.

50 Plants
Golden Self-
Blanching.

50 Plants
Giant Pascal.



This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to **AMERICAN GARDENING.** Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P. O. Box 1697, N. Y.

Built to Sit On, Not to Straddle.



THE WHEELER BICYCLE SADDLE.

Every rider who has given the **WHEELER REFORM** a trial prefers it to all other saddles. Endorsed by physicians. Especially recommended for ladies.

We will send a Wheeler Bicycle Saddle as a Premium for Three New Subscriptions at \$1.00 each. Purchaser pays express.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Charles F. Kleiner dropped dead on July 8. He was employed at Schenley Park, and had been afflicted for some time with heart disease. He was sixty years old, and leaves a widow and five children.

J. S. Reid, for many years foreman of the greenhouses of J. Wolf, Jr., at Philadelphia, died on July 4. He was born in Aberdeen, Scotland, in 1865.

Johann Lambert, of Lambert & Sons, the rosarians of Trier, Germany, died on June 23, in his 67th year. The roses Kaiserin Augusta Victoria, the Yellow Rambler, and many others were raised by this firm.

Carnations for Private Place.

On page 495 of AMERICAN GARDENING of July 10, appears a request for information as to the most profitable varieties of Carnations to grow in a private establishment.

Having been growing Carnations for market very extensively for the past few years, and being at present in a private place, I think I am posted in this line. These are what I consider the very best varieties for the purpose named: Red, Jubilee. Pink, Albertini. Light pink, Daybreak. Dark pink, Tidal Wave. White, Lizzie McGowan. Yellow, Goldfinch. Variegated, Armazindy. Of course there are others, new and old varieties. I always try a few new ones myself, for I don't like to miss a good thing. William Scott is not listed, for the reason that it is not as good a flower as Albertini, and when it is off crop, it keeps off too long, and bursts badly in winter.—JAMES HARTSHORNE, Ill.

A New Style of Greenhouse.

A departure in greenhouse construction, so far as this country is concerned, has been inaugurated by the firm of Dalledouze Bros., Flatbush, L. I., and is worthy consideration by gardeners and others. The chief interest lies in the great gain in head room for bush or other plants. The progress of this house, which is now filled with carnations, will be watched by us with considerable interest and reported upon as may be necessary.

The construction is an addition to a number of other houses, its dimensions are 20½ x 200 feet. The eaves protrude 5½ inches beyond the foundation line, this outward inclination of the sides giving more head room for the plants, and also gaining considerable light. Glass meets glass, and no lodgement for snow is possible. The sides are kept in position by means of braces attached to the iron rafters, whose perpendicular supports run down into solid foundations. These rafters carry the entire weight of the house, and no weight of any importance is evident at the eaves. Double ventilation is provided at the ridge, there being no side ventilation. The house is glazed with 16 x 24, double thick French glass. Lord & Burnham were the builders. The style of house has already been occasionally used in England.

Oceanic, N. J.

The regular semi-monthly meeting of the Monmouth County Horticultural Society was held on Friday, the 16th inst. The principal business transacted at these meetings now relates to the coming exhibition to be held at Red Bank on September 1 and 2. At the last meeting, however, time was found to listen to an admirable paper on "Herbaceous Plants," which was read by Mr. Herman Stoye of Little Silver. Then was read a communication from the American Horticultural Society, suggesting the holding of a fall show in New York; on a motion the communication was laid on the table. August 6 is the date of the next regular meeting.

Madison, N. J.

There was a good meeting of members of the Morris County Gardeners' and Florists' Society in Masonic Hall, Madison, on Wednesday, July 14. Five new members were elected and two proposed. The preliminary schedule of a proposed show to be held in New York in November under the auspices of the American Horticultural Society was read and discussed, but upon a motion it was decided to take no action.

The show committee reported that the McAlpin Hall, Morristown, had been secured for the show which will be on November 3 and 4. The schedule of prizes was discussed at length and passed, and owing to the lateness of the hour, the reading of Mr. C. Totty's paper on the "Chrysanthemum," was postponed till the next meeting.

A Proposed Confederation.

The American Horticultural Society has proposed to the various gardeners' societies in the vicinity of New York City that they all combine to hold a great fall exhibition in November next for the "elevation of American horticulture and to benefit the hospitals of New York City." The societies asked to co-operate in the movement were as follows: The New York Gardeners', New Jersey Floricultural, Hempstead, Morris County (N. J.), Monmouth County (N. J.), West Chester, Dutchess County (N. Y.), and Springfield (Mass.) Horticultural.

So far as present reports indicate, the proposal has not met with the approval of these bodies. At a meeting of the Dutchess County Society, the vote went 12 against, with 2 in favor. The New Jersey societies, with one accord, decided to take no action.

Toronto.

The July meeting of the Horticultural Society was held on Tuesday, the 6th inst., and in spite of the heat it was a good one. Roses was the subject for discussion. The meeting was an open one and many of the public attended. Mr. Uttley, the first vice-president, read a short paper by J. H. Dunlop on the cultivation of tea roses in greenhouses. John Chambers gave a very interesting talk on hardy roses and climbers. He mentioned many varieties of roses as among the best for the country that had been in cultivation for over fifty years. While he highly praised many of the newer kinds, he said that some of these old ones had proved so good and so hardy that we could hardly do without them.

Some good seedling geraniums were on the tables from Mr. Jay and gallardias and delphiniums from Mr. Frost and Mantion Bros. The next meeting will also be an open one and will be devoted mostly to the subject of sweet peas. If the weather be favorable there will be quite a show of these flowers, as Mr. Uttley is an enthusiast in their culture and there are several other good growers among the members.

Boston.

Patrick Norton has entered on his duties as chairman of the Garden or Visiting Committee of the Massachusetts Horticultural Society. This committee performs an important work and it will be the endeavor of the new chairman to still further increase its usefulness. They have the awarding of the H. H. Hunnewell prizes for the best-laid-out and best-kept estate of not less than three acres, the John A. Lowell prizes for the best houses of chrysanthemums arranged for effect and the society's prizes for the best house of foreign grapes, the best house of chrysanthemums grown on benches, the best house or frame of violets, best carnation house, best fruit garden and the best vegetable garden. All applications for visits must be made in writing to the chairman of the committee at any time during the season.

excepting in the case of the Hunnewell prize, for which entries must be made before August 1.

Saturday, July 10, was hollyhock day with the Massachusetts Horticultural Society, according to the schedule, but owing to the lateness of the season there was but one entry made and the award of the prizes was put off for one week. An interesting exhibition was, however, made without the hollyhocks. J. S. Bailey showed a fine specimen of *Coelogyne Massangeana*; James Wheeler, gardener to J. H. White, Esq., made an interesting display of sweet peas, embracing 90 named varieties; William Thatcher, gardener to John L. Gardiner, Esq., exhibited Japanese iris, stocks and poppies; William H. Spooner showed the Bardou Job rose; James Cornley, Rea Brothers and W. N. Craig made displays of cut flowers; Mrs. E. M. Gill and Miss Hattie B. Winter arranged vases of flowers. William Thatcher received honorable mention for a new seedling delphinium.

Portchester, N. Y.

The first regular meeting of the newly formed Horticultural Society is held this day (Saturday) for the purpose of arranging for a fall show.

Chrysanthemums.

Staking the bench plants should be proceeded with as the plants begin to reach heavenwards. If they can be readily strung to wires running through the house, that will be found to be the best method if the wires be made taut. Three wires for each row will be enough for the season, and then three ties will be sufficient. If wiring be not practicable, wire stakes certainly come next in the order of neatness and they offer no obstruction to the sun's rays as do a forest of bamboos. Whatever is used must be made firm, for the plants must have vigorous syringing to keep them clean, and this cannot be done if the whole thing is loose and liable to fall over.

Zulinda.—It seems an outrage to put a stake to this and varieties like it. From a June cutting, this variety, if well grown and the crown bud be taken, will measure more across the flower than the height of the plant from the ground. It is, I think, one of the most handsome foliage varieties grown, and struck the end of April, moved along into an eight-inch pot, pinched once, and three shoots taken up, makes in the fall with its pleasing pink flowers, one of the prettiest plants imaginable.

The Single Stems in six-inch pots should be plunged in ashes up to the rim. They are liable to suffer from neglect because they dry out so quickly. Stake them and lay a plentiful mulch of tobacco stems in the pots.

Caterpillars seem to be very plentiful this year, and, therefore, need lots of looking after.

Miss Bramhall is throwing lots of buds. "Rub out the July bud and take the next" still applies.

Mrs. Robinson is making splendid growth. Why do we so often hear that it has a weak neck? C. Torry, N. J.

Extent of the Nursery Business.

The Census Bureau gives the following interesting figures as to the extent of the nursery business in the United States. The total number of nurseries, 4,510; their value approximates, estimated at the present depressed values, \$41,987,835. The nurseries in the year 1891 occupied 172,806 acres of land valued at from \$15 to \$150 per acre; the capital invested approximates \$54,425,669, furnishing employment to 41,657 men, 4,680 boys fourteen years up, and 2,279 women. This is a remarkably good showing, resulting chiefly from the evolution of less than seventy-five years in this industry.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

White Leghorns as Summer Layers

Those who are fond of belittling the White Leghorn for the benefit of other breeds, point to the white beauties as summer layers only. While it is doubtless true that any other breed would find it difficult to excel them as summer layers, I may say that we have not yet found a breed that will distance them as winter layers. To be sure, we have not tried all breeds, in all climates. But we have tried enough to make us pin our faith more strongly each year to the Leghorn as an all the year round layer. To this end, however, one needs both pullets and hens in the flock.

Overstimulation. What Is It?

In the effort to obtain the greatest possible number of eggs in the year, a great difficulty presents itself. An excessive number of eggs can scarcely be produced without forcing. A "balanced ration" for eggs often proves just the ration to unbalance the fowl, as regards her digestive apparatus. The moment this becomes true, it may be known that there has been an over stimulation. And for this, long continued, there is no remedy but the hatchet. The most successful poultry man is he who so balances his feed as to produce first, thrift; after that poultry products of the various sorts which he wishes to sell. For fowls in confinement, the greatest dangers lie in the way of overfeeding heavy grains and meat.

Angel's Wings.

According to one catalogue, the owner of the plant rejoicing in this taking name need never speak of angels without seeing the flutter of their wings, inasmuch as it is said to be always in bloom. The plant is rather bright, slightly resembling a Bougainvillea. The individual flowers are of the irregular labiate form, growing singly in the axilla of the leaves. They are of a rather dull crimson in color. With only here and there a bloom, the plant is not particularly showy. But if well covered with bloom, it may prove quite attractive, especially in winter, when red blossoms brighten up the window so much. Its more stately name is *Beloperone*.

Classifying Plants as to Care.

It needs only a few rules to grow nearly all plants, if we can mentally place each one in a class with many others. There are the hard wooded, and the soft wooded, each class requiring different treatment; there are the heat lovers, and those which refuse to thrive except in a cool temperature; there are sun lovers, and shade lovers; there are moisture lovers, and those which have no delight except in drought. Most of the hard wooded plants require somewhat similar treatment. By learning this, by placing the sun lovers in the south windows, the shade lovers in an appropriate place, and by making certain that the plants which delight in moisture shall have plenty of it, the plant problems are mainly solved in a general way.

Using Manure Water.

If there is ever a time when it is safe to use manure water it is when there is warm and fairly equable temperature and a full supply of fresh air, as during the summer season. This applies to plants that are in good growing condition, as it would seem that good common sense should teach us not to stimulate plants that desire to rest. Plants that really want to grow can take light doses of manure water now to very good advantage. Try it on the *Aspidistra*, the *Jasmines*, etc.

Trimming Back Fuchsias.

Plants intended for winter bloom have been resting for some time. When well into August they should be cut back severely, and removed from the pots. After the soil has been washed from the roots, and the roots slightly trimmed,

(Continued on next page.)

AGENTS WANTED.

Read this partial description of the best book of the kind for women which has ever been published, then write us for terms and territory.

HOUSE PLANTS

AND
HOW TO SUCCEED WITH THEM.
BY

LIZZIE PAGE HILLHOUSE.

Scores of books have been written on flowers and their cultivation, but it has been reserved to Mrs. Hillhouse to cover a field of highest interest to women hitherto untouched, and to provide a reference book and complete guide for all her sisters who, loving plants, would ever be surrounded by them did they but know where to turn for such advice as to their preservation and instruction in their culture as would be open to them to follow, easily understood, yet thoroughly practical.

"I have bought book after book," the author says, "in a vain search for that knowledge which would enlighten me as to how to prolong the lives of my precious pets, when noting with alarm their distressed appearance, only to find them all a delusion and a snare, so technical or ambiguous as to be far beyond my reach or apprehension. Therefore, for the benefit of fellow sufferers, I have determined to put down what little I have found out from bitter experience, knowing it will be practical and true, as far as it goes."

"HOUSE PLANTS" has been written by a woman for the countless thousands of women who have no conservatory or hothouse, and are compelled to grow their plants in the home, and it gives freely of the knowledge which the author has been gathering through many years of observation.

Recognizing the fact that no book adequately covering the subject has ever been published, Mrs. Hillhouse has undertaken to fill the deficiency, and most ably and effectively has she accomplished the task. The result is a book of information and instruction, written in simple language, which will be prized and consulted by every woman so fortunate as to become its possessor. Of all books of reference issued for domesticated women, "House Plants" will take its position second only to the much prized and ever handy family cook book.

The amateur will be both surprised and delighted with the great range of plants which this book tells us it is possible to successfully raise in the house. Chapters are devoted to Bulbs, Cacti, Ferns, Flowering Plants, Foliage Plants, Lilies, Palms, Shrubs, Vines, Creepers and Basket Plants, and one on plants unclassified. A separate chapter on the propagation of plants is extremely interesting, as it is here so many fail.

Again quoting from the author, "In writing this little book, I have endeavored to keep strictly within the lines of my personal experience, and to select for description and suggestion as to treatment only those plants which I knew could be grown successfully in our living rooms or houses. This, undoubtedly, may be done, if my instructions are followed."

"How little most people—bright people, too—know of the marvelous and amazing creations of the plant world. Those silent monitors, the flowers, are not dumb, but speak to us through the delicacy of their accents, their intricate shapes, complex habits, and the glorious penciling of their heavenly colors, that no human artist can command."

HOUSE PLANTS, 12mo., 220 pages, cloth, profusely illustrated, and with complete and ready reference index to all plants mentioned. Price \$1.00. A. T. De La Mare Ptg. and Pub. Co., 2 to 8 Duane St., New York, publishers.

they are to be repotted into rather small pots, at first, in fresh rich earth, loamy and friable. After one good settling of the soil, water is to be given but sparingly until growth begins. The pots can be prevented from drying out by avoidance of exposure to sun and wind.

Lean Pullets for Layers.

Again and again is the warning given that the fat hen is not the profitable layer. As a pullet nears maturity, it is an easy matter to fatten her by injudicious feeding, and the over-fat pullet is not the early-laying pullet. At the beginning is, after all, the best place to begin. Plenty of nitrogenous and bone-forming foods all the season, to build up the well-bodded but lean layer. Plenty of corn and meal all the season to raise the fine-carcassed cockerel for the block. Plenty of care all through the season as to feed and feathers, cleanliness and tameness, and room to develop, for the exhibition stock. Whatever we are aiming at, let us not wait until it is full time to hit the mark before we take aim, especially at long range.

The Hen as a Machine.

People are fond of referring to the hen as a machine into whose figurative hopper we turn certain kinds of grains and grits and green provender, and grind out eggs as a matter of course. Measurably, this is true but the hen differs from the machine in that hen likings and appetites must always be considered. There are some things that she will not eat, no matter how good her owner may believe them to be for her. Many things she may be taught to eat; but if, after painstaking in this line she still refuse certain rations, it is safe to conclude that they are not suited to her then condition. The common "stupid" hen is usually intelligent enough to know what is for her harm.

"The Best Dozen Eggs"

Which is really best, the white egg or the brown; the large egg, or that of medium size? There is much argument in the poultry papers of late, trying to prove that the birds which lay the "best dozens" at the shows, are really the best utility birds. If the judging were based on uniformity of color and uniformity of size, just far enough above the average that the breed could be held up to it, the point might be considered proven. But too often the eggs are over-sized (double yolked, perhaps), merely because the hens are out of condition, too fat, or otherwise. Looked at from the producer's standpoint, the frequent over-sized egg is not desirable. It costs more to produce, it injures the sale of the average, and as a rule, it brings him no more money. Nevertheless, the breed that always lays good-sized eggs—if there are enough of them—is a good breed to have. The consumer likes such eggs.

Success With Oleanders.

Failure in blooming this old favorite results frequently from one or both of two causes. One of these is the lack of abundance of water during growth. The other consists in failure to afford sufficient light and warmth. It is this lack which causes the buds to refuse to leave the partially-developed stage in which they so often stand for many weeks. Plenty of light, plenty of water during growth, plenty of sunshine and air later to make short-jointed, well-ripened wood for next season's work are the points which make for success.

MYRA V. NORRIS.

DWYER'S SUMMER and AUTUMN LIST
Of Pot Grown and Layer STRAWBERRY Plants, CELERY, VEGETABLE Plants, FRUIT Trees and ALL NURSERY STOCK will be mailed free to all who apply for it.



T. J. DWYER, Cornwall, N.Y.
Box 178.

Mention American Gardening when you write.

Our publishers will supply any book wanted. Send your orders.

WHOLESALE MARKETS.

New York.

The shipments of all kinds of cut flowers have fallen off considerably, and but little stock is now to be seen. Roses have become very scarce; Sweet Peas are nearly over. The new crop now in is Asters, these are getting to be very plentiful, and so far are selling at \$1 per dozen bunches.

Fruits and vegetables are plentiful and clear fairly well; prices are weakening slightly. Peaches are now the main feature in the way of fruit, receipts having increased and the quality has improved, but even now there is a large proportion of inferior fruit, much of it bearing evidence of having been stung by the curculio, and a large proportion of the fruit has evidently been gathered from the ground. A word of advice to Georgia shippers is, don't ship such stuff.

Prime, highly-colored, even-sized Elbertas from that above section are making occasionally as high as \$3 per crate of nine baskets, each basket weighing on an average 3½ pounds and containing 9-12 fruits. A large proportion of the crates shipped contain only six baskets and some dealers contend that they are the heavier when so packed; but as far as our observation goes, the highest figures were obtained for the first-named style of packing.

E. I. Carter of Richland, sent in three carloads of fine quality in good condition which were sold at figures varying from \$2.50@2.75 and a few \$3.

Hothouse grapes are very abundant and sales are slow; 50c. per pound is top notch.

Hothouse tomatoes still continue to move freely, owing to the unripe and poor condition of the outdoor grown stock; 12c., 15c., and 20c. per pound are taking prices.

Potatoes are holding firm at \$2.25@2.50.

Apples—Near-by, hand-picked, per barrel, \$2@2.50; near-by, windfall, per barrel, 75c.@1.50; Virginia, per barrel, \$1@2.50; Maryland and Delaware, good to prime, per crate, 60c.@90c.; common, per crate, 80c.@50c.

Peaches—Southern, express, fancy, per carrier, \$2.50@3; freight or express, good to cheap, \$1.25@2.25; poor to fair, per carrier, 75c.@1; Maryland and Delaware, early, per crate, 75c.@1.25; early, per basket, 50c.@1; Jersey, early, per basket, 50c.@75c.

Pears—Le Conte, medium to fancy, per barrel, \$2@3.

Grapes—S. C. Moore's Early, per 25-pound case, \$2.

Plums—Wild Goose, per quart, 4c.@5c.

Cherries—Sweet, per pound, 3c.@7c.; sour, per pound, 3c.@4c.; eight-pound baskets, as to size and condition, 20c.@40c.

Currants—Large, red, per quart, 2c.@4c.; bulk stock, per pound, 2c.@3c.

Blackberries—Monmouth Co., Jersey, Wilson, per quart, 5@6c.; Jersey, Kittatiny, per quart, 4@5c.; South Jersey, cultivated, per quart, 4@6c.; Maryland and Delaware, cultivated, per quart, 3@5c.; small and inferior, 2@3c.

Huckleberries—Shawangunk Mountains, per quart, 6@8c.; Pocono Mountains, per quart, 6@7c.; other Pennsylvania, blue, per quart, 6@7c.; Pennsylvania, per eight-quart basket, 40@50c.; Jersey, per quart, 5@6c.; Delaware and Maryland, per quart, 4c.@5c.

Raspberries—Upriver, red, per pint, 3@5c.; per three-to-four cup, 2@4c.; four-to-quart cup, 2@3c.; Upper Jersey, red, per pint, 2@4c.; Jersey, red, per pint, 2@3½c.; Blackcap, up-river, per pint, 2@4c.; Jersey, per pint, 2@3c.; western New York, per quart, 3@5c.

Melons—Watermelons, by rail, per car, \$125@275; by steamer, per car, \$100@200; medium to large, per 100, \$20@30; small, per 100, \$10@15; muskmelons, Gem or Jenny Lind, fancy, per bushel basket, \$2@2.50; choice, per bushel basket, \$1.25@1.50; poor to fair, per basket 50c.@1; per barrel, or barrel crate, \$1@2.50.

Corn—Jersey, per 100, 60@75c.; North Carolina, per 100, 50@75c.

Cabbages—Jersey and Long Island, per 100, \$3@4.

Cucumbers—Jersey, per bushel box, 50@65c.; Philadelphia, per one-half barrel basket, 60@75c.; Norfolk, per barrel, \$1@1.50; Norfolk, per basket, 40@50c.

Egg plants—Florida, per basket, 50c.@1; Jersey, per bushel box, \$1@1.25.

Lima beans—Maryland, per one-half barrel basket, \$3@3.50.

Onions—Maryland, per one-half barrel basket, 70@80c.; eastern shore, per one-half barrel basket, 60@75c.; North Caro-

(Continued on next page.)

Beware of Ointments for Catarrh that Contain Mercury.

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O. contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally and is made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free.

Sold by Druggists, price 75c. per bottle.

Business Cards.

C. D. Zimmermann, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Consultations collected from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 188, New York City

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the adrt, and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

LOWEST PRICES on earth. Trees and Plants. Neil the Nurseryman, La Porte, Ind.

TRANSPLANTED CELERY PLANTS, all the leading kinds. John A. Smethers & Son, P. O. Box 104, Berwick, Pa.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 454 W. Broadway, New York

EGYPTIAN ONION sets, for immediate delivery if wanted, \$1.00 per bus. F. O. B. Streator, La Salle Co., Ill. Address R. D. Kline.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

CELERY PLANTS, strong and stocky, \$1.00 per 1000, \$9.00 per 10,000; satisfaction and safe arrival guaranteed; special low express rates. The most practical and complete book on celery culture, 75c. Peter J. Schuur, Kalamazoo, Mich.

CELERY PLANTS, Transplanted only. First-class, leading kinds. Greatly superior to seed-plants. Carefully packed; good for two weeks transit. 40c. per 100, \$3.00 per 1000. R. M. Welles, Towanda, Pa.

MANDOLIN AND GUITAR strings at bargain prices. Best quality Silver Steel Wire, 2c. per set, postpaid; 5 sets, \$1.00. Banjo strings, set 15c. Satisfaction guaranteed. Edgar P. Waltz, General Delivery, Akron, Ohio.

CABBAGE PLANTS, strong and healthy. Flat Dutch, Fother's Brunswick, Early Winnigstad, Drumhead Savoy, \$1.50 per 1000. Special price on large orders. Cauliflower, Early Paris, 40c. per 100. W. W. Nash, Montrose, Pa.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

WANTED, steady position on gentleman's place; by an industrious, honest and sober German, married, one child; thoroughly understands the care of horses, carriages, garden, cows etc., best of references. A. Sorgenfrei, Box 200, Tarrytown N. Y.

lina and Virginia, per barrel, \$1.50@ \$1.75; Jersey, per barrel, \$1.75@ \$2; Orange County, red, per barrel, \$1@ \$2.
Peppers—South Jersey, per crate, 60@ 75c.
String beans—Long Island, per bag, \$1 @ \$1.25.
Squash—Marrow, per barrel crate, 75c. @ \$1.25; yellow crook-neck, per barrel, 50 @ 75c.; white, per barrel crate, 50@75c.
Tomatoes—Monmouth Co., Jersey, per crate, 75c.@ \$1.25; south Jersey, per crate, 50@75c.; Norfolk, per carrier, 75c. @ \$1.50.
Turnips—White, per 100 bunches, \$1@ \$1.50; Russia, per barrel, 50@75c.

Philadelphia.

Business has been very good in this market during the past week; all kinds of stock have been selling freely. Most of the business has been done at the freight depots, there being but very little stock at the warehouses.

Apples—Maryland and Delaware, per bushel crate, 60c. to 75c.; Jersey, wind-fall, per barrel, 75c. to \$1.

Raspberries—Jersey, red, per pint, 2c. to 3c.; blackcaps, per pint, 2½c. to 3½c.

Gooseberries—Pennsylvania, Industry, per quart, 5c. to 6c.; small, per quart, 8c. to 4c.

Huckleberries—Jersey, per quart, 5c. to 7c.; Pennsylvania, per quart, 7c. to 8c.

Blackberries—Maryland and Delaware, cultivated, per quart, 4c. to 6c.; Jersey, 8c. to 5c. per quart.

Currants—Large red are being offered mostly in bulk at from 2½c. to 4c. per pound.

Cherries—Sweet, per pound, 4c. to 5c.; sour, per pound, 3c. to 4c.

Melons—Watermelons are much more plentiful, and are moving very well; choice stock is selling at \$20 to \$25 per 100; fair to good, \$10 to \$20. Muskmelons, fancy, per one-third barrel basket, \$1.40 to \$1.75; fair to good, 75c. to \$1.25.

Peaches—Georgia, fancy, \$2.50 to \$3.50 per crate, and selling very fast at these prices.

Pears—Le Conte, fancy, \$3.75 to \$4.25 per barrel; fair to good, \$2.50 to \$3; per basket 65c. to \$1. There are arriving in much better condition and are selling well; in fact, one firm on Monday sold an entire carload to jobbers, at the freight depot, demand being so strong.

Corn—Jersey, per 100, 60c. to 75c.; selling slow.

Potash

is one of the three important ingredients of a complete fertilizer; the others are phosphoric acid and nitrogen. Too little Potash is sure to result in a partial crop failure.

Free

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Another American gardening when you write.

Cabbages—Jersey, per 100, \$2.00 to \$2.50; per basket, 15c. to 20c.

Cucumbers—Jersey, per five-eighths basket, 30c. to 35c.; Norfolk, per barrel, \$1.25 to \$1.60.

Egg Plants—Jersey, per basket, 80c. to \$1; Florida, per one-half barrel box, \$1 to \$1.40.

Onions—Jersey, per five-eighths basket, 35c. to 45c.; per barrel, \$1.75 to \$2; Maryland, per one-half barrel box 75c. to \$1.

Boston.

The new apples from Virginia, Maryland, and New Jersey are in various conditions. Some West Virginia Early Harvests (so-called) selling \$2.75; Jersey Red Astrichans, \$2.75; Sour Bough, 2.50@ \$2.75; common stock from around Norfolk, 50c.@ \$1 per half-barrel basket.

South Carolina Delaware grapes just appearing, bringing \$3.50@ \$4.50 per seven-basket carrier. Moore's Early \$2 per carrier; hothouse Hamburgs, 70c.@ 80c. per pound.

A few old apples to be found; they bring \$2@ \$3.50, and are mostly Russets or Ben Davis.

Very good demand for pears; best Le Conte, \$3 per barrel.

Pineapples doing better; the surplus stock cleaned up, and the second pickings coming to the front, consequently the market sees a large quantity of small pines which have to go to canning trade.

The only strawberries arriving are those from Nova Scotia, they can be quoted 6c.@12c. Raspberries not as plenty, 4c.@5c. for thirds. Blackberries fairly plenty with an easy market,

8c.@10c. generally, with choice fancy wanted at 12c.@14c.

Blueberries in good demand, 13c.@15c. per quart.

Currants are in excellent condition, never better, but find hard sales at 5c. @6c. per quart.

Gooseberries, Hudson River, 4c.@6c. a quart; Nova Scotia, 40c.@50c., peck boxes.

Tomatoes are firm and it is many years since they sold so high; Virginia stock, \$1.50 a bushel; hothouse, 15c. a pound; Jersey, 90c.@ \$1 a box supposed to hold 22 quarts.

Potatoes are firmer, market keeps well sold up, best Eastern Shores Jerseys, or Bristol Ferry's, \$2.75@ \$3 per barrel; Virginia getting about dug out.

Onions steadier, barrel stock, Virginia or Kentucky, \$2.25@ \$2.50.

Watermelons plentier and lower, 20c.@ 25c., according to size.

Cabbages, near-by, 4c. a head.

Marrow squash, high colored, \$1.50@ \$1.75; pale, 75c. a barrel.

Peas, 30c.@50c. a bushel.

Cucumbers \$1.50@ \$2 per 100. Home-grown stock all that comes at present.

Lettuce, short, brings 20c. a dozen.

String beans, green, 35c.@40c. a bushel; wax, 35c.@40c.

Beets, 30c. a bushel; turnips, 50c. a bushel.

A large quantity of home-grown vegetables, if we except tomatoes and onions.

Asparagus, no demand, neither is there any call for corn; cantaloupes, if fancy, \$2.50@ \$3; common stock, \$1@ \$1.50.

Peppers unchanged; also mint; summer squash and egg plant.

The few mushrooms wanted bring 70c. a pound.

TO BE PUBLISHED AUGUST 10.

The Water Garden

(PROFUSELY ILLUSTRATED.)

BY WILLIAM TRICKER.

THIS volume, which has been prepared by the foremost aquaticulturist of the country, and to whose efforts the present growing popularity of the Water Garden is largely due, is designed to serve as a **SOUND, PRACTICAL CULTURAL HANDBOOK** for amateur and professional alike.

The book will be freely illustrated with plates and illustrations in the text, and will describe all operations, from the growing of plants in tubs to construction of the large pond, planting, seed saving, propagation, wintering, and all other necessary details of cultivation.

— ORDERS RECEIVED NOW. —

A. T. DELAMARE PTG. & PUB. CO., Ltd.,

Box 1697, New York.

Green Fly and Ants on Trees.

A plum tree, three years from the nursery, has not as yet borne fruit. Early this summer it was badly infested by green fly and ants. We sprayed with Bordeaux and Paris green, and London purple, and also broke off the tips of the new growths which were most attacked. This did no good and now the tree has lost all its leaves. Is it likely to die? What connection exists between the green fly and the ants.—C. A. L.

—There is no reason why the tree should die from this year's bad progress. It was a pity you wasted energy in giving the sprayings mentioned, because you used wrong substances for green fly; the creature sucks and poisons on the leaves do not touch it, the proper thing is kerosene emulsion so directed as to cover all parts of the plant and of the lice too. Take good care of the tree, do not let it starve and all will come out right. The ants and lice have a peculiar relationship in that the former exploit the latter for food purposes; they actually use them as we do cows.

Rust of Verbena.

Is it possible to stop the rust disease of Verbenas? I have a large bed of the plants, they are all growing vigorously, but every day I lose one or two plants. Have used slaked lime, but with no results. The bed has been planted to Verbenas several times already.—L. D. E.

—Guided by the experience of one of the largest growers in the country, there is no real cure for the trouble other than that of burning the plants, destroying also any varieties that show a marked tendency to become diseased. On the other hand, several remedies are held up as sure cures by other growers. Sulphide of potassium and Bordeaux mixture are recommended. Possibly a change of soil with early and frequent sprayings may help you.

Bagging of Grapes.

(To C. A. L. and others.)—Grapes are "bagged," that is, the bunches are tied in ordinary grocery bags, made of paper, in order to preserve their color and finish and the ripe fruit is certainly greatly improved thereby. The bagging affords protection from insect attacks, too, and especially of wasps. As soon as the "set" is sure, the bags may be put on, gathering the neck around the stalk and tying it securely. A small hole may be made in the bottom to allow escape of moisture. The bags are removed when the grapes are to be gathered.

LET US SUPPLY YOU WITH YOUR.....

Celery and Cabbage Plants.

Celery—Giant Pascal, White Plume, New Rose, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000

Cabbage—Succession, Flat Dutch, Drumhead, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000.

For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write

CYPRESS
IS MUCH MORE DURABLE THAN PINE.

CYPRESS SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.

GREENHOUSE
AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

ARMSTRONG & McKELVY Pittsburgh.
BEYMER-BAUMAN Pittsburgh.
DAVIS-CHAMBERS Pittsburgh.
FAHNESTOCK Pittsburgh.
ANCHOR Cincinnati.
ECKSTEIN }
ATLANTIC }
BRADLEY }
BROOKLYN } New York.
JEWETT }
VLSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MISSOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROS CO Philadelphia.
MORLEY Cleveland.
SALEM Salem, Mass.
CORNELL Buffalo.
KENTUCKY Louisville.

PLEASE bear in mind the fact that the "best," or the "standard," in all lines commands a fair price. See list of the brands of Pure White Lead which are the standard. They are the best. Avoid those brands said to be "just as good," offered for "less money," and of "so called White Lead."

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price with list extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Built Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.

BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.



THREE NEW CANNAS.

40 NEW IRIS.

SIEBRECHT & SON, - 409 Fifth Avenue, New York.

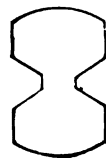
Mention American Gardening when you write.

THE BEST HANDY MICROSCOPE FOR THE FLORIST!

...A CODDINGTON MAGNIFIER...

The applications of science to practical horticulture are to-day so numerous as to need no pleading for recognition, and the cultivator who is alive to facts knows that disease can be fought most thoroughly, and with the minimum of labor, only by going to its inception—in short the battle must be declared just so soon as the disease has a foothold. Continual alertness is the only safeguard, and a grower should be in a position to at once thoroughly and minutely examine into all suspicious marks or spots and not wait until the manifestation was all too evident.

All things have small beginnings, and in order to detect disease, artificial aid is frequently a necessity, thus all should carry a convenient

**...POCKET MICROSCOPE...**

to examine suspected cases of fungus or insect pests at once.

Nothing can be better adapted for this purpose than a Coddington Lens, suitably mounted. This lens is solid, and thus not affected by change of temperature, consequently admirably adapted for the purposes for which we offer it.

The accompanying illustration represents a lens, mounted in German Silver, which we offer at \$2.50 each; they can be had in various powers, from a one-half to a two-inch focus, but for all general purposes (and the one we use ourselves,) the most adaptable is that known as a one-inch focus. It gives a magnification of 10 diameters, and is more easy to work with as it allows a greater distance from the lens to the object than does a lens of higher power; by this means a better light can be brought to bear on the object, and also the field of view is not so restricted.

We will mail this Coddington Magnifier, of the best possible construction, and made with great care throughout, one-inch focus recommended, with a power of ten diameters, for \$2.50 cash with order. If instrument is not satisfactory purchase price will be refunded if instrument is promptly returned in good order.

We can also supply a very effective pocket magnifier, half-inch focus, flat field, at the low price of \$1.25, postpaid. Address all orders to

A. T. DE LA MARE PTG. & PUB. CO. Ltd., P. O. Box 1697, NEW YORK.

We Believe every reader of AMERICAN GARDENING feels proud of his paper and the practical, uplifting work it is engaged in; it is raising the standard of Gardening, and maintains the dignity of all engaged in the profession.

We Believe the cause of good Gardening to be eminently a missionary one; from which it follows that the circulation of AMERICAN GARDENING can most readily be enlarged through the efforts of its subscribers. Our circulation, therefore, is an index of our subscribers' interest in the paper.

We Believe our readers are anxious to see AMERICAN GARDENING reach the highest possible development in its work of horticultural education. The legitimate aim of a class paper is to increase its influence through an extension of its circulation.

American Gardening is the most successful of all, and has the largest circulation of any weekly Journal devoted to Gardening and Fruit Culture, but has scope and the disposition to add to its list tens of thousands of patrons. "Come with us and we will do you good," is a living truth in our case; all our new friends are loud in their praise of the value of the paper to them. The cause of "AMERICAN GARDENING" is the cause of American Horticulture.

We Believe that our friends are the ones on whom to call to push circulation. Understanding thoroughly the value of the paper to every one interested in gardening, they can best express its spirit and comprehensiveness and succeed in making subscribers.

With a View to obtaining the assistance of our friends in the propaganda for new subscriptions, and in order that they may have something tangible whereby to remember their successful efforts, we have compiled the following list of

SUMMER PREMIUMS SUMMER

To which we invite your attention in the hope that each and every reader of the paper will endeavor to send us AT LEAST one new subscriber before the close of the season.

American Gardening for 1896. Containing 832 pages of text and illustrations, with complete index. The most full, complete, and desirable volume on Gardening, Fruit Growing, and kindred subjects ever issued. Few works on horticulture can compare with this in value to the student or the practical man. *Handsomely bound in cloth, with leather back and edges.*

This most desirable volume will be forwarded, express paid, to any address, for only seven new subscriptions at \$1.00 each.

American Carnation Culture. By L. L. LAMBORN. A work on the Classification, History, Propagation, Varieties, Care, Culture, etc., of the Divine Flower. Nothing has been left unsaid from which any practical benefit could be obtained. Illustrated. Third edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Beautifying Country Homes. By J. WEIDEMANN. A handbook of landscape gardening. This is the most elegant and useful work on the subject ever issued in this country. It is beautifully illustrated with numerous fine wood engravings, and with 17 full-page and 7 double-page colored lithographs of places already improved. It contains general directions for lawns, roads and drives, walks, hedges, trees and shrubs, gardens, ornamental grounds, hints on burial lots, etc., etc. The beautifully colored plans of improved places are accompanied by descriptions giving the names and positions of the various trees and shrubs employed in planting, thus providing a complete planting map. Cloth, 4to. Reduced from \$15.00 to \$10.00.

Given for 20 new subscriptions at \$1.00 each.

Bulb Culture (Henderson's). By PETER HENDERSON. Contains special cultural directions for over 200 varieties of Bulbs. Compiled with great care, and its information is accurate, reliable and up to the latest. 25 cents.

Given for 1 new subscription at \$1.00 each.

Bulbs and Tuberous-Rooted Plants. (Their History, Description, Methods of Propagation and Complete Directions for their Successful Culture in the Garden, Dwelling and Greenhouse). By C. L. ALLEN. The author of this book has for many years made bulb growing a specialty, and is a recognized authority on their cultivation and management. He has taken the initiative to make bulb growing a special industry in this country, and writes from his own long and extensive experience. The subject is treated in a very exhaustive manner. Handsomely illustrated, cloth, 12mo. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

Canning and Preserving Fruits and Vegetables, and Preparing Fruit Pastes and Syrups. By ERMERTINE YOUNG. This work gives a full account of the best methods by which the surplus fruits may well be saved for home use and for the large market demand, and a handsome profit accrues

to the home workers. A practical chapter on evaporation of fruits is embodied in the book. Paper, 20 cents.

Given for 1 new subscription at \$1.00 each

Chrysanthemums and Their Culture. By EDWIN MOLYNEUX. Sixth Edition. By far the best practical work yet written on this subject. 50 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemum Culture for America. By JAMES MORTON. This is the only 'Mum book published for American use, and is an excellent and thorough work; especially adapted to the culture of Chrysanthemums in America. The field is fully covered. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Elliott's Practical Handbook of Landscape Gardening. By F. R. ELLIOTT. Designed for city and suburban residences and country schoolhouses, containing designs for lots and grounds, from a lot 30x100 feet, to a 40 acre plat. Cloth, 8vo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Ferns and Fern Culture. By J. BIRKENHEAD, F. R. H. S. How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, Wardian cases, dwelling houses, etc. A thorough and complete work by a renowned specialist. 128 pp., thoroughly illustrated, 16mo., cloth. 75 cents.

Given for 2 new subscriptions at \$1.00 each.

Fruit Culture, and The Laying Out and Management of a Country Home. By W. C. STRONG, ex-president of the Massachusetts Horticultural Society, and vice-president of the American Pomological Society. Illustrated. New revised edition, with many new additions, making it the latest and freshest book on the subject. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Fruit and Fruit Trees of America, or the culture, Propagation and Management in the Garden and Orchard of Fruit Trees generally. By A. J. DOWNING. Second revision and correction, with large additions. By CHARLES DOWNING. This work has no equal in the country, and deserves a place in the library of every pomologist. It gives descriptions of all the finest varieties of fruit, native and foreign, cultivated in America, and contains the names and synonyms of over 10,000 varieties. Over 1100 pp., with several hundred outline engravings, including supplements. 8vo., cloth. \$5.00.

Given for 12 new subscriptions at \$1.00 each.

Grape Culturist. By A. S. FULLER. New and revised edition, 1894. One of the best works on the culture of hardy grapes, with full directions for all departments of propagation, culture, etc. Illus., cloth, 12mo., \$1.50.

Given for 3 new subscriptions at \$1.00 each.

INCUBATORS. Self-regulating. Catalogue free
O. S. SINGER, Cardington, O.
Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send
10 cts. for Mrs. Theodosia B. Shepherd's
New Catalogue of Rare and Beautiful
Flowers.

Many New Begonias, New Cosmos,
Rare Cacti, etc., not offered by others.
Ventura-by-the-Sea, - California.
Mention American Gardening when you write.



A Fence Not Made By Hand.

The average farmer can not afford to indulge in
hand made fence, nor hand painted pictures. Even
if he does the work himself, a "botch" and a "dab"
will likely be the result, while the time consumed,
if properly applied in his regular business, would
provide means for beautiful photographs, engrav-
ings, etc., and lots of the "old, reliable" Page fence.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

GLASS For Greenhouses, Grap- eries, Conservatories, GLASS VANHORNE, GRIFFEN & CO.

Importers of French Glass.

13, 15 & 17 LAIGHT ST., AND
62, 64 & 66 VARICK ST.,

NEW YORK.

Mention American Gardening when you write.

"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for
Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND
DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it
increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and . . . **THE AMERICAN JADOO CO.**
Testimonials, Address

513 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

LORD & BURNHAM CO., HORTICULTURAL ARCHITECTS AND BUILDERS.

STEAM AND HOT WATER HEATING ENGINEERS.

Plans and Estimates furnished on application.



Largest Builders of Greenhouse Structures. Six Highest Awards at the World's Fair.
Send four cents postage for Illustrated Catalogue.

LORD & BURNHAM CO.,
ARCHITECTURAL OFFICE, 160 FIFTH AVE., COR. 21st STREET, NEW YORK
Factory: Irvington-on-Hudson, New York.
Mention page

A YARD OF ROSES.



Copyright, 1896, by O. D. Gray, New York.

The illustration but faintly represents the beauty of this celebrated painting by the well-known artist, Mr. Newton A. Wells. The grouping and coloring has been performed with exquisite taste, and the reproduction we offer is worthy a frame, and a position on the wall of any one's room. This sketch, in eleven colors, is 36 inches long and ten inches wide, on heavy drawing paper, and sells in the art stores of New York for fifty cents. We will send "A Yard of Roses," securely packed in a tube to prevent injury, postpaid, as follows:

To all renewing their subscription and adding five cents to pay postage and packing.

To all sending us \$1.00 for their own renewal subscription and 75 cents for the subscription of a friend, we will send "A Yard of Roses" free and postpaid, as a premium to both addresses.

AMERICAN GARDENING, P. O. Box 1697, New York.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 136. NEW YORK, JULY 31, 1897. 5 CENTS A COPY \$1.00 A YEAR.

CONTENTS OF THIS ISSUE:			
Apple Rust..... 536	Delphiniums..... 540	Melons..... 537	Quinces, Diseased..... 546
Blackberries..... 536	Egg Plants..... 537	Nitrogen, Growing the..... 538	Readers' Notes..... 540
Burning..... 540	Fruit Garden..... 536	Obituary: Fowler, W..... 542	Slime Mould on Lawns..... 536
Campanulas..... 540	Fruit Growing in Okla- homa..... 535	Hintchman, Mrs..... 542	Societies, Notes on..... 542
Cannas Italia & Austria..... 539	Fruit Rot..... 536	Orchid Bouquet, A Royal..... 543	Strawberry, Variety Notes on..... 536
Celery, The Early..... 537	Fruits of Experience..... 539	Phlox..... 539	Strawberries, Summer Planting..... 539
Cherries..... 536	Home Plot, All About the..... 541	Potato Bug, The..... 536	Strawberries, Fall Set- ting of..... 533
Chrysanthemums..... 536	Lima Beans..... 537	Poultry Notes..... 541	Sweet Pea Novelties..... 534
Clematis..... 546	Market Reports: N. Y., Phila., Boston..... 544	Privus Gardeners..... 542	
Clematis Dying off..... 540		Prunus Pissardi..... 540	
Compost Heap, The..... 537		Questions Answered..... 545-6	
			Sycamores, Disease of..... 538
			Tomatoes..... 537
			Vegetable Garden..... 537
			Weeds..... 537
			Window Garden, The..... 541
			Illustrations.
			Apple Rust Disease..... 536
			Oklahoma, Fruit Grow- ing in..... 535, 537
			Sycamores, Diseased..... 533

Fall Setting of Strawberries.

R. M. KELLOGG, Three Rivers, Mich.

It's a mistake for the commercial grower. I concede you can get quite a good many fine berries, but you can't make any money out of it.

If I could not get berries for my own table I would be willing to buy potted plants, pay big express charges and all that rather than deprive myself and family of an abundant supply of berries; I would set them any time I could; but for a commercial grower to plant early vegetables and then buy potted plants at the price he must pay for them and set his beds the last of July or first of August is "fiddling for time."

There is no money in it for the ordinary grower—not one in a thousand gets a full crop, and that one would have to have ideal conditions including an extra rich soil, with irrigation facilities and give the plants extra culture. If the fall was very wet or ground naturally moist and mellow, he might partially succeed.

The last six years have given us but one reasonably wet fall and we are likely to have a repetition of this shortage of rain during the months of August, September, and October.

Of course much depends on what you mean by "a crop." If it be 40 to 75 bushels, that's all right; it can be had, but such a crop does not pay any one.

My idea of commercial strawberry growing,—and I have followed it for a respectable lifetime—is to grow only strictly first-class fruit, build up a reputation and secure a permanent hold on the market. I want every plant laden with immense berries, rich in flavor, sound to the core, and a texture so firm that the fruit can be shipped anywhere. To produce this I want my ground very rich, especially in potash and phosphoric acid, with plenty of partially decayed vegetable matter or humus. I want to set my plants early in the

spring while they are entirely dormant, so new lateral roots will start in great abundance. I would set them with the cone maker so that the roots shall come near the surface to get the sun's rays at once.

I then want the blossom buds removed, before open to secrete pollen. I am a stickler for pedigree in plants just as much as any stock breeder is for pedigree in stock. A plant that has been allowed to shed its pollen to exhaustion, or has been previously taken from an old bed, and is therefore incapable of breeding (fruiting) cannot occupy my land or receive my care. I want a plant thoroughbred in every sense of the word.

Then the runners must be kept off so the plant shall build up massive crowns and send its roots away down deep and far out, giving it abundant resources by which, without exhaustion, it can bring its immense berries to the fullest perfection. The plant must be isolated so the sun can shine on its crown as well as on every leaf. It must be cultivated frequently all summer.

I have such plants set this spring and at this writing (July 19), you can't put a half-bushel over them without doubling up the leaves.

Now I would like to see some one set potted plants by the side of these and get enough berries (including this previous crop of early vegetables) to buy the berries that will grow on my plants, assuming we have reasonable climatic conditions.

No one could or should expect a large crop of berries until he has grown large plants. It requires three or four weeks for plants to get established, and the fall months are not enough for them to make a proper growth.

To the commercial grower who has grown his early vegetables, let me now urge the sowing of crimson clover or cow peas. Apply all the manure that can be had during the fall and winter and set the strawberry plants next spring.



FIG. 148.—ANTHRACNOSE OF SYCAMORE TREES. DISEASED AND HEALTHY TREES. (See page 538.)

Sweet Pea Novelties for 1897.

The science and art of the culture and nomenclature of the sweet pea have assumed great proportions, and many men of well-equipped faculties make a study of this popular flower, to which I ascribe the fact that it has far outstripped all others in the extent of its culture, and the hold it has upon the affections of its votaries.

It is customary for the houses making a specialty of the sweet pea, to introduce a half-dozen or so of novelties, so called, to the public, many of which have no merit, while some are merely changes rung on the old, and nearly forgotten varieties. It is the province of the sweet pea expert to test these various novelties, and give their points, good, or bad, to those who depend upon them for expert advice.

I give below my tests of some of the novelties of this year, as well as some advance work of the specialists.

ECKFORD'S 1897 SET. (Eng. introduction.)

QUEEN VICTORIA.—This is decidedly the best of this set. Eckford describes it as "soft yellow, subtly overlaid with faint purple," but no American specialist, so far as I know, has detected the purple in it. My "Chro-mometer" shows it to be a light lemon self. My test of it shows it to be: Form, expanded; size, medium; color, light lemon self; substance, fair; stem, long and slender. It has a slight, tight roll to the edge of the standard, which detracts, apparently, from its size. It is the nearest approach to that goal to which all specialists are striving—a real yellow sweet pea.

PRINCE EDWARD OF YORK.—There is nothing particularly fine about this sweet pea, and it is surprising that Eckford should have introduced it. It proves to me what I have been suspecting for some time, that he is putting out unfinished work, no doubt owing to his advanced age. While it is large, yet it is old style, and not up to his usual work. It tests as follows: Form, expanded, deep notch at top; size, large; color, standard dark cherry (Eckford gives it scarlet); substance, good; stem, medium.

LADY NINA BALFOUR.—This sweet pea has had the poorest average of germination of any Eckford ever introduced. I have two plants out of forty seeds, but neither of them is likely to bloom. Others report the same difficulty.

COUNTESS OF POWIS.—This is a good sweet pea, and a new shade. Eckford describes it "as a glowing orange, suffused light purple," but I make it as given below. It is very attractive, and will be welcomed as an acquisition. It tests: Form, expanded; size, large; color, standard shrimp, veined salmon; wings, salmon-pink. It has the real satin finish. Substance, good; stem, long and slender.

TRIUMPH.—This has the most perfect form of any of the set; it is a giant, and without a flaw as to everything but color, which contains nothing new, except as to arrangement. This will be a good flower to cross on, as the size and form are already there. It tests: Form, expanded; perfect type; size, giant; color, standard dark salmon-pink; wings, white, veined, dark rose (Eckford gives it "standard, orange-pink; wings white, slightly flushed with delicate purple.")

SALOPIAN.—From the advance description, we were led to believe that this would be the greatest acquisition to the list of sweet peas ever made, but we were never so badly disappointed. It throws over 50 per cent. of the obsolete *Butterfly* form (deep scallops at each side), and the color is not at all what Eckford described. One of the most desired colors in sweet peas is a true crimson, and we were assured we had it in Salopian. Note Eckford's description of the color: "Deep crimson, tinged with mulberry-red, suffused with rich orange-scarlet." Now note what it really is, as per test: Form, expanded; size, giant; color, dark cherry self; substance, good; stem, short and stocky. The worst feature about Salopian is that it generally comes three to a stem, and the first to open blackens before the second is out, and is seedling by the time the third is out. It is a hard matter to get a perfect spray.

SHAHZADA.—This has the same percentage of *Butterfly* form as the last, but in other respects is a fine flower, the large expanded forms being beauties. It is free from the objectionable gloss present in Monarch and Stanley. It tests: Form, expanded; large size; color, very dark maroon, streaked dark garnet standards; wings, light plum, streaked dark garnet; substance, fine; stem, medium. A great advance in the darks, after the American specialists have selected it up.

Taken all in all, the above set is a disappointment, as not being up to Eckford's standard.

ECKFORD'S 1897 SET. (American trade.)

This is one of the finest Eckford ever introduced.

COQUETTE.—Has the same objection as to form as Shahzada, but comes a larger percent. true. It has a shade of true yellow in it, which, if it could be "selfed," would be what we all desire. It tests: Form, expanded, with rolled edge; size, large; color, light yellow, suffused pinkish purple; substance, fine; stem, long and stocky; flowers all face one way.

LOVELY.—Is just what its name indicates, a most lovely flower, its only fault being its liability to bleach whiter, if not promptly cut. None of the pinks has the same beautiful appearance on the vine. It tests: Form, finest hooded; size, giant; color, medium pink center, with wide margin of light pink; substance, fine; stem, very long.

MARS.—There seems to be a diversity of opinion in regard to this sweet pea. Of its form Eckford says, "a fine large, finely-expanded bold flower of the most beautiful form." Hutchins says of its form, "full size and hooded shape." I have found it to be hooded, with about 50 per cent. of the obsolete *Butterfly* form. Of its color there is equal diversity of opinion. Eckford says "bright, fiery crimson, deepening with age." Hutchins says "intense crimson-scarlet." As there are no crimson or scarlet sweet peas, I cannot agree with the above, as the Chro-mometer shows it to be a dark cherry self. It tests: Form, hooded; size, large; color, dark cherry self; substance, good; stem, long and slender.

COUNTESS OF SHREWSBURY.—This sweet pea should never have been introduced by such a specialist as Eckford. It is old type, and is off color, and has not an attractive point about it, excepting its graceful slender stems. It is simply a washed-out "Little Dorrit." It tests: Form, expanded old type, with notch at top; size, medium; color, standard white, suffused light rose; wings, white; stem, long and slender; fair substance.

PRIMA DONNA.—This is all that Eckford claims for it, excepting that it comes of two shades, one resembling Crown Jewel. The typical flower throws mostly fours, all facing one way. It is of the highest type, and worthy of its introducer, and will have a long run as a favorite. It tests: Hooded, finest form; size, large; color, medium pink self; substance, fine; stem, long and stocky.

ROYAL ROSE.—This is a most beautiful and high-bred flower, and should prevent the introduction of any lower class sweet pea from Eckford's workshop, as showing what he can do. It attracts the attention of every one, and with me was the largest sweet pea. It tests: Form, expanded; size, mammoth; color, standard dark violet-rose; wings, light rose, suffused on white; substance, fine; stem, long and slender.

BURPEE'S 1897 SET.

While all sweet pea lovers will ever revere the name of Henry Eckford, as the pioneer in its advancement, yet justice compels one to say that the American hybridizers have caught up with, and passed him in the art of producing new and beautiful sweet peas; of course they adopted his methods, but with the usual Yankee ingenuity they have improved upon them. Sweet peas equal to the first two named below were never put out by Eckford.

AURORA.—This is the most beautiful sweet pea of the year, and a new shade. We have had many so-called salmon

shades in sweet peas, but Aurora is the first one that has the true shade. It is of the highest grandiflora type, and is destined to have a permanent place on the list; no variety bunches as well as Aurora. It tests: Form, finest expanded; size, mammoth; color, dark salmon, striped on white; substance, fine; stem, long and stocky.

AMERICAN SEEDLINGS.—This is the most remarkable strain of sweet peas ever produced, both from the manner of their production and being all the results of hybridizing, and not the selection of "sports." These seedlings run the gamut of colors and shades, excepting those known as dark. In them we have a true orange, and light yellow, a buff with pink edge, and a violet-edged white, of grandiflora size and form, being a perfected *Butterfly*. Some are of expanded and some of hooded form, of the finest type. They test: Size, large; substance, fine; stem, long and slender.

BRILLIANT.—While this sweet pea is not as large as Salopian, yet it is far superior to it, in that it does not blacken in the sun. By this is not meant that if left to die on the stalk it will not turn black. It means that all will keep their color equally well, and fade together. It is somewhat irregular in outline, some of the blooms showing the peculiarities of Oddity. I have not yet been able to locate its color, but it is an intense fiery shade of red, the exact shade of which will no doubt be a matter of much discussion. It tests: Form, expanded; size, medium to large; color, unknown; substance, fine; stem, very long—a typical stem for a sweet pea.

BURPEE'S NEW COUNTESS.—This is an object lesson in the art of selection. It is a selection from the old Countess of Radnor, which has been considered off color on account of the standard showing a shade of cherry, which disharmonizes with the lavender associated with it. Some years ago a typical plant was selected, and the type rigidly adhered to, and the result is one of the most beautiful sweet peas grown. It tests: Form, hooded, finest type; size, large; color, standard dark lavender, edged light lavender; wings, pearl lavender; substance, fine; stem, long and stocky.

CREOLE.—This is a decided acquisition, being a soft pink fused with light lavender on the standard, and a pure dark lavender on the wings. Being the only instance of the expanded form, it forms a pleasant contrast to others of the same shade, all of which are hooded. It tests: Form, expanded; size, large; color, as above; substance, fine; stem, long and stocky.

GOLDEN GATE.—This is noted for the peculiar shape of its wings as well as its dainty coloring. The wings, when true, stand parallel, like gate-posts, suggesting the name. It is very floriferous. It tests: Form, bizarre; size, large; color, standard light cherry-violet; wings, pansy-violet; substance, good; stem, long and slender.

MAID OF HONOR.—This is a selection and improvement on the old *Butterfly*, the form of which is now considered obsolete. It comes very true to type, and will be one of the best florist's sweet peas for cut blooms. It tests: Form, expanded; size, large; color, white ground, edged English violet, suffused rosy violet; substance, good; stem, long and slender.

UNNAMED CALIFORNIA SEEDLING.—This is a most striking sweet pea, being the darkest of the so-called "mauve" color. It looks very much as though the originator was working for a self of this shade. The introducers offer a prize for the most appropriate name for it. It tests: Form, hooded; size, medium; color, white ground "flushed," pansy-violet, "blotched," crimson-mauve; shades deeper on reverse; standard and wings edged pansy-violet.

WALKER'S OREGON SEEDLINGS.

These novelties sent me by Mr. S. T. Walker of Forest Grove, Oregon, who is coming into prominence as a hybridizer of sweet peas, are a fine set. They contain something new in sweet peas, and when selected up to the highest standard will obtain a permanent place on the

list. They show the most intelligent manner of crossing, and give us an idea what to expect from Mr. Walker in the future.

DARK MAROON STRIPE (a sport from Dorothy Tennant.)

PALE MAUVE STRIPE (a sport from Dorothy Tennant.)

These two are very fine dark stripes, but require severe selection, as there is too much variance to call them set. I think that the lighter forms of both of them should be selected. They test: Size, large; form, hooded; substance, good; stem, medium.

SPORT FROM COUNTESS OF ABERDEEN (stray from Eckford sealed packet.)—This is the finest of Walker's novelties, being a most unique shade of soft invisible pink, showing deeper in the shade. I would not be surprised to know that Eckford has this in reserve. It does not fade white as the florets age, as do most pale pinks. It tests: Form, hooded; size, large; color, as above; substance, fine; stem, long and slender. It is most chaste in large bunches.

SPORT FROM CAPTIVATION. "STRIPED CAPTIVATION."—This is not a Captivation, but is of a lighter shade, being the striped form of light self from Captivation, which I have in my collection. It is a very pleasing shade, but needs selecting or uniformity of shade, dark or light. It tests: Form, expanded; size, large; co-

well set should be introduced to the public. It tests: Form, finest hooded; size, large; color, white, waved dark ox-blood, faint on front, and dark on reverse of standard and wings—the so-called "waved" effect. Substance, fine; stem, long and slender.

MEDIUM FLAMBEAU; LIGHT FLAMBEAU.—Of lighter shades than the former, and of poorer quality. Will never be so attractive. Needs selection to a set type.

BLANCHE BURPEE, THREE TO STEM FIRST FLOWERS; BLANCHE BURPEE, SECOND AND THIRD CROP OF FLOWERS.—These selections of this white sweet pea showed no perceptible difference, excepting that some of the florets of the latter were possibly slightly larger than the former. This is the finest strain of Blanche Burpee that I have ever seen, being well selected, and thoroughly bred. The florets averaged an inch and three-quarters across the standard, many measuring scant two inches. They truly are mammoth, and show the possibility of this variety in the hands of a skillful floriculturist. We will yet see standards of this variety two and a half inches across—if Walker keeps at it.

VENUS (test as to Venus losing its color).—This is a fine selection of Venus, which comes mostly in fours, but I have not found any loss of color in the Venus furnished me.

tests: Form, expanded; size, giant; color, a blue Princess of Wales; substance, good; stem, medium stocky.

STRIPED CELESTIAL.—Is a high-grade flower, but is just one season too late, being almost identical with Juanita. The color fades as the flower ripens, which Juanita does not. It tests: Form, expanded; size, large; color, white, striped English violet; substance, good; stem, medium stocky.

RED RIDING HOOD.—This variety grows upon one. Like some other good things one must acquire a taste for them. It has been universally admired in my garden this year, and it is an exponent of the highest type of the art of selection. It is a matter of patience in many cases to select a color or shade, but to select up a freak of nature is genius, pure and simple. It is extremely fragrant, and has the typical stem, long and slender, but strong. The wings are the deepest rose, while the abortive standard is a transparent cream fused light rose. Could this be selected to a pure white standard, it would enhance its beauty. It should have a place in every collection.

EMILY LYNCH.—I had an unusual experience with this variety, or rather with four vines of it. While my rows were about four inches high, I noticed that these four vines were shooting up at an amazing pace. I made careful notes of their progress and they came into bloom in sixty-three days from planting the seed. There is nothing in the history of this variety to indicate extreme earliness, and it has mystified me greatly, and opened up a new problem, whether a variety will "sport" earliness? As the seed was obtained by purchase from Mr. Hutchins, I have saved seed from these four vines, and intend to give them a thorough test for earliness next season, and do not desire to be quoted as endorsing the extreme earliness of the Emily Lynch, until I have made further tests, as there is too much at stake for a mistake to be made, as this is three weeks earlier than E. E. B. Ferry, planted at the same time.

I have some fine things in my garden, of which I am not permitted to speak by the owners, but there are some fine surprises in store for the lovers of the sweet pea, if the ends of the hybridizers meet their expectations, as shown by their work in my hands—I may have a surprise or two myself.—SAMUEL A. HAMILTON, Sweet Pea Expert, Roaring Spring, Pa.



FIG. 149.—FIVE YEAR OLD PEACH TREES AND GRAPE VINES IN OKLAHOMA.

lor, white, streaked light "purple-heliotrope"; substance, fine; stem, small (needs selecting.)

STRIPED PENZANCE (similar to Aurora).—This is the same as Burpee's Aurora, and being an astray from Eckford's Crown Jewel, shows that he has also been after an orange stripe and got a salmon. It tests the same as Aurora.

SANDED PRINCE (sport from Princess of Wales) distinct from Gray Friar.—The difference between this and Gray Friar is that the coloring in it is very much lighter and more evenly spread; it has a distinctly "sanded" appearance. It tests otherwise the same as Gray Friar.

PURPLE STRIPE (Emily Eckford × Mrs. Joseph Chamberlain.)

DARK PINK STRIPE (Emily Eckford × Mrs. Joseph Chamberlain.)

Are both fine sweet peas, but not yet selected to a type. Will be both of value when set.

DARK SPORT FROM CATHERINE TRACY.—This is a hooded form of this well-known sweet pea, but is of a darker shade than its parent. It tests: Form, hooded; size, medium; color, cherry, veined dark rose, faintly spotted white on margin of standard.

DARK FLAMBEAU.—Is a sweet pea with a future. It has attracted unlimited attention in my garden this season. It is worthy of a separate name and being

AURORA (four to a stem).—Is identical with Burpee's Aurora, and brought me only threees.

LIGHT GALETY.—Is what its name indicates and tests same as Galety.

Test for variety of colors and shades, (Emily Eckford × Mrs. Joseph Chamberlain) shows eight fine sweet peas, of hooded and expanded forms, covering a large range of shades. All are fine, but need selecting to type. Being the progeny of one plant, it shows a most remarkable "break" in hybridizing. Three of the best shades are: Dark Princess of Wales; dark salmon-pink, broadly striped on white; dark red-heliotrope, faintly streaked on white. All show high form.

LYNCH'S 1897 NOVELTIES.

THE BRIDE.—I was unfortunate with this variety. My first two plantings failed to germinate, and the third has not yet given me any good blooms. I hold my opinion of this for another year.

CALIFORNIA.—Is a hooded sweet pea of value; at first it seems to be identical with Katharine Tracy, but it is not. It tests: Form, hooded; size, large; color, suffused pale pink center, margined creamy pink—a very soft shade; substance, fine; stem, long and slender.

MAMMOTHPODDED PRINCESS OF WALES.—Is a most unique flower. The foliage as well as the color and form are entirely new. It has the "tubular" wings. It

Fruit Growing in Oklahoma.

The accompanying illustrations show, to a certain extent, what may be done in Oklahoma in the way of fruit culture.

The photographs were taken on June 20, 1897, in the Cheyenne and Arrapahoe country six miles east of Watonga, the county seat of Blaine County. This country was opened for settlement five years ago and the grape vines (fig. 149), and peach trees in the background are of the same age. The soil is sandy and easily cultivated, yet not so loose that it dries out rapidly to any great depth.

The views are typical and very many such examples of the energy and industry of Oklahoma's settlers were seen in a drive of 375 miles through the territory. Here and there one sees some relics of a failure who "has gone back to his wife's folks" but even he has frequently left a peach orchard to gladden the waylayer with several juicy peaches.

The other picture (fig. 151) is a view of the home of a farmer four miles west of Ponca City in Kay County. This county is in what is known as the Cherokee strip, which was opened for settlement in September, 1893. It shows a development that is truly remarkable when one considers the conditions. This year's wheat crop has been marvelous, and will be supplemented by a corn crop equally large. The majority of those who "made the run" into the strip had very little cash and practically all of the improvements have been paid for out of crops raised in three years—truly a good record for a new country in hard times.

JOHN FIELDS.

Strawberries in 1897.

Report on Varieties.

Our crop of berries this year has been enormous in quantity, large in size of berries, and of the highest quality. The following of the newer and old varieties have been the best:

For productiveness we still place the "Parker Earle" at the head of the list.

We have now fruited the "Ridgeway" for six years and give it the second place on the list for productiveness, and first place for uniform large size of berries, high color, superb quality, satisfactory plant growth.

As a fancy market berry, the "Clyde" comes in a good third; the plant is a good healthy grower, very productive; the berries are of large size, firm, and of good quality; its one fault is that the color of the berry is not as bright as it should be, but still it looks very well when crated up for market.

The "Fountain" has given a splendid crop of large and handsome berries of good form, large size, rich color, and good quality.

"Glen Mary" is a good strong grower, healthy, and productive; berries inclined to be rough.

"Tennessee Prolific" is very productive; berries of good size and color, but rather soft.

"Rio" gave us the first good berries, but soon runs to nubbins.

"Drought King," plant and berries of the "Crescent" type, but larger; is a very satisfactory variety, and will become popular with the average grower for market.

"Brandywine" is a disappointment in our soil. The plant is a good grower and productive, berries of large size, but of a dirty unattractive red in color. (Sold as culls.)

"Mexican," a productive berry; fruit large, good form, medium firm; light red in color, good quality; plant a good grower but subject to rust.

"Aroma," a productive variety in our soil; the largest berries inclined to be rough, but medium-sized berries are smooth and firm; a good red in color; quality good.

"Enormous," plant a good grower nearly free from rust, very productive; first berries are rough but good form and bright color; not very good quality; rots in a wet time; not firm enough to ship.

NEW VARIETIES.

Of new varieties only fruited on spring-set plants, the following remarks may be made:

"Margaret," a good strong, healthy plant, reasonably productive. The fruit is large, firm, nearly always smooth, of good color and quality; a promising late variety.

"Magoon," a good grower and healthy; fruit large, good form, high color and good quality; worthy of trial.

"Ruby." This we consider one of the best of the new varieties. Plant a splendid grower, making plants freely; productive, berries above medium in size, of bright color, even form, and good quality; very promising.

"Mele," one of the best of plants; healthy, productive, berries of large size, good form and quality, bright and attractive color; worthy of trial.

"Jenny Rusk," a good grower, healthy, productive; berries above medium in size, fairly smooth, good color and quality.

"Seaford." This is a very promising variety; a good plant, productive; the fruit is large, fine in color, and good in quality; will make a splendid berry for a fancy market.

"Louis Gauthier." The new berry from France; the plant is almost an ideal one with large round dark green foliage, entirely different in appearance from American varieties. The fruit is very large, of good form, light rose in color, and in flavor resembles the apricot more than the strawberry. A wonderful variety and should be tested by all fruit-growers.

M. H. RIDGEWAY, Wabash, Ind.

The Apple Rust.

Apple rust affects the trees in various parts of the country to a greater or smaller extent. The affected leaf has scurfy bunches on the under surface, the corresponding area on the upper surface, becoming orange-yellow, or sometimes almost crimson in color. As the disease progresses the leaf becomes more and more distorted, and in case the injury affects a large proportion of the leaves, serious damage to the tree may result.

It is a curious fact that the fungus which causes this disease, needs not only the apple, but also the cedar or juniper in close vicinity, in order to live and multiply; in other words, the disease does not go from one apple tree to another, but from the apple to the cedar or juniper, and from the cedar or juniper back to the apple. A normal cedar branch looks as shown in 1 of accompanying illustration. If you have cedars near your apple trees, very likely they show the abnormal growth seen at 2, and this peculiar development of the cedar leaves, and the formation of these "cedar apples," or "cedar balls," are the result of the rust fungus. You will then also find the apple leaves blistered with the orange-yellow rust spots. Spraying the orchards with our ordinary fungicides for scab, etc., will assist in likewise preventing the



FIG. 150.—THE CEDAR APPLE STAGE OF THE APPLE RUST. (See text.)

rust; but the surer way of accomplishing this object is to cut down the cedars and junipers, thus destroying one link in the chain of the life of the rust fungus.

The Fruit Garden.

Cherries.—Standard trees, after the first two or three years, require no pruning, unless, as sometimes happens, a branch growing across another has sagged so that it rubs on another below; in such a case the present is a good time to remove one of them. The cherry is apt to bleed, or gum considerably, so that pruning of old trees should be avoided as much as possible. When it becomes necessary to cut out deadwood from old cherry trees, it is time to buy young trees to replace them. Young trees should be trained by disbudding in summer, rather than by the knife in winter.

Fruit Rot is getting in some fine work just now among plums, nectarines, and cherries, with the almost daily rains, and close, muggy atmosphere. Spraying for it is practically of no use in this vicinity.

Blackberries.—They are in their glory in this kind of weather, great luscious berries in plenty. Just now I am interested in three lines of Snyder that were well matched last December. This spring the laterals were pruned back on No. 1 to about 9 inches, on No. 2 to about 20 inches, while on No. 3 no pruning was done, nature having a free course. Which way will pay best is yet to be seen, but I know that No. 1 is not the best.

Apples.—Clean up all fruits from under the trees, and make fertilizer with them. First to destroy any worms yet in them, and secondly for appearance's sake.

Plums.—Abundance and Ogon come in good for use just now, with red Astrachan apples. J. HOLLOWAY, L. I.

Chrysanthemums.

Feeding.—So long as the plants are making a strong healthy growth, they do not need any stimulant; but some of the earlier potted plants will now be rootbound and will be improved by a liquid of either cow or sheep manure. I believe that when plants will carry along in good condition till the bud is set, without feeding, they are better for it, but just so soon as you get the bud, feed it "for all it's worth," and then the flower gets all the benefit. No hard and fast rule can ever be laid down as to when feeding should begin, but the man who watches his plants closely can tell at once when they are not happy. When the foliage begins to get pale (if the paleness does not proceed from overwatering) is a sure sign that the plants are in need of a pick-me-up.

The Potato Bug has begun in this section to pay attention to the Chrysanthemum. During the past year or two I have made the acquaintance of many different insects around and on the plants, but the potato bug is a new one to me. I presume the young would hatch out all right and set in to feed if the eggs were left alone. If this kind of thing keep on, all the gardener of the future will have to do will be to plant a row of chrysanthemums along one end of the garden, when the myriads of bugs and insects will settle right with them, and all will cease from troubling and the gardener be at rest. A fortune awaits the introducer of a new insect-proof, self-disbudding variety. It will fill a long-felt want.

Specimen Plants should not be stopped again, as it is getting late in the season for such work. If the pots are now full of roots, give a good top dressing of cow manure. It is a great help, because plants so treated do not dry out nearly so soon as others left to themselves. C. TOTTY, N. J.

Slime Mould on Lawns.

A correspondent recently forwarded some blades of grass with leaves of clover which he had gathered from his lawn. They were covered by a substance of a slaty black color, and our correspondent was somewhat alarmed for the sooty patches did not add to the beauty of the natural green.

The development upon the grass is due to one of the slime molds (*Physarum cinereum*). As a slimy substance, it literally crawls up from the ground upon the blades of grass, and then changing its color oftentimes from a yellowish orange to a brown, it produces its vast crop of spores. The fungus is not parasitic upon the grass, and only injures it by using the grass as a place for the production of its spores.

It is not unusual to have these slimy moulds appearing in this way upon living vegetation, particularly that which is close to a rich earth, and during moist weather similar to that which has obtained during the last two weeks. Not being a parasite, and only coming occasionally when circumstances are peculiar, there needs to be no alarm nor action taken in the matter. One cannot foretell where this slime mould will rise from the ground, and therefore, there is no guide as to where to use any precautionary measures. In fact, it would be difficult to use any under the circumstances.

BYRON D. HALSTED.

Plums and the Tariff.—"My dear sir," the collector of duty will say to the importer of plums, "you have in this bag 62 pounds of plums. Section 264 fixes the duty on plums at 2 cents per pound. You owe me \$1.24." "My very dear sir," the polite and guileless importer will answer, "you mistake. I have in this bag a bushel of plums, although it happens that the bushel weighs 62 pounds. Section 262 fixes the duty on plums at 25 cents per bushel. I owe you a quarter of a dollar. Here it is. Take it, my dear sir." Then they will clinch.

The Early Celery.

Blanching and Marketing.

In an article which was published a few months ago in "American Gardening," my method of growing celery by the "new celery culture" was detailed, and as I have been successful in marketing at a good price all the early celery I am able to grow, it may be that my experience will be of use to others.

There are some difficulties to be overcome in handling celery during the hot weather (July and August) if it is to be placed on the market in good condition, but when I have been able to produce good celery at this time of the year, I have found it much more profitable than that marketed in the fall months, when the market is well supplied and prices consequently low.

BLANCHING.

For this early celery, in my locality, I have found but little competition, and have been able to obtain good prices from the proprietors of fashionable hotels and summer resorts. There is also a large enough number of rich people in the near-

out irrigation, for when the plants are so close together a large growth cannot be had without it, and moreover during hot, dry weather blanching goes on too slowly, and the stalks often become stringy, or hollow. When the boards are set up, run the water in the vacant space between them, thus hastening the blanching and improving the quality of the celery.

When the celery is sufficiently blanched, the boards are taken down and removed to other rows. The celery is cut a little under the ground and trimmed, leaving the refuse on the ground. If the sun be shining, the celery is at once carried to a cool cellar near by, and if not at once packed for market, we stand it up in a vat containing one or two inches of cold water in the bottom. This is all the water that is allowed to come in contact with the celery, for as there is no earth used in banking it, it needs no washing.

Never pack wet celery for shipment, as it is liable to heat and spoil. If it be necessary to hold the celery a few days after it is cut and trimmed, it can be kept in good condition by packing ice around the vat in which it is stored, and making the cellar as cool as possible.

on the general market, distribution would cost so much that the profits would be reduced.

In a word, the conditions of success are: a near-by market where fancy prices can be obtained, suitable soil (that which is easily worked and retains moisture), large quantities of fertilizers, and water available for irrigation.

W. H. JENKINS, Delaware Co., N. Y.

The Vegetable Garden.

Weeds.—After the heavy rain we have lately experienced everything is growing rapidly now in the garden, and as nothing can or will outgrow weeds if allowed to get a start, they must be kept in check by frequent hoeing, and it is best at this time to rake away the weeds, or they quickly take hold and grow vigorously again.

Egg Plants should now be setting their fruit. To do well they need constant attention. A liberal dressing of unleached wood ashes is of great assistance to egg plants, especially if one require first-class, well formed, and well colored fruits. One pint distributed to each hill and well raked or hoed in will answer the purpose, and will well repay the trouble. Liquid manure from the barnyard drainings applied not too strongly after rain is also of great help to backward plants or those growing in somewhat poor soil. The salient points in the successful growing of egg plants are good rich land and good culture.

Tomatoes should be carefully looked after, particularly after so much rain. All ripe fruit is to be regularly gathered. Do not allow the vines to grow too densely, as they will now be inclined to do; this should be done by pinching back all unnecessary laterals. This should be done if possible while the growth is small, as by cutting away several large vigorous branches at one move, a sudden check is given to the whole plant, and prevention is better than cure in all cases. Keep main branches tied up where the plants are grown to a trellis. Tomato vines should not be allowed to run on the ground; if done, the fruits are liable to be infested with wire worms, and so spoilt; they are also subject to fruit rot; keep the vines above the ground; let the air circulate freely among them. Wood ashes are excellent for tomatoes.

Melons.—This is not a very good time for ripening melons; they are not so sweet after so much rain. It is always an advantage to plant vegetables, especially melons and tomatoes, on well-drained land. The vines now will be covering their allotted space which makes it a difficult matter to cultivate them, in doing which care should be exercised not in any way to bruise the vines, as the damage done in this way now is irreparable. Pull out all prominent weeds that may appear above the foliage.

Lima Beans.—Several hills of our lima pole beans are this year attacked with a small maggot or nematode, or possibly some fungus. I have not yet determined which; the roots are infested, and the plants attacked wilt and die down. The trouble has made its appearance here since the hot, wet weather set in. I have watered several hills with lime water, as an effort to check the evil. Will any readers who may discover a sickly appearance in their pole limas, communicate with the editor, and give their experiences, as an aid to further research into the trouble?

W. M. EDWARDS, Conn.

Preparing a Compost Heap.

Please inform me through American Gardening how to prepare a compost heap as regards the kind of manure, manner of handling and applying? I am an amateur in horticulture and, although I have read a great deal about compost heaps, I have never heard how to prepare them.—A. SUBSCRIBER.

—Every once in a while a question similar to this is received and during last year the desired information was given some four or five times. As a detailed article of instructions appeared so recently as December 12 last we refer our correspondent to that issue, page 792.



FIG. 151.—AN OKLAHOMA HOMESTEAD. (See Page 535.)

by villages, so that I have found customers for all I could grow.

In blanching celery during warm weather, care must be taken that no soil comes in contact with it to rust it; it cannot, therefore, be banked with earth. I have tried tying wrapping-paper around the bunches, and other methods, but have found that I could blanch the celery at a much less cost—and blanch it better, too—with boards.

After much experimenting in planting at different distances apart, the plan which I have now adopted as giving the best results, is to plant double rows two feet apart, i. e., plant two rows 10 or 12 inches apart, and next leave a space of two feet.

When the plants are about one foot high, place the blanching boards on both sides of the double row, but be sure to keep them well apart, for if the leaves get wet between the boards, and the sun does not get in to dry them they will rot and spoil the appearance of the celery, besides stopping its growth.

When the celery grows a few inches above the boards, crowd the boards closer together, and the blanching will be completed in a few days.

The boards I use are from 12 to 18 inches in width, and with them blanch celery that grows two feet high or more. I hold them in place with cross pieces notched to set over the tops of the boards.

I have never been successful in growing a good quality of early celery with-

SELLING.

As to selling, we try to retail all we can from the market wagon which goes out with a load every day. For the wagon we put up the celery in berry crates, removing the baskets and fillers. For shipment to hotels and summer resorts, the celery is packed in small baskets holding two or three dozens. That which is shipped to dealers is put up in baskets holding six dozens.

When retailing celery from the wagon during warm weather, a wet blanket may be thrown over the crates, and if a part of the load is not sold, it can be placed at night in the cold storage vat and sold the next day.

The celery is retailed from the wagon at 4 cents and 5 cents per bunch, and sometimes for the very early celery I can get a little more. I usually find a good reliable man to drive the wagon, and pay him a commission on his sales.

The celery put up in small baskets for the hotel trade realizes for the earliest, from 40 cents to 50 cents per dozen net, and later in the season, 35 cents.

For that which is sold to dealers I receive 80 cents per dozen.

Though I have been able to obtain larger returns from my land and labor in growing early celery than I have from any other crop, it is only after years of experience that success in growing it has come. Celery at this season is a luxury, and there are only comparatively few people who can afford to buy it, so it costs a good deal to distribute it. If sold

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 15, 1898.

PUBLISHED BY
A. T. DELAMARE PTG. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.
REGISTERED CABLE ADDRESS
Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per agate line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Growing the Nitrogen. The eagerness with which one will run upon a new idea is one of the greatest troubles that have beset the tiller of the soil in all ages. Given the emphatic demonstration of the value of a new practice, it is safe to conclude, that, despite the thorough showing of its efficacy at the hands of the skilled experimenters, there will be hashed up from all over the country an apparently weighty mass of evidence, going to show that the teachings of the more advanced minds, if not all wrong, at all events have the appearance of being too highly colored with the desire of the experimenter to impress value on to his own work.

That such has been the case with many of the results of applied science in our experiment stations does not need argument nor illustration to prove. Willing as is the American cultivator to avail himself of the very latest teachings of science towards the easing of his labors, yet up to within a very recent time, the cultiva-

tor has not been in the position of being able to adapt to his own locality the fundamental principles of a new discovery, and by a skillful manipulation of the superstructure, realize the full benefit from following such a course.

While not every one even can conduct an experiment, there are still fewer who are able to deduce from the results, those proper conclusions that are open to one having had the mind properly trained to appreciate the relative value of the factors bearing on the result. Again, an experimenter must be able to recognize any accidental issue that may have disturbed the proper course of events.

The young cultivator of to-day can, if he will, start into his battle of life with an equipment of mental perfection and analytical power that was not open to his forefathers. The courses in agriculture and horticulture which are provided for his benefit by the numerous colleges and educational institutions of the country put at his feet this great advantage, and as a consequence, the technical literature of this country is flavored with scientific reasoning and teaching to an extent that causes no little wonder to the European reader.

Yet all this is but as it should be. In no other country in the world does the government devote such interest to the promotion of agricultural interests. The amount of money appropriated to this end for the fiscal year 1897-'98, amounts to \$1,890,000.

There is perhaps a danger that with such a large sum of money to be expended, there will be a waste, and, indeed, it is a fact that some of the work done by experiment stations is hardly creditable to such a munificent monetary gift. What is wanted is concentration and coöperation between the various stations. It is not to the best advantage of the public that re-hashes of previous publications in other states be made and published in bulletin form, something more real is wanted. Why not, for instance, let all the states investigate a matter of general importance and issue a combined report available for the whole country!

And this brings us back again to our original line of thought. Take as an example the use of nitrogen catching crops to improve the condition of the land. When crimson clover was first brought prominently into notice some five years ago, as a consequence of the attention it received and of certain undoubtedly good results from its use, many farmers "experimented" with it, and many very conflicting reports were given out. To-day it is still debated as to whether crimson clover should or should not be carried over the winter alive. Let us inquire into the philosophy of the use of this crop: It is on account of the storing of nitrogen in root tubercles that the clovers are valuable as nitrogen catchers. But it is not for what is caught and stored that we grow the crops; we desire to get the nitrogen into the soil, and it is not until decay of the plant sets in that this end is attained.

There is no doubt but that the greatest amount of nitrogen is caught by the longest and best growth of the crop, and if it can be carried over to spring, and then plowed in so much the more is

gained; but at the same time there is a gain if the plant be grown for ever so short a period. It is a catch crop, and for the amount of work it does as a fertilizer late in the season, is unequaled by any other crop known.

In order to obtain the best results from the use of crimson clover, it must be sown early to allow it to gain sufficient strength to live over winter, yet not so early as to give it time to shoot into flower the same year. Here is the crucial point, and the period for sowing is short, perhaps only about two weeks in any given spot varying from the early part of July, in the extreme North, to later as one goes South. In the neighborhood of New York about the first week of August. It is as late ordinarily as can be relied upon. The plant is really an annual and will make its growth in the same year as it is sowed if it has the chance to do so.

Disease of Sycamores.

On page 538 of this issue, we give two views of Sycamore trees; the one has been badly affected by the blight or anthracnose, while the other on the opposite side of the same street is in full vigor and unaffected. As we gave a detailed description of the disease and its method of working so lately as on page 506 of issue for July 17, it will not be necessary to enlarge now. So far, the only remedy appears to be the cutting out and burning of all affected twigs and branches.

Home Evaporator.

Some time ago a reader inquired of us concerning a small fruit dryer for home use. After some search we have, we believe, found the particular one inquired about, and particulars may be had on application.

"The Water Garden."

Owing to the expensive character of this work, the publishers have been compelled to set the price at \$1.50. The volume is now on the press, and every effort will be made to publish it at the date given in the advertisement elsewhere. Orders are coming in rapidly, and all who wish to secure a copy of the first edition should apply promptly. The work, intrinsically, will be of undoubted value, and the typographical appearance of the book itself a magnificent product of the printer's art.

The Greatest Park in the World.

Writing of "The Greatest Nation on Earth," in the July "Ladies' Home Journal," William George Jordan says: "Uncle Sam set apart a royal pleasure ground in Northwestern Wyoming and called it Yellowstone National Park. To give an idea of what its size, 3,312 square miles, really means, let us clear the floor of the park and tenderly place some of the great cities of the world there, close together as children do their blocks. First put in London, then Greater New York, Chicago, Philadelphia, Paris, Boston, Berlin, St. Louis, Hong Kong, San Francisco, and Washington. The floor of the park would then be but half covered. Then lift up Rhode Island carefully, so as not to spill any of its people, set it down and press in the West Indies—and even then there are 200 square miles left. No equal area in the world has such a diversity of natural phenomena and such magnificent scenery. It is a marvelous land of streams and waterfalls, geysers and hot springs, mountains, cañons, lakes and forests of primeval age."

New Orleans Horticultural Society held its annual election Thursday, July 15. The following officers were elected: Ed. Baker, president (re-elected); Dan Newsham, vice-president; John Eblen, treasurer (re-elected); Paul Abele, secretary (re-elected).

Strawberries.

More About Summer Planting. 700 Bushels to the Acre.

I wish to write a few words in answer to Mr. Hale in "American Gardening" of July 24:

In speaking of his thirty years' experience in strawberry growing, Mr. Hale calls our attention to the fact that we have been growing old, and that we have been growing strawberries for twenty-five years. We have learned from practical experience that the summer planting of pot-grown strawberry plants can be made profitable, no matter what Mr. Hale says to the contrary.

We are pleased to have Mr. Hale take the responsibility of advising one to set 20,000 plants to the acre for summer planting—we most certainly don't want the credit for this statement. What connection this statement of Mr. Hale (made in his former article on page 490) had with our address at the American Institute we fail to see; it is misleading. However, your readers will now know that it is Mr. Hale, and not us, who goes on record as advising 20,000 plants to the acre for summer planting. We are very anxious that there should be no misunderstanding on this point.

Mr. Hale is getting closer to facts in his second letter when he says "planters use from 6,000 to 8,000 plants per acre," and that the cost of these plants would be "from \$20 to \$25." This is about the market price for this number of plants. However, in his first communication, when speaking about setting 20,000 plants to the acre, he says "plants for setting an acre can be bought in the spring for from \$18 to \$25," and he certainly gives the impression that 20,000 plants can be had for this money.

Mr. Hale, on page 525, is trying to make us use 20,000 plants for summer planting, and then he multiplies this by \$18, making a total of \$260. There is a saying that there is no one so blind as the one who "will not see," and this seems to fit Mr. Hale's case exactly. Mr. Hale can advise the use of 100,000 plants to the acre, if he wants to, but he must not endeavor to get us to answer for his sins. We will repeat our former statement. We advise 7,500 plants to the acre, and these, at the prices we named per 1,000, would cost less than \$100.

Mr. Hale very much overreaches himself when he doubts our ability to furnish enough pot-grown plants a day in the season to plant one or two acres of ground. We have constantly on hand during the summer months 40,000 pot-grown plants. We ship every week from 15,000 to 20,000 pot-grown plants. I do not believe our customers will mind us using their names to show what we are doing in this direction. A few of the large orders we filled last week were received from the following people:

Mr. H. McK. Twombly per E. Burnett, Madison, N. J., 1,000 pot-grown strawberry plants. Mr. John Dodd, New Milford, Conn., 1,200 pot-grown strawberry plants. Mr. J. C. Dieterich, Jr., Alleghany, Pa., 1,000 pot-grown strawberry plants. Miss J. Grace Alexander, Winchester, N. H., 900 pot-grown strawberry plants. Mr. Edward Rushmore, Plainfield, N. J., 700 pot-grown strawberry plants. Mrs. W. B. Wilcox, Taftville, Conn., 550 pot-grown strawberry plants. Mr. C. A. Capen, Canton Junction, Mass., 300 pot-grown strawberry plants. Mr. T. M. Hegnembourg, Dunkirk, N. Y., 450 pot-grown strawberry plants. Mr. J. M. Richards, Cornwall, N. Y., 450 pot-grown strawberry plants.

Here are only nine customers—we are not counting our orders to the trade, or the dozens of smaller orders sent out during the past week. Moreover, this was an unfavorable week for shipping, owing to the excessively wet weather. The week previous we shipped considerably more, and this week we will ship double the amount forwarded last week.

We have purposely gone into these details, fearing that any of your readers may infer from Mr. Hale's supposition that we are not able to furnish at any time during the season, all the pot-grown plants they wish to purchase. An order

for a few thousand of these plants will not "swamp" us, as Mr. Hale thinks. Besides, we are advertising in your paper, and we don't want people to think that we are unable to furnish them with the plants they want. This, as you see, is another good reason for giving the facts as stated above.

In regard to the yield of strawberries per acre, as Mr. Hale and every well-informed fruit-grower knows, circumstances have much to do with it. Where the conditions are all favorable one can grow a great many bushels of strawberries to the acre. More bushels in fact, that he could get many to believe he grew, unless they saw them.

Mr. Hale asks me if I ever grew strawberries at the rate of 585 bushels to the acre. I answer him: "Yes. I have often done it and have often seen it done. One of my neighbors fruits them every year at the rate of 700 bushels to the acre. He fruited them at this rate the past season. I don't want to be understood as saying that this result can be always accomplished. In fact, it is rarely that such good results are realized. However, they are possible, large as they may seem to the inexperienced person. I would feel quite safe in guaranteeing to grow 400 bushels of strawberries to the acre for the first, second, and third years after being planted.

Mr. Hale or any other practical fruit-grower can do fully as well as this, perhaps better. The possibilities of the strawberry under favorable conditions, are away beyond the expectation of the average horticulturist. T. J. DWYER.

In a Louisiana Garden.

Phlox.—In the hardy borders now, the perennial Phloxes make a fine show, in white and so many shades of red and purple. They need plenty of water now, and the whole plant should be showered with water every evening, as the big loose heads of bloom get unsightly from dust. These plants grow well in shade and against fences and walls where many other plants would not bloom. With us the season of bloom is long—from June till frost in November. I find it best to get plants from the florist, as seed does not come up well for me. After the plants are started they are little trouble. Keep the weeds out; if they get too thick dig out some in the winter. I throw rich soil over and among mine and notice by doing so I have early and large flowers and plenty of them. Late of evenings the flowers of the Phlox are quite fragrant.

Golden Leaved Salvia.—When it first came from the florist it was golden-leaved, but when I set it in the garden I cut off all the top and made plants, and every one grew; result, I have plenty of green-leaved Salvia; one could not tell which of the plants were golden-leaved, all are alike, and all are just like the old Salvia that is now making such bright patches in the garden. There are plants of it over three feet across and four feet high.

Salvia Patens I have poor success with, seed never comes up, so I beg the plants from my florist. But there is another lovely pale blue Salvia here just coming into bloom. It is hardy, and has long terminal spikes of bloom and pale green foliage.

Cannas Italia and Austria.—Hot July weather, but the Cannas are ablaze with color. In the garden now are about forty varieties, from a foot and a half high, to six feet. Italia and Austria set this spring are five feet high in damp soil, and have been in bloom two months. Some of the blooms have measured eight inches across. Much has been written of the frail flowers, but I find them as lasting as those of many other Cannas. It may be because mine are at the east of the house in an angle at the end of the gallery, and only get the sun till ten of mornings; they are near the water, too, and many a bucketful is thrown on them every evening. As soon as a stalk has finished blooming, I cut it off near the ground. Plants have thrown up already several bloom stalks and plenty more are showing.

MARGARET E. CAMPBELL, Louisiana.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

In the early part of the season when we cut back the newly-set peach trees we left one or two more of the most prominent buds on the side from which the prevailing winds came than on any other side of the tree. This is quite important, especially where the young orchard is in a location where the winds have full sweep.

Small fruits like strawberries and raspberries should be picked as soon as ripe (not "dead ripe"), as then they present a much more attractive appearance in the boxes, are more firm, and will keep much longer.

We make it a point after having finished work with any kind of a hoe, shovel, cultivator, or any other garden tool, to at once put it under shelter thus keeping it in good repair two to three times as long as if left exposed to the weather.

At the beginning of the raspberry picking season the extremely hot and dry weather was a great setback to the earlier ripening berries, but about the 14th heavy rains came, and now, July 18, we are having the finest well plumped up raspberries we ever grew.

How the grand old red Cuthbert raspberry is standing by us this season! It is bringing us two cents per quart more than any of the fancy varieties, and such a lively demand for it! I will venture to say that the Cuthbert will be grown by the most progressive fruit-growers for many years to come, but right here let me say that it does not like neglect and will pay in more and finer berries the next year for every time the cultivator and hoe is used around it.

Vegetable gardeners complain much this season that they never saw the potato bugs so thick.

I fear I made a mistake in recommending the Improved Wilson for a shipping berry.

I have no doubt that leaving ripe fruit to dry up on the raspberry bushes injures the plants. If there was a glut in the market, rather than leave them on the vines, I would take the clippers and at once cut out the fruiting canes and give the new growth the advantage.

Where we scattered straw over the mowed-down strawberry plants in the old patch and burned it over, the plants are coming up fresh and green.

On a part of the patch of Lucretia dew-berry hills we will drive a stake close by each hill and tie the vines to it to get them up away from the cultivator, as they are making such a lively growth that they are spreading all over the ground.

Yes, the old strawberry beds are a great place for the propagation of insects and of fungous disease, but a good burning over cleans out all.

Did some of your raspberry bushes get weighted down with fruit, so that some of it was in the sand? A little straw along the row at fruiting time would have prevented it, or the bushes tied to a strong stake or trained with wire along the rows. The Schaffer seems much inclined to do this.

What are we to do with prices so low for some small fruits? My answer is this: High prices or low prices, go ahead and raise finer fruit than ever before, but not more than can be handled to advantage. If you have some varieties that are inferior to those of your neighbors, discard them as soon as you can get into bearing others that are considered the best. In the meanwhile, take the best of care of the kinds you have; prune them closely next spring, so that the berries will be larger in size. None but the best kinds pay.

As we wished to grow a large amount of plants from our Gregg raspberries, we cut the fruiting canes very close, and left only from one to two canes in a hill. The berries are extra fine in every way, but, of course, there are not as many quarts to the hill as if three to four fruiting canes had been left. The result is a heavy and strong growth of new wood.

Red raspberries keep much better if canned the same day as they are picked.

CHARLES NASH.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Prunus pissardi Dropping Leaves.

—For the past two or three years, my *Prunus pissardi*, almost as soon as the new leaves are fully developed, has regularly dropped almost all of them; and after remaining almost bare for a week or so, has put forth a new crop, which develop perfectly and remain on till frost. I have never been able to detect any insect or fungous enemy, although I have sprayed the tree in winter with strong copper sulphate, and later with mild Bordeaux, since the first season when the tree behaved in this manner. Naturally it makes but little growth, though carefully cut back in winter. This year, as the leaves were falling, I found for the first time a numerous crop of aphides on the branches; but attribute their presence to the enfeebled condition of the tree rather than suppose them to be the cause of the trouble. Can some one diagnose the difficulty, and suggest a remedy?—H. B. C.

Campanulas and Delphiniums in La.—I read with interest the "Notes from the Herbaceous Garden," on page 502, issue of July 17. The Canterbury bells come up here from seed sown in the fall, grow till late the next spring, often throwing up plenty of tall bloom stalks, and just before the color of flowers shows the plants seem to soften near the ground and in a little while they are dead. One year I had three to bloom from over 100 plants, one was white, one pink, and the other a lovely blue. The plant of the latter was fully as large around as a flour barrel and almost as high, and one mass of lovely blue flowers all of April and May; many of the stems were wide, flat, and ridgy. (A case of fasciation.—Ed.) It was one of the most beautiful things I ever saw. That was years ago, and nearly every year since I have planted seed in the fall only to meet with disappointment.

As to Delphiniums, the trouble here is to get the plants to grow till blooming time; I have four plants now in bloom; they are three feet high, the flowers in long loose terminal clusters, and of a most lovely shade of blue—I call it *Salvia patens* blue. The foliage is woolly and deeply cleft, the plants branching with scattering foliage on the branches. My seed was planted in February, and on the north side of the house. The plants have been in bloom since the early days of June; still they are perennials, for I have had plants and seed from florists several times before. Plants from florists generally grew and gave a few flowers, then turned black at the ground and died; plants from seed planted in the fall made good growth till May, when rains set in and they would die, no matter what kind of soil or situation.—MARGARET E. CAMPBELL.

Burning and Other Matters.—In reply to Mr. Snyder's letter appearing in your issue of July 17, I would state that as a rule, neither man, beast, nor vegetable can thrive or be healthy in a temperature varying from 40° to 80°. Mr. Snyder and his plants must be exceptions. He says that blistered glass will injure some tender foliaged plants. Does he mean to say that *Lantana borbonica*, *Dracenas*, *Aspidistras*, etc., are tender foliaged plants? In this section any plants whatsoever will be burned by blistered glass. Mr. Snyder never syringes roses overhead, and in spite of the violation of this common rule, never suffered from red spider; I have never had potatoes burned after a slight shower. If Mr. Snyder will look over my first communication discussing "watering during sunshine," he will find that I recommended watering thoroughly or not at all. Mr. Snyder states that he gained all his knowledge by experiments, and kindly volunteers to teach me a few points if I will visit or

correspond with him. I am very glad to profit by Mr. Snyder's knowledge and experiments, as he assures me he has "no old-fashioned ideas to combat nor prejudices to overcome." I, for instance, was compelled to serve a four years' apprenticeship, wherein, of course, he has an advantage over me. But it seems his experiment in forcing strawberries was not altogether a success, and in this connection we gardeners of the old school might be able to give him some points. Likewise his experiment in securing lateness is a thing of the past. Anybody having forced strawberries knows that forced plants, planted in open ground in the spring, will give a second crop if the forcing was a failure. As to transplanting poppies in the greenhouse, no Northern gardener would attempt it, as we have something better and more useful. Mr. Snyder thinks it a miracle to have Callas from Christmas until now. We could have them also, but we think it is more beneficial for the plants to have a rest when we have any quantity of other cut flowers outside. Mr. Snyder's method is to reduce cost to a minimum. By this, I assume, his object is to save fuel, and I think this is where he makes a mistake. By trying to save a half-ton of coal the plants receive a check in damp, cool weather, from which they suffer for months afterwards.—N. BUTTERBACH.

Clematis Dying Off.—With reference to what was published in your two last issues we have to report similar experiences in our business. We do not believe the trouble to be due to a disease, however; our theory being that it is due entirely to the care of plants previous to planting. This difficulty is particularly noticeable in imported plants. Such plants come to this country in large bunches, with but little material among the roots, and we hold that in this way the tissue of the roots is damaged, and though the damage is not apparent to the eye, yet is of such extent as to prevent the new rootlets from starting. All must agree that healthy growth of the tops, depends upon active new growth of roots. Now, when such damaged stock be planted, the temperature and dampness induces growth, and the top starts. This is maintained by the energy stored within the old roots, just as a *Colchicum* grows on the shelf in a dry office. But as soon as this energy is exhausted the top dies, simply because there are no new rootlets to maintain it. Any person so disappointed can verify this by taking up the plant and looking (in vain) for the new rootlets. The remedy is: Look shy upon imported stock, or teach the importer a lesson in packing, and at the same time see that the fault is not with yourself after stock is received. It would aid partially damaged roots by cutting off severely, thereby giving new surface from which new rootlets can start. Are we mistaken?—L. TEMPLIN & SONS, Calla, O.

I see in your two last numbers a discussion on the Clematis dying. Now I have had the same experience as have Mr. H. J. Bothe and Mr. H. A. Siebrecht, and it may be that if they will examine their vines when they are dying they will find they are stung by some insect and that there is a worm in the pith, causing the dying. It will be found above ground, and not generally over two feet from the ground. I know what I am talking about, for I have taken some out this summer. I do not think that Mr. Siebrecht's proposed planting in fall will make any difference.—FRANK KNAUF.

Strawberry Colonel Cheene.—For the information of M. J. B., Mich., would state that I got Colonel Cheene's strawberry plants at Plymouth, Mass., from a private grower. I do not know if they are for sale, nor if they are ever called Kentucky.—R. C. P.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

Odds and Ends.

A neighbor figured on raising quite early melons by planting in raised hills. Soil was drawn up in hills four to six inches high and twelve to fourteen inches in diameter. In the top of this hill he planted the seed, only to be sadly disappointed in finding the hills dried out and only about 25 per cent. of the seeds germinated. He was about to blame the seedsman, but his neighbor, to whom he gave a handful of the seeds, said the seed was all right and grew nicely; hence we see this time the planter was at fault, not the seedsman.

Try to keep plenty of fresh drinking water standing around in the shade for the poultry. Three times each day is none too often to change it.

The longer we grow fruit the more we are of the opinion that it is not so much the amount of ground which is planted out as it is the care which is given from the start to the finish.

Beware of Ointments for Catarrh that Contain Mercury.

as mercury will surely destroy the sense of smell and completely derange the whole system when entering it through the mucous surfaces. Such articles should never be used except on prescriptions from reputable physicians, as the damage they will do is ten fold to the good you can possibly derive from them. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, O. contains no mercury, and is taken internally, acting directly upon the blood and mucous surfaces of the system. In buying Hall's Catarrh Cure be sure you get the genuine. It is taken internally and is made in Toledo, Ohio, by F. J. Cheney & Co. Testimonials free. Sold by Druggists, price 75c. per bottle.

Business Cards.

C. D. Zimmermann, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. J. W. Forsyth Johnson, P. O. Box 188, New York City

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advt., and each initial or a number counts as one word. No cut or display type allowed.

HULSBOSCH BROS., bulbs and plants, Englewood, N. J.

LOWEST PRICES on earth. Trees and Plants. Neil the Nurseryman, La Porte, Ind.

TRANSPLANTED CELERY PLANTS, all the leading kinds. John A. Smethers & Son, P. O. Box 104, Berwick, Pa.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York

EGYPTIAN ONION sets, for immediate delivery if wanted, \$1.00 per bus. F. O. B. Streater, La Salle Co., Ill. Address R. D. Kline.

CELERY PLANTS, strong and stocky, \$1.00 per 1000, \$5.00 per 10,000; satisfaction and safe arrival guaranteed; special low express rates. The most practical and complete book on celery culture, 75c. Peter J. Schuur, Kalamazoo, Mich.

CELERY PLANTS. Transplanted only. First-class, leading kinds. Greatly superior to seed-bred plants. Carefully packed; good for two weeks transit. 40c. per 100, \$3.00 per 1000. R. M. Welles, Towanda, Pa.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

WANTED, steady position on gentleman's place; by an industrious, honest and sober German, married, one child; thoroughly understanding the care of horses, carriages, garden, cows, etc., etc. references. A. Sorgenfrei, Box 200, Tarrytown N. Y.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

As the Novelties Grow.

Solanum Wendlandi gives no sign as yet that it is to be of any value. Procured in March, it has stood absolutely still ever since, although the plant seems to be in good condition. The pale green delicate foliage of the Lotus, Coral Gem, is both pretty and peculiar, but the plant does not yet seem strong as to growth. *Æruea sanguinea* is slow of growth and unpleasing. *Vulcan Begonia* is not standing full sun heat as well as we had been led to believe, but in color and profusion of bloom it is unsurpassable. *Asparagus Sprengeri* has been named by some the most beautiful plant of its kind; while the general verdict will, probably, not bear out this rating, there seems to be no doubt that it will prove a very strong addition to the list of plants for the window garden.

Among the Roses.

In a lot of some 25 Roses, procured during the spring just past, nearly all novelties, and from several different dealers, only two have died. These are *Mosella* and *Mrs. J. Sharman Crawford*, the latter badly mildewed when received. As to bloom, *Madame Abel Chatenay* has already been mentioned as very fine. *Mlle. Germaine Trochon* is not so large, nor of so good form. Neither is it so good a grower, with us, but in color and texture it is fine, and the tea fragrance is very pronounced. The color is a beautiful salmon cream. *Madam Pernet Ducher* is very delicate in creamy yellow, though not so double as one could wish. Neither of the last two is very large.

Growing Yarrow.

"What is that fine, delicate, drooping plant in the pot yonder?" one asked the other day. "With all your Ferns and Palms and Butterfly Lilies and so on, it is quite the prettiest thing you have." The plant was Yarrow, transferred to the pot from a waste field some two months ago. The foliage is of an odd and somewhat rare shade of green, and the plant is exceptional in the delicate fineness of its lacinations. The outer foliage droops gracefully over the pot, making the plant excellent for bracket use, and the delicate young growths are coming on very nicely. It is fully worthy a place in the most aristocratic collection, to grace the summer window.

Ivy Leaved Geraniums.

One of the newer of these rejoices in the name of *La France*, which gives it an immediate entry into the affections of all. The *La France* color is taking wherever found. Perhaps the greatest value of these plants is for window-box and vase use. The colors are bright, the foliage unsurpassed in many ways, the habit excellent, and the capacity for clothing the receptacles with greenery very good.

Repotting Plants.

It often happens that certain plants stand still with no apparent reason therefor. There may not be that "going off" of foliage which indicates the resting period at hand, and the cultivator is at a loss to know how to manage the case. The trouble sometimes lies in the constant packing of the soil caused by surface watering. Cultivation may remedy it, but repotting is usually better. In a case like this, a larger pot will not be needed, and indeed, as the free soil crumbles away from the roots, it may be found that a smaller size will suit them better.

Cecile Brunner's Proper Place.

Among all the varieties of polyantha Roses known to us, there is not another that seems to merit equal praise with *Mlle. Cecile Brunner*. (Clotilde Souper, being a hybrid, is not considered in this comparison.) Brunner is a strong grower, for a polyantha; its color and shading are beautiful; its form entirely distinct and very pleasing. In form and size it reminds one very much of some of

the most double of double Balsams. It does not seem well known among amateurs for a Rose that has been before the public so long. Probably this is because dealers have neglected to praise it according to its real merits. Is there anywhere another equally beautiful Rose which blooms in such immense clusters and so persistently throughout the season?

The American Working Hen.

While the workingman is complaining that he does not get his just deserts, the American working hen, who never gets hers keeps persistently on at her task. Her earnings for a single year, according to an estimate based on the latest census returns, have been more than enough to pay for the education of all the sons and daughters of all the 14,000,000 families in the country for the same year. Enough, that is to say, with the little trifle of 12,000,000 over. Our poultry product for a year, statistics say, even though they are but the aggregate of littles—of littles hardly worth the attention of any man—are four times our output of silver (over which we quarreled so viciously last fall) and more than the value, either of our pigs, our corn, our potatoes, our cotton, our oats, or our wheat. Verily, our hens are millionaires, or at least we a millionaire nation, by their efforts.

Eggs. "In Spite."

"One of the editors" tells of calling upon several poultry keepers and finding that in most of the houses, the roosting platforms had not been cleaned for weeks. "The hens," he said, "were producing some eggs, in spite of their surroundings." Many people have supposed

that we are past the days when most poultry keepers treated their fowls with such amazing disregard of the value of the dollar. When hens are so kept that they are obliged to lay "in spite" of their surroundings, or out of spite to their ungrateful owners, it is safe to say that the products of spite will not go much farther than to equal the cost of their food.

Prevention Rather Than Cure.

The proverbial pound of cure required, in the poultry yard at least, is always expensive, and often virtually thrown away. People do not realize that the number of individuals housed together, and the fact that they gather their food from the same ground where they deposit their excrement, multiply the fowls' chances of contagious attack. This is one of the reasons why prevention among poultry is so infinitely preferable to cure. We may put our poultry in crowded quarters, and get, as a result feather-pulling and moping from no exercise; also we may get about the same result, in lazy, vicious, and sickly flocks, if we omit grit and green food, or feed too much corn, we get indigestion and constipation; if we leave them to suffer without shade, and with stale or foul water, we may get apoplexy or diarrhoea, or even so-called cholera; with open draughty houses we get sneezing and throat difficulties which may run into roup; wet floored houses mean cramp and rheumatism. Any and all these mean that the hens are working "in spite of" the owner's neglect, and that he will have to pay for the pounds that cure, if cure there be. And all the ill results noted might have been easily prevented.

MYRA V. NORRIS.

A WOMAN SAVED.

A CASE OF INTEREST TO EVERY WOMAN.

Mrs. Henry Younghans Tells a Story of Suffering and How She Was Cured.

From the Evening News, Detroit, Mich.

Mrs. Henry Younghans, of Detroit, Mich., who resides at 1008 Grand River Avenue, said: "Ever since our last little one came I was an invalid. For years I have had the most painful experience and would have to lie down most of the time. After the last baby was born I was unable to attend to my housework. I could hardly stand up and had dizzy spells. I wanted to sleep all the time and was treated by several of the best physicians. I would have the most fearful cramp, for which hot applications were used. I used these hot applications until I blistered myself severely.

"Before our child was born I had been a strong, healthy woman and was scarcely ever sick. After he was born I grew weak and thin, and received scarcely any help from the medicine left by the doctors. They said I was not properly cared for and that the baby was too strong for me. My back seemed to be breaking and I was scarcely ever without a severe headache. Could not tell you how many different prescriptions I have taken, but every doctor had a different plan of treating my case. I wore supports and laid for weeks with my limbs elevated, but without avail. One day my husband suggested that I try Dr. Williams' Pink Pills for Pale People, as he had read several articles in the paper about women who had been helped by them. I was discouraged and thought I must always be an invalid, but said I would try them after I had taken the bottle of medicine I was then using.

"A few days after he brought me in a box and asked me to give them a trial. I started taking Dr. Williams' Pink Pills for Pale People that day and put the other medicine away, thinking it would please him if I tried the pills. Before I had taken one box I felt better. My husband noticed the improvement and bought two more boxes. I kept on using them until I had taken four boxes, and I was entirely cured.

"I keep them in the house now and use them occasionally, as they are a great help to all women. You would not have known me two years ago. What I am to-day is owing to Dr. Williams' Pink Pills for Pale People."

(Signed) MRS. H. YOUNGHANS.
Mrs. H. Younghans, being duly sworn, states that she has read the above and that it is true in every particular.

ROBERT E. HULL, JR., Notary Public.
Wayne County, Michigan.

Dr. Williams' Pink Pills for Pale People are not a patent medicine in the sense that name implies. They were first compounded as a prescription and used as such in general practice by an eminent physician. So great was their efficacy that it was deemed wise to place them within the reach of all. They are now manufactured by the Dr. Williams' Medicine Company, Schenectady, N. Y., and are sold in boxes (never in loose form by the dozen or hundred, and the public are cautioned against numerous imitations sold in this shape) at 50 cents a box, or six boxes for \$2.50, and may be had of all druggists or direct by mail from Dr. Williams' Med. Co.

For Present Sowing.

TURNIP SEED. We have all the best varieties.

CUCUMBER SEED FOR PICKLES. Our STOCKS are the Finest.

The first Consignment of our **SURE CROP. Mushroom Spawn,** just arrived.

Quality! BETTER!! than ever!!!

Descriptive Catalogue Free, by mail.

WEEB & DON, Seed Merchants and Growers,
114 Chambers St., NEW YORK.

Mention American Gardening when you write.

LET US SUPPLY YOU WITH YOUR.....

Celery and Cabbage Plants.

Celery—Giant Pascal, White Plume, New Rose, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000.
Cabbage—Succession, Flat Dutch, Drumhead, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000.
For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

Offer No. 80.

FOR ONE NEW SUBSCRIPTION

200 CELERY PLANTS

AS FOLLOWS:

50 Plants
White Plume.

50 Plants
New Rose.

50 Plants
Golden Self-
Blanching.

50 Plants
Giant Pascal.



This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to AMERICAN GARDENING. Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P. O. Box 1697, N. Y.

Built to Sit On, Not to Straddle.



THE WHEELER BICYCLE SADDLE.

Every rider who has given the WHEELER REFORM a trial prefers it to all other saddles. Endorsed by physicians. Especially recommended for ladies.

We will send a Wheeler Bicycle Saddle as a Premium for Three New Subscriptions at \$1.00 each. Purchaser pays express.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

The Victorian Roll of Honor.

In our issue of July 10, page 490, we spoke of the institution of the "Victorian Medal of Honor in Horticulture" by the Royal Horticultural Society of England. The list of recipients has just been issued, and is given below. The names of the majority will be familiar to very many of our readers who will appreciate the comprehensiveness of various branches of the horticultural interest and industry thus represented. At the same time we cannot but express surprise at some of the, to us, glaring omissions. No doubt the task of selection was a difficult one, but some whose names do not appear are surely as worthy as the best of those included.

Baker, J. G.	Marles, C.
Balfour, Professor.	McIndoe, James.
Barr, P.	Milner, H. E.
Barron, A. F.	Molyneux, Edwin
Beale, E. J.	Monro, G.
Boxall, Wm.	Moore, F. W.
Bull, W.	Morris, Dr.
Bunyard, G.	Nicholson, G.
Burbidge, F. W.	O'Brien, J.
Crump, W.	Paul, G.
Dean of Rochester,	Paul, W.
The Very Rev. the	Rivers, T. F.
Dean, R.	Rothschild, the Hon.
Dickson, G. (Chester).	Walter.
D'Ombra, F.	Sander, F.
Rev. H. H.	Schroder, Baron.
Drury, C. T.	Seden, J.
Dunn, Malcolm.	Sherwood, N.
Ellacombe, Rev.	Smith, J. (of Ment-
Canon.	more).
Elwes, H. J.	Smith, Martin R.
Foster, Professor M.	Speed, H.
Fraser, J. (Wood-	Sutton, Arthur.
ford).	Thomas, Owen.
Gordon, G.	Thompson, W. (Ips-
Heal, J.	wich).
Henslow, Rev. Pro-	Thomson, D. (Drum-
fessor.	lanrig.)
Herbst, H.	Turner, H.
Hooker, Sir J. D.	Wilmott, Miss.
Horner, Rev. F.	Wilson, G. F.
Hudson, J.	Wolley-Dod, Rev. C.
Jekyll, Miss.	Wright, J.
Kay, Peter.	Wythes, G.
Laing, John.	

Obituary.

The wife of Mr. John Hinchman, formerly gardener to William L. Strong for fifteen years, died at her home at East Oceanic, N. J., on Tuesday, July 20. The funeral was one of the largest attended ever seen in the district. There are six children left to mourn her loss, the youngest of which is four years of age. Mr. Hinchman has been in business for himself for the past two years and is very successful.

In the death of William Fowler of Baltimore, the craft loses a good man and thorough gardener. Born December 19, 1822, at Kelvin Grove, near Glasgow, Scotland, he served his apprenticeship at the Botanical Gardens in Glasgow, and graduated at Kew in 1848. In the same year he came to America and settled in Virginia. The British government appointed him to collect specimens in Australia, where he spent nearly four years in gathering one of the largest collections now in Kew Gardens. After returning from Australia, he came to Baltimore and was engaged by the late John Hopkins upon the Clifton estate, where he remained for forty years. It was the intention of Mr. Hopkins to have the University bearing his name established on the Clifton ground, and at the same time have Mr. Fowler plan and lay out a botanical garden, but through the untimely death of Mr. Hopkins, the plan fell through.

Many rare specimens of trees now at Clifton were planted by Mr. Fowler, and the cutting down and grubbing out of

the same during the last year grieved him very much.

Acacias and other New Holland plants were his favorites. Conifers also were great pets of his, and Clifton has a fine collection.

Toronto.

The Toronto Gardeners and Florists' Association had an excursion to Niagara Falls Park on Tuesday, the 13th inst. About 50 members and friends took the trip. The party was guided by George Vair, and had a most enjoyable time. Mr. Vair had lately been over the ground, and by his kindness we were able to see about all it was possible to see in one day. Niagara Glen was the first place we stopped at. Our party spent nearly two hours in the glen and most of them expressed their thanks to Mr. Vair for showing them this new attraction to Canada's best known park. After leaving the glen we went to the main part of the park where we were met by Mr. Cameron, the genial and able gardener, who showed us over the most interesting parts. The park proper was quite a revelation to several of us that had not been near it for ten or twelve years. Since Mr. Cameron took charge the place has been entirely changed. All its natural beauty has been preserved wherever possible, and where improvements have been found necessary they have been made in such a way as to be as much as possible in harmony with the surroundings. The Dufferin Islands have been opened to the public, and rustic bridges have been made, connecting all of the islands.

Holyoke, Mass.

The annual sweet pea show at Mountain Park the 21st and 22d inst. was a very pretty affair. It was a free exhibition given as an attraction to the park, yet it was a credit alike to the exhibitors and to the manager of the show, C. M. Hartzell. Mr. Hartzell's display comprised 120 named varieties, including several of the 1897 sorts. Of these novelties Countess of Powis was very pleasing. R. S. Houston made a very attractive exhibit, arranging his flowers with foliage, greatly improving their appearance.

Of the out of town exhibitors, J. W. Eldred and Rev. W. T. Hutchins, of Springfield and D. W. Brainard, Thompsonville, Conn., were the most extensive. Mr. Eldred's Lovely is certainly a lovely flower. Mr. Hutchins had several very pleasing vases of the newer sorts, among them Maid of Honor, which, so far, does not come up to the older varieties of about this color; Lottie Eckford is much better. The sweet peas from Mr. Brainard were all good commercial sorts. Sweet peas were also shown by several amateurs. No prizes were awarded.

American Dahlia Society.

This society has issued its schedule of prizes in connection with its second annual show. The exhibition is to be held under the auspices of the Pennsylvania Horticultural Society, in its new hall, Broad Street, below Locust, Philadelphia, commencing on the third Tuesday of September (21st) next, and closing on the following day.

In addition to the awards for dahlias, special prizes will be given for summer flowering bulbs, cannas, ornamental plants and cactus.

Boston.

The exhibition at Horticultural Hall on July 17 was rather slim so far as effect was concerned, owing to the severe gale of the few days preceding. The prizes for hollyhocks had been put off from the preceding week, but were only awarded in part. M. H. Walsh, gardener to the estate of Hon. J. S. Fay of Woods Holl, received all the awards that were made, his display covering one end of a small table, where two or three years ago it was an easy matter for the same exhibitor to fill a table the whole length of the hall with beautiful specimens and at the same time have a liberal competition. The prizes for gladiolus

were generally competed for, and Kenneth Finlayson, gardener to Dr. C. G. Weld, carried off the honors by taking the first and second prizes. James Greene, gardener to James L. Little, Esq., received the third prize, and there were other exhibits of which the growers may be proud. James Greene was first on tuberous begonias, second not awarded, and the third to D. F. Roy, gardener to Hon. E. S. Converse. Carl Blomberg made a creditable display of hardy aquatics including among other interesting specimens, *Nymphaea alba rosea*, a native of Sweden, which has seldom bloomed in this country, and *N. Martiana fulgens*. Added to this was a fine display of native American ferns and several complete collections of native flowers.

A Royal Orchid Bouquet.

The "Gardeners' Chronicle," London, in its issue of June 26, editorially comments as follows on the bouquet ordered by Her Majesty the Queen, for the decoration of the dining-room at Buckingham Palace on Jubilee Day. The flowers were furnished by F. Sander & Co., St. Albans, England:

"The framework of the bouquet consisted of a basket made of wicker-work, heavily gilt, standing on a polished mahogany base; in shape trifoliate, beautifully fluted and worked. From the three corners spring the handle, its three branches forming a dome, surmounting the top of which is a royal crown, the letters 'V. R. I.' twelve inches in length, being arranged beneath the crown, which consists of several hundreds of flowers of *Odontoglossum citreolum*, the letters being composed entirely of the orange-colored *Epidendrum vitellinum*, Millais' favorite orchid. It is impossible to attempt the description in detail of the many thousands of orchids used in this, the most superb bouquet ever seen, endless spikes of all that is best and rarest from Her Majesty's dominions being used, together with almost priceless blossoms of the hybridist's art raised in this country since our Queen's accession, many of them unique and of great value, among the choicest varieties being *Cattleya Empress of India*, *C. Our Queen*, and *C. Victoria Regina*, which received awards at the meeting of the Royal Horticultural Society on the 15th inst. The Princess of Wales *Odontoglossums* were prominent in magnificent pure white spikes, as also were Lord Dalhousie's *Dendrobe*, with its nankeen-yellow and maroon blossoms. The sprays of the *Disa* from Table Mountain; *Stenoglottis fimbriata longiflora*, also from South Africa; the moth-flowered *Dendrobe*, from Australasia and British New Guinea; *Vandas*, from the British East Indies; *Cattleyas* and richly-colored *Oncidiums*, from British Guiana, and the lovely scarlet *Epidendrum vitellinum* and *Lælia xanthina*.

"Among the more rare species and varieties employed, mention may be made of the white *Sobralia leucantha*, the beautiful hybrid *Phalaeonopus Owenianus*, *Vanda teres Hookeri*, the white-pouched variety of *Cypripedium Godfreyae leucochilum* var. *Godfreyana*, an importation possessed only by Mr. R. H. Measures, of orchid fame; the Luxembourg variety of *C. caudatum*, *Dendrobium Phalaenopsis*, the spikes of which are admirably adapted for bouquet-making; *Oncidium Batemannianum*, with its beautiful yellow expansive lip and brown crest; *Calanthe Laucheana*, a cross between *C. Sanderiana*, and *C. veratrifolia*, the flowers colored lilac and white; *Cattleya Harrisoni*, *Masdevallias*, chiefly varieties of *Harryana*, and a few *M. Chimera*.

"The handles of this magnificent basket of orchids were fitted with flutes or sockets, and the flowers were placed in them, with the spikes entire, and, in very many instances, the whole bulb and leaf also. The interior of the basket, which had to be specially designed and constructed for the occasion, is one central dome, forming a solid founda-

Potash Free

ant, must not be stinted. Send for our books mentioned below.

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write.



THREE NEW CANNAS.

40 NEW IRIS.

SIEBRECHT & SON, 409 Fifth Avenue, New York

Mention American Gardening when you write.

**Bay Trees,
Hardy Palms,
AND EVERYTHING
FOR DECORATING**

"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND
DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address **THE AMERICAN JADOO CO.**

813 Fairmount Avenue, PHILADELPHIA, PENN.

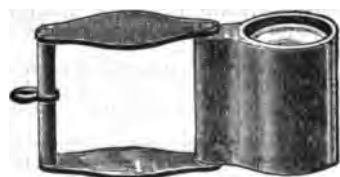
Mention American Gardening when you write.

THE BEST HANDY MICROSCOPE FOR THE FLORIST!

...A CODDINGTON MAGNIFIER...

The applications of science to practical horticulture are to-day so numerous as to need no pleading for recognition, and the cultivator who is alive to facts knows that disease can be fought most thoroughly, and with the minimum of labor, only by going to its inception—in short the battle must be declared just so soon as the disease has a foothold. Continual alertness is the only safeguard, and a grower should be in a position to at once thoroughly and minutely examine into all suspicious marks or spots and not wait until the manifestation was all too evident.

All things have small beginnings, and in order to detect disease, artificial aid is frequently a necessity, thus all should carry a convenient



...POCKET MICROSCOPE...

to examine suspected cases of fungous or insect pests at once.

Nothing can be better adapted for this purpose than a Coddington Lens, suitably mounted. This lens is solid, and thus not affected by change of temperature, consequently admirably adapted for the purposes for which we offer it.

The accompanying illustration represents a lens, mounted in German Silver, which we offer at \$2.50 each; they can be had in various powers, from a one-half to a two-inch focus, but for all general purposes (and the one we use ourselves,) the most adaptable is that known as a one-inch focus. It gives a magnification of 10 diameters, and is more easy to work with as it allows a greater distance from the lens to the object than does a lens of higher power; by this means a better light can be brought to bear on the object, and also the field of view is not so restricted.

We will mail this Coddington Magnifier, of the best possible construction, and made with great care throughout, one-inch focus recommended, with a power of ten diameters, for \$2.50 cash with order. If instrument is not satisfactory purchase price will be refunded if instrument is promptly returned in good order.

We can also supply a very effective pocket magnifier, half-inch focus, flat field, at the low price of \$1.25, postpaid. Address all orders to

A. T. DE LA MARE PTG. & PUB. CO. Ltd., P. O. Box 1697, NEW YORK.

tion, supporting the whole mass of blossoms, which, perfectly finished and arranged, had a height of eight feet, with a diameter of six feet. The number of flowers in the bouquet in 1887 was 50,000, but this huge trophy contains a larger number, while the quality

is better, and rarity greater; and by command it was delivered at Buckingham Palace on Monday afternoon. The bouquet, on the termination of the court dinner, was carried into the Queen's boudoir, which it served to adorn for several days."

WHOLESALE MARKETS.

New York.

Business generally has been depressed for a week; this is, no doubt, largely due to the precarious weather. It is only with difficulty that the market clears and then only at low figures.

The chief crop to suffer is melons which are a complete drug and not paying expenses; three dozen melons for 75c. was a fancy figure in the middle of the week, this figure would nearly all be absorbed when shipping and other charges are taken out of the total. In appearance the crop is all right, but the flavor is questionable.

Another crop that is in a poor way is tomatoes, owing largely to the unripe and poor appearance of the same.

Georgia peaches have been light in supply, and last week's figures have been fairly well maintained for fancy quality. A few Vineland peaches are in the market, and sell for about 50c. per basket.

Blackberries are light in receipt, with stock in poor condition, owing to the wet weather, and prices rule low, 4c. per quart being the highest possible, but the bulk does not average the half of that.

Apples—Near-by, hand-picked, per barrel \$1.50@2.25; near-by, windfall, per barrel, 50c.@\$1.25; Southern, hand-picked, per barrel, \$1@2; Maryland and Delaware, good to prime, per crate, 50@60c.; common, per crate, 25@40c.

Peaches—Georgia and South Carolina, fancy, per carrier, \$2.25@3; good to cheap per carrier, \$1.25@2; poor to fair, per carrier, 50c.@\$1; Virginia Troths, per carrier, \$1.00@1.50; Maryland and Delaware, early, per crate, 75c.@\$1.25; early, per basket, 50@51.00; Jersey, early, per basket, 40@75c.

Pears—Le Conte, Southern, poor to fancy, per barrel, \$1.50@2.75.

Grapes—Delaware, per 25-pound case, \$1.50@3; Niagara, per 25-pound case, \$1.75@2.25; Moore's Diamond, per 25-pound case, \$1.75; Moore's Early, per 25-pound case, \$1.50@1.75.

Cherries—Eight-pound baskets, as to size and condition, 20@35c.

Currants—Large, red, per quart, 2@4c.; bulk stock, per pound, 2@3c.

Blackberries—Monmouth Co., Jersey, Wilson, per quart, 1@5c.; South Jersey, cultivated, per quart, 1@5c.; Maryland and Delaware, cultivated, per quart, 1@4c.

Huckleberries—Shawangunk Mountains, per quart, 6@8c.; Pecono Mountains, per quart, 6@7c.; Other Pennsylvania, blue, per quart, 5@7c.; Pennsylvania, per eight-quart basket, 50@60c.; Jersey, per quart, 4@6c.; Delaware and Maryland, per quart, 8@5c.; Virginia, per eight-quart basket, 30@40c.

Raspberries—Up-river, red, per pint, 1@5c.; per 8-to-quart cup, 1@4c.; four-to-quart cup, 1@3c.; Upper Jersey, red, per pint, 1@4c.; Lower Jersey, red, per pint, 1@3c.; blackcap, per pint, 1@4c.

Melons—Watermelons, fair to choice, per car, \$125@175; common, per car, \$75@100; medium to large, per 100, \$15@25; small, per 100, \$8@12; muskmelons, Maryland Gem and J. Lind, carrier, \$1@1.75; Norfolk Gem and J. Lind, barrel, \$1@1.50; Norfolk Gem or J. Lind, carrier, 50c.@\$1; Norfolk and North Carolina, bushel basket, 40@75c.; Norfolk and North Carolina, per barrel, carrier, 50c.@\$1.25; Norfolk, Christina, per barrel, \$1@1.75; Baltimore, Gem and Lind, basket, 75c.@\$1.

Celery—Fair to prime, per dozen, 20@50c.; small and poor, per dozen, 5@15c.

Corn—Near-by, Jersey, per 100, 75c.@\$1.25; South Jersey, per 100, 50@75c.

Cabbages—Jersey and Long Island, per 100, \$2.50@3.

Cucumbers—Jersey, per barrel, \$1@1.25; Jersey, per bushel box, 30@40c.; Norfolk, per barrel, 50c.@\$1; pickles, Jersey and Long Island, per 1,000, \$1.50@2.50.

Egg plants—Jersey, per basket, \$1@1.50; Jersey, per bushel box, 75c.@\$1.

Green peas—Western New York, per bag, \$1.50@2; Long Island, per bag, \$1.25@1.50.

Lima beans—Maryland, per one-half barrel basket, \$2.50@3; Jersey, per bag, \$1.50@1.75.

Onions—Maryland, per one-half barrel basket, 70@80c.; eastern shore, per one-half barrel basket, 65@75c.; North Carolina and Virginia, per barrel \$1.50@2; Jersey, white, per barrel, \$3@4; Jersey, white, per basket, \$1.25@1.75; other Jersey, per barrel, \$1.50@2.25; Orange County, red, per barrel, \$1@2.25.

Peppers—Jersey, per crate, 60@75c. Radishes—Local, per 100 bunches, 75c.@\$1.25.

String beans—Long Island, per bag, \$1.50@2.

Squash—Marrow, per barrel crate, 75c.@\$1.25; yellow crook-neck, per barrel, 50@75c.; white, per barrel crate, 50@75c.

Tomatoes—Monmouth Co., Jersey Acme, per crate, 75c.@\$1.25; other Monmouth Co., Jersey, per crate, 40@75c.; south Jersey, per crate, 30@50c.; Philadelphia, per basket, 25@30c.; Maryland, per carrier, 40c.@\$1; Baltimore, per one-third baskets, 50@75c.; Norfolk and North Carolina, per carrier, 25c.@\$1.

Turnips—Russia, per barrel, 50@75c.

Boston.

The market is well supplied with cantaloupes, coming mostly from Virginia. Every variety grown in that state seems to be in some of the barrels, and if not all in one barrel, all seem to be in one shipment from one farmer to one commission house. Price ranges from \$2.50 down to \$1.50 a barrel, with all the good eating kinds finding very good sale at \$2.25@2.50.

Watermelons, healthy demand, 20@22c., some fancy large held for more money.

The few dealers who receive hothouse cantaloupes are having a fine time. It is one of those occasions when the quality of hothouse stock can be guaranteed; home-grown stock bringing 25@75c. each, while some Montreals bring \$1@1.50 each; readers must not, however, get excited over these figures because they are rather fancy prices at a peculiar season of year, and the dealer, as every other wide awake man should do, is taking advantage of the opportunity.

High-colored marrow squash in good demand at \$1.50 per barrel. Pale hard to be placed at any figure.

The duldest currant market ever seen in New England is now about closing with stock offering at 1@2c. per pound.

Red raspberries are about over, holding up in price, 8@5c. for thirds, Hudson River stock; while some near by bring 8@10c. a pint.

Blackberries are not appearing in large quantities, and sell all the way from 8@10c.

So much rainy weather keeps the girls from picking blueberries, therefore, no large receipts, and a range of prices from 10@14c.

Nova Scotia strawberries bring 10@18c., according to condition when arriving and their keeping qualities. It is a long way to send them, and the conveniences are not perfect.

Homegrown potatoes are firmer, about \$3 per barrel; stock is excellent, and yield said to be fairly large.

Few Virginia white sweets bringing \$4 a barrel.

Pear trees of this section are showing up well laden with fruit.

There is a large demand for pineapples, most of the stock coming running small sized, and yet commands very good figures, 6@7c. for 36 counts, 8@10c. for 30 counts, 11@12c. for 24 counts.

Some Georgia Elberta peaches are offered at \$2@2.25 a crate.

Native string beans, \$1 a bushel; shell beans, \$1.25 a bushel; peas, 75c.@\$1 a bushel.

Hothouse cucumbers, 2½@3c. each; field cucumbers have not made any progress this year, and the crop is way behind time; apparently the worst season in our remembrance.

Hothouse tomatoes in good demand at about 15c. a pound; while Virginia stock is plentier, but has not so quick a sale at \$1 per bushel.

New carrots look exceedingly nice on

the counters with their green tops and invite purchasers at 50c. per dozen bunches. Gooseberries about gone. Asparagus, \$1@1.50 a dozen; egg plant, Florida stock, 75c.@\$1.50 a box.

Round radish steady at 20c. a dozen; lettuce at 30c. a dozen; summer squash firm at 50c. a dozen; cabbage, good sale at 4c. a head; turnips, 75c. a bushel; beets mighty plenty at 40c. a bushel.

The South Carolina grapes are just about as plenty as their quality brings a demand; they are not quite as well colored this year as some seasons. Moore's Early, \$1.50 for the seven-basket carrier, with Delaware finding a slow sale at \$2@2.25.

Black Hamburg grapes range from 50c. to \$1 per pound.

Mushrooms bring \$2 per pound. Readers, however, must understand that fewer are wanted at this season of the year, and when an order comes, the party is willing to pay a good round price to get them; might generally be termed hard to find.

Rhode Island green corn easily brought 16½c. per dozen at the beginning of the week.

Onions, Ohio barreled stock, \$1.75@2. Peppers selling 40c. a dozen.

Philadelphia.

The late heavy rains which have been general throughout the country have had a bad effect upon fruits and vegetables, and although shipments continue to be heavy, the quality is not up to standard. Everything has cleaned up well, but prices, as a rule, are low.

Apples—Jersey hand-picked, \$2@2.25 per barrel; windfall, 75c.@\$1 per barrel. Delaware and Maryland, good, per crate, 60@80c.; fair to good, 35@50c. per crate.

Shipments of peaches are daily increasing, but there is not a large quantity yet arriving in this market; so far, nothing but Georgia fruit has been seen. Fancy, well-colored fruit has sold for \$3 per crate, while the general price has been \$2.25@2.50 for good fruit; fair to good, \$1.75@2.

Pears—Le Conte, fancy, from Georgia, \$3.25@4 per barrel; per basket, 75c.@\$1.

Corn—Jersey, per 100, 65@80c.; fair to good, 40@50c. per 100.

Cabbages—Jersey, fancy, \$2.75@3.50; fair to good, \$2@2.50.

Jersey cucumbers are now arriving in large quantities, and prices have fallen to 30@40c. per basket for good stock; with fair to good, at 15@25c. Norfolk, per barrel, 75c.@\$1.

Egg plants—Jersey, per bushel basket, 60@75c.

Onions—Jersey, five-eighths basket, 40@50c.; Maryland, one-half barrel box, 75@90c.

Peppers—South Jersey, per crate, 50@70c.

Squash—White, bushel, per barrel, 60@75c.

Marrow—Per barrel, 80c.@\$1.

Tomatoes—Jersey, fancy, per five-eighths basket, 70@80c.; fair to good, 40@60c. Excepting the first grade, most of the stock is not inviting, so large a proportion being unripe.

Potatoes are holding firm at from \$2.25@3 per barrel.

California Fruit for Europe.—The first consignment of California green fruits to Europe this season was made from Sacramento at midnight Tuesday, June 29. It consisted of six car loads. From this time forward shipments of this character to the East will be made regularly on passenger schedule. It is calculated to have the shipments in London twelve days after shipping.

DWYER'S SUMMER and AUTUMN LIST
Of Pot Grown and Laver STRAWBERRY Plants, CELERY, VEGETABLE Plants, FRUIT Trees and ALL NURSERY STOCK will be mailed free to all who apply for it.

T. J. DWYER, Cornwall, N.Y.
Box 176.

Mention American Gardening when you write.

Questions Answered.

This is a Bureau of Information, to which subscribers can apply freely for advice on any and all subjects in the field of horticulture.

In order to lessen labor, and that the Editor and his friends may understand each other, the following rules must be observed:

Rules for Correspondents.

Questions must be concise, plainly written on one side of the paper only, and addressed INQUIRY DEPARTMENT, AMERICAN GARDENING, P. O. Box 1697, New York City.

Letters appertaining to subscriptions, or other business matters, should be directed separately; otherwise delay may follow.

The name and address of the sender is required, in addition to a nom de plume. Use a separate sheet of paper, not a scrap, for each question. Questions will be attended to without delay. If by mistake a query fails to be answered, it should be repeated.

Specimens of plants for identification must be ample; mere scraps will not do, and no notice can be taken of such.

Questions relating to insects or diseased plants should always be accompanied by specimens, packed in a tin box, and forwarded at letter postage. Always send a liberal sample.

Conditions and soils vary so infinitely that we would be pleased to have our correspondents describe theirs.

Correspondents referring to articles which have appeared in AMERICAN GARDENING should mention page and date of issue.

We cannot promise to comply with requests to answer by mail.

We cannot undertake to reply by mail.

Boston Ivy.

I have some fine vines of Japanese Ivy, growing nearly to the top of the house. But the leaves are for the most part large and coarse, so that they are almost without the distinctive beauty of the finely and delicately-leaved vines I see every where in town on churches, etc. Can you suggest any treatment of the roots which

would change the habit of my vines? They have not been unduly manured—not at all for two or three years.—H. B. C.

—Your vines are evidently luxuriating in congenial soil and favorable conditions. Time and further growth, with lack of attention—starving, in fact—will ultimately bring about the appearances you desire.

Stem-Weevil in Amaranthus.

I am very much grieved to find my large bed of Amaranthus, which was doing so well and making a fine show, is dwindling away to nothing. Some grub has attacked the roots, and each time I pass the bed I find another large plant lying prostrate, with all the roots eaten off, and the grubs an inch or two up in the heart. I send you a section with the worms in it.—E. C. R.

—The grub attacking E. C. R.'s Amaranthus is the larva of one of the so-called "stalk-weevil" (Curculionidæ). Which one of the numerous species of stalk-weevil cannot be definitely determined until the adult beetle can be reared. Most of the stalk-weevils attack plants in such a manner that it is impossible to destroy them without destroying the plants. All that E. C. R. can do this year is to pull the infested plants and burn them. It is to be hoped that after determining which species it is that is attacking the Amaranthus, we may be able to suggest some other plant to be planted with the Amaranthus as a trap plant, that is, some plant for which the weevil has a preference, and which can be pulled and burned after the weevil has deposited its eggs in it.—F. A. S.

Uprooted Apricot.

I have a tree of Moor Park apricot, eight years old. It was blown over last October, and I propped it up; this spring it was full of blossoms and now carries a heavy crop of fruit. Can this tree be

transplanted, or would it be better to get another tree? It must be moved from its present place.—A. C. E.

—The safest plan will be to procure a new tree, owing to the age of the present one, otherwise the fact that the tree was partially uprooted a year ago would help materially in the proposed transplanting this fall or next spring.

Seedling Pansy.

(To D. M.)—The Pansy sent does not possess any feature that would distinguish it specially from others we have seen before. The color is dull and the form not of the best.

Wintering Papyrus.

Is it possible to keep the roots of Papyrus antiquorum over during the winter? I have not succeeded in doing it as yet.—E. T. H.

—Papyrus antiquorum can be safely wintered over, both small and large plants. If large plants or clumps be lifted in the fall they may be placed in tubs or half-barrels and kept in the greenhouse, or large plants may be planted in the border of a rose house. Plants in four or six-inch pots may be placed on the benches or tables and treated like Cyperus alternifolius; Papyrus winters best under these conditions, not submerged or deluged with water, and in the full light such as a rose house affords. If too cold and wet the plant will rot. Minimum temperature 60 degrees.

Growing Lily Bulbs.

Is South Central Kentucky far enough south to grow Lillum Harrisii successfully. How long does it take to grow the bulbs to salable size.—REAM.

—So far as our information goes, we do not believe that your district is specially adapted to the propagation of Lillum Harrisii, but, of course, you are the best judge of that. Two or three years are required to develop large bulbs.

TO BE PUBLISHED AUGUST 20.

The Water Garden

(PROFUSELY ILLUSTRATED.)

BY WILLIAM TRICKER.

This work will contain nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work.

On heavy enamelled paper. Elegantly bound. Large octavo. Price, \$1.50.

THIS volume, which has been prepared by the foremost aquaculturist of the country, and to whose efforts the present increasing popularity of the Water Garden is largely due, is intended to serve as a **SOUND, PRACTICAL CULTURAL HANDBOOK** for amateur and professional alike.

The work should find a place in every library and in the home of all gentlemen interested in gardening; it will prove indispensable to the private gardener, whether he is at present cultivating an aquatic garden or with a view of preparing himself to take charge of one at any moment. It is scarcely necessary to dwell on the value of the book to the commercial man; every one in trade will require it.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A full descriptive list of Nymphæas and all other water plants, as well as of all trees, shrubs, etc., adapted for marginal effects, is included.

— ORDERS RECEIVED NOW. —

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8 Duane Street, P. O. Box 1697, New York City.

Columbines are Perennial.

(To C. A. L.)—The Columbines (*Aquilegia*) are all perennials, but may possibly be treated as annuals in some instances. The most satisfactory way, however, is to treat them as biennials. See article on page 439.

Clematis Questions.

—(1.) What is the best method of inducing the common large flowering Clematis to grow more compactly than is its ordinary habit? Can this be done by pinching off the ends of the leading shoots?

—(2.) What is the best fertilizer for Clematis growing in a heavy black soil, and when should it be applied?

—(3.) Suggest a list of Clematises designed to give continuous bloom from early spring to late fall.—CHICAGO.

—(1.) It is a difficult matter to change the habit of Clematis and derive any benefit therefrom by pinching the leading shoots. There are so many Clematises of different types that might be called "common large flowering Clematis," that a definite answer to the question would be misleading. Some types (patens and florida) flower from wood of the year before, and, as a rule, do not have live wood enough in spring. While lanuginosa and Jackmanni types flower on the current summer's growth, this should be trained rather than stopped.

(2.) The best fertilizer is a heavy dressing in the autumn, of rotten barnyard manure. If the soil, when dry, be very compact, work in some sand.

(3.) A small collection should include the following: In shrubby kinds, *Integrifolia*, *tubulosa*, *Davidiana* (blue), *erecta* (creamy white), *Pallasae*, and *stans* (white). In climbers, *Albert Victor*, and *Mrs. James Bateman* (lavender), *Fair Rosamond*, *Duchess of Edinburgh*, and *Henry* (for white), *Earl Beaconsfield*, *Jackmanni*, *Prince of Wales*, and *Louis Van Houtte* (purple), with *lanuginosa* and *Belle of Woking*. Of the small flowering kinds, *virginica*, *crispa*, *graveolens*, *viticella*, *paniculata*, and *vitalba*.—J. H.

Small Celery Plants.

I have two or three flats of young celery plants one to two inches high, seemingly too small for planting for this year's growing. Can I keep over winter in cold frame or cellar to be set out in garden next spring?—A BEGINNER.

—It is not too late to plant celery out in the garden; it will yet make serviceable heads. If it were possible to keep it over in the way suggested, it would be useless.

Quinces Diseased.

(To T. E. B.)—The specimens sent show that your trees are attacked by the Orange Rust (*Roestelia aurantiaca*). The bright orange-colored pimples are the ruptured spore cups from which the millions of spores escape to carry on the life of the fungus. Do not delay a day in removing and burning thoroughly all infected fruit and adjacent parts if necessary. The fungus causing the rust is one of that very interesting group of parasitic fungi which have alternate generations on different hosts, the alternate host in the case of the quince rust being a juniper or wild cedar, where it appears first as a slime. (See paragraph and fig. 150 entitled "Apple Rust.") Very early spraying may mitigate the evil another year, but if the other host can be destroyed, the remedy is sure.

Cherries and Plums, Not Bearing.

Will you give some instructions as to time and method of pruning for fruit, young cherry and plum trees? And also how to keep on the tree any fruit it may form. I have young trees, of good size and in vigorous condition which either bear nothing, or lose very early what little fruit they have. They are in gravelly loam, well drained, with a little slope to the south; they get a yearly dressing of wood ashes, and are properly cultivated, and the foliage is abundant.—WEST VERMONT.

—West Vermonter should have cherries, provided the trees are old enough, and

are sprayed in proper season. The trees in general, need no pruning except perhaps, for the two first years after planting (see instructions in "The Fruit Garden" for February 27, and also in this issue). Lacking detail, it seems strange about the plums not cropping, age and vigor are there, the soil, too, is passable. It looks as if *cucullo* had something to do with the fruit dropping. Fertilizer is not necessary while the trees are making vigorous growth and no crop. It might have shed some light if the age and varieties had been mentioned. The subject was covered in detail in "The Fruit Garden" for January 28 and March 6, and a reference to those issues might help "Vermonter" a good deal.

Strawberries for Christmas.

In your editorial of June 5, you speak of a New Jersey grower who marketed his first strawberries four days before Christmas. As you stated his method of growing is not touched upon by any of your correspondents, would you give his way, if obtainable.—Fr. S., Springfield, Mo.

—The grower referred to makes a great secret of his work; therefore, we are not in a position to make known his entire method. He grows his plants entirely on benches planted out and not in pots, as is usual with most growers. Having been at it many years, he has succeeded in reducing it to a system whereby he ripens the plants and starts them again so as to come on in batches. A number of houses are devoted to strawberries only. The bench plan demands exclusive use of space, and much attention, especially during the growing and fruiting months. Mildew and red spider are the special foes. If much moisture exists, mildew is apt to attack the plants; should they be kept on the dry side, red spider is liable to cause trouble, so that great dangers exist unless a careful balance is maintained. Otherwise the same treatment is as detailed in our issue of June 5.

Plants Named.

(To R. E. P.)—The Rose sent is, we think, Queen's Scarlet, sent out by Hall and Thorpe in 1880.

The Editor in the Garden.

The following remarks from a farm contemporary have their bearings in other quarters. For "farm" and "farmer" read "garden" and "gardener":

There is a certain class of farmers who have funny ideas as to the relation the farm editor has to the farm. They think he should be a farmer himself in the sense that he lives on his farm and fertilizes it with his own sweat. They fail to see that this is a total and absolute impossibility; that the editing of a farm paper requires all the time and study that any one man is competent to give, and that the running of a farm successfully makes the same requirement; and that no man is competent or can begin to be competent to do both at the same time. A farm does not furnish the facilities for the editor of a great agricultural paper. The editor must have the full use of the mails, of clerical help, must be where people can find him, and to edit the paper on the farm is not to edit it at all in the full sense of the word. The farmer may be a regular contributor to the pages of an agricultural paper and may do some of the best work that is done on the paper, but to contribute regularly to the columns of a newspaper is one thing; to edit it is another and entirely different thing. Ten men can be found to do the first where one man can be found to do the second. To require, therefore, that the editor of a farm paper must live on the farm and plow and sow and reap while editing the paper is to require an absolute impossibility. No man, so far as we know, has ever done it, and it is safe to say that none ever will.—Wallace's Farmer.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send us stamp for our new catalogue.

AGENTS WANTED.

Read this partial description of the best book of the kind for women which has ever been published, then write us for terms and territory.

HOUSE PLANTS

AND

HOW TO SUCCEED WITH THEM.

BY

LIZZIE PAGE HILLHOUSE.

Scores of books have been written on flowers and their cultivation, but it has been reserved to Mrs. Hillhouse to cover a field of highest interest to women hitherto untouched, and to provide a reference book and complete guide for all her sisters who, loving plants, would ere be surrounded by them did they but know where to turn for such advice as to their preservation and instruction in their culture as would be open to them to follow, easily understood, yet thoroughly practical.

"I have bought book after book," the author says, "in a vain search for that knowledge which would enlighten me as to how to prolong the lives of my precious pets, when noting with alarm their distressed appearance, only to find them all a delusion and a snare, so technical or ambiguous as to be far beyond my reach or apprehension. Therefore, for the benefit of fellow sufferers, I have determined to put down what little I have found out from bitter experience, knowing it will be practical and true, as far as it goes."

"HOUSE PLANTS" has been written by a woman for the countless thousands of women who have no conservatory or hothouse, and are compelled to grow their plants in the home, and it gives freely of the knowledge which the author has been gathering through many years of observation.

Recognizing the fact that no book adequately covering the subject has ever been published, Mrs. Hillhouse has undertaken to fill the deficiency, and most ably and effectively has she accomplished the task. The result is a book of information and instruction, written in simple language, which will be prized and consulted by every woman so fortunate as to become its possessor. Of all books of reference issued for domesticated women, "HOUSE PLANTS" will take its position second only to the much prized and ever handy family cook book.

The amateur will be both surprised and delighted with the great range of plants which this book tells us it is possible to successfully raise in the house. Chapters are devoted to Bulbs, Cacti, Ferns, Flowering Plants, Foliage Plants, Lilies, Palms, Shrubs, Vines, Creepers and Basket Plants, and one on plants unclassified. A separate chapter on the propagation of plants is extremely interesting, as it is here so many fail.

Again quoting from the author, "In writing this little book, I have endeavored to keep strictly within the lines of my personal experience, and to select for description and suggestion as to treatment only those plants which I knew could be grown successfully in our living rooms or houses. This, undoubtedly, may be done, if my instructions are followed."

"How little most people—bright people, too—know of the marvelous and amazing creations of the plant world. These silent monitors, the flowers, are so dumb, but speak to us through the delicacy of their scents, their intricate shapes, complex habits, and the glorious painting of their heavenly colors, that no human artist can command."

HOUSE PLANTS, 12mo., 220 pages, cloth, profusely illustrated, and with complete and ready reference index to all plants mentioned. Price \$1.00. A. T. De La Mare Ptg. and Pub. Co., 2 to 8 Duane St., New York, publishers.

We Believe every reader of AMERICAN GARDENING feels proud of his paper and the practical, uplifting work it is engaged in; it is raising the standard of Gardening, and maintains the dignity of all engaged in the profession.

We Believe the cause of good Gardening to be eminently a missionary one; from which it follows that the circulation of AMERICAN GARDENING can most readily be enlarged through the efforts of its subscribers. Our circulation, therefore, is an index of our subscribers' interest in the paper.

We Believe our readers are anxious to see AMERICAN GARDENING reach the highest possible development in its work of horticultural education. The legitimate aim of a class paper is to increase its influence through an extension of its circulation.

American Gardening is the most successful of all, and has the largest circulation of any weekly Journal devoted to Gardening and Fruit Culture, but has scope and the disposition to add to its list tens of thousands of patrons. "Come with us and we will do you good," is a living truth in our case; all our new friends are loud in their praise of the value of the paper to them. The cause of "AMERICAN GARDENING" is the cause of American Horticulture.

We Believe that our friends are the ones on whom to call to push circulation. Understanding thoroughly the value of the paper to every one interested in gardening, they can best express its spirit and comprehensiveness and succeed in making subscribers.

With a View to obtaining the assistance of our friends in the propaganda for new subscriptions, and in order that they may have something tangible whereby to remember their successful efforts, we have compiled the following list of

SUMMER

PREMIUMS

SUMMER

To which we invite your attention in the hope that each and every reader of the paper will endeavor to send us **AT LEAST** one new subscriber before the close of the season.

American Gardening for 1896. Containing 832 pages of text and illustrations, with complete index. The most full, complete, and desirable volume on Gardening, Fruit Growing, and kindred subjects ever issued. Few works on horticulture can compare with this in value to the student or the practical man. *Handsomely bound in cloth, with leather back and edges.*

This most desirable volume will be forwarded, express paid, to any address, for only seven new subscriptions at \$1.00 each.

American Carnation Culture. By L. L. LAMBORN. A work on the Classification, History, Propagation, Varieties, Care, Culture, etc., of the Divine Flower. Nothing has been left unsaid from which any practical benefit could be obtained. Illustrated. Third edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Beautifying Country Homes. By J. WEIDEMANN. A handbook of landscape gardening. This is the most elegant and useful work on the subject ever issued in this country. It is beautifully illustrated with numerous fine wood engravings, and with 17 full-page and 7 double-page colored lithographs of places already improved. It contains general directions for lawns, roads and drives, walks, hedges, trees and shrubs, gardens, ornamental grounds, hints on burial lots, etc., etc. The beautifully colored plans of improved places are accompanied by descriptions giving the names and positions of the various trees and shrubs employed in planting, thus providing a complete planting map. Cloth, 4to. Reduced from \$15.00 to \$10.00.

Given for 20 new subscriptions at \$1.00 each.

Bulb Culture (Henderson's). By PETER HENDERSON. Contains special cultural directions for over 200 varieties of Bulbs. Compiled with great care, and its information is accurate, reliable and up to the latest. 25 cents.

Given for 1 new subscription at \$1.00 each.

Bulbs and Tuberous-Rooted Plants. (Their History, Description, Methods of Propagation and Complete Directions for their Successful Culture in the Garden, Dwelling and Greenhouse). By C. L. ALLEN. The author of this book has for many years made bulb growing a specialty, and is a recognized authority on their cultivation and management. He has taken the initiative to make bulb growing a special industry in this country, and writes from his own long and extensive experience. The subject is treated in a very exhaustive manner. Handsomely illustrated, cloth, 12mo. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

Canning and Preserving Fruits and Vegetables, and Preparing Fruit Pastes and Syrups. By ERMENTINE YOUNG. This work gives a full account of the best methods by which the surplus fruits may well be saved for home use and for the large market demand, and a handsome profit accrues

to the home workers. A practical chapter on evaporation of fruits is embodied in the book. Paper, 20 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemums and Their Culture. By EDWIN MOLYNEUX. Sixth Edition. By far the best practical work yet written on this subject. 50 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemum Culture for America. By JAMES MORTON. This is the only 'Mum book published for American use, and is an excellent and thorough work; especially adapted to the culture of Chrysanthemums in America. The field is fully covered. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Elliott's Practical Handbook of Landscape Gardening. By F. R. ELLIOTT. Designed for city and suburban residences and country schoolhouses, containing designs for lots and grounds, from a lot 30x100 feet, to a 40 acre plat. Cloth, 8vo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Ferns and Fern Culture. By J. BIRKENHEAD, F. R. H. S. How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, Wardian cases, dwelling houses, etc. A thorough and complete work by a renowned specialist. 128 pp., thoroughly illustrated, 16mo., cloth. 75 cents.

Given for 2 new subscriptions at \$1.00 each.

Fruit Culture, and The Laying Out and Management of a Country Home. By W. C. STRONG, ex-president of the Massachusetts Horticultural Society, and vice-president of the American Pomological Society. Illustrated. New revised edition, with many new additions, making it the latest and freshest book on the subject. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Fruit and Fruit Trees of America, or the culture, Propagation and Management in the Garden and Orchard of Fruit Trees generally. By A. J. DOWNING. Second revision and correction, with large additions. By CHARLES DOWNING. This work has no equal in the country, and deserves a place in the library of every pomologist. It gives descriptions of all the finest varieties of fruit, native and foreign, cultivated in America, and contains the names and synonyms of over 10,000 varieties. Over 1100 pp., with several hundred outline engravings, including supplements. 8vo., cloth. \$5.00.

Given for 12 new subscriptions at \$1.00 each.

Grape Culturist. By A. S. FULLER. New and revised edition, 1894. One of the best works on the culture of hardy grapes, with full directions for all departments of propagation, culture, etc. Illus., cloth, 12mo., \$1.50.

Given for 3 new subscriptions at \$1.00 each.

INCUBATORS. Self-regulating. Catalogue free
O. S. SINGER, Cardington, O.
Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send
10 cts. for Mrs. Theodosia B. Shepherd's
New Catalogue of Rare and Beautiful
Flowers.

Many New Begonias, New Cosmos,
Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.
Mention American Gardening when you write.



"PLEASE ROOM AT THE TOP."
Have that position for a number of
years. The statement. Nothing to do
but keep the best wire fence
made, and the rest. Sometimes a new
concern is placed in near the head of the
line, but are in their place in the rear,
where there is no room.

PAGE WOVEN. Adrian, Mich.
Mention American Gardening when you write.

Established 40 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

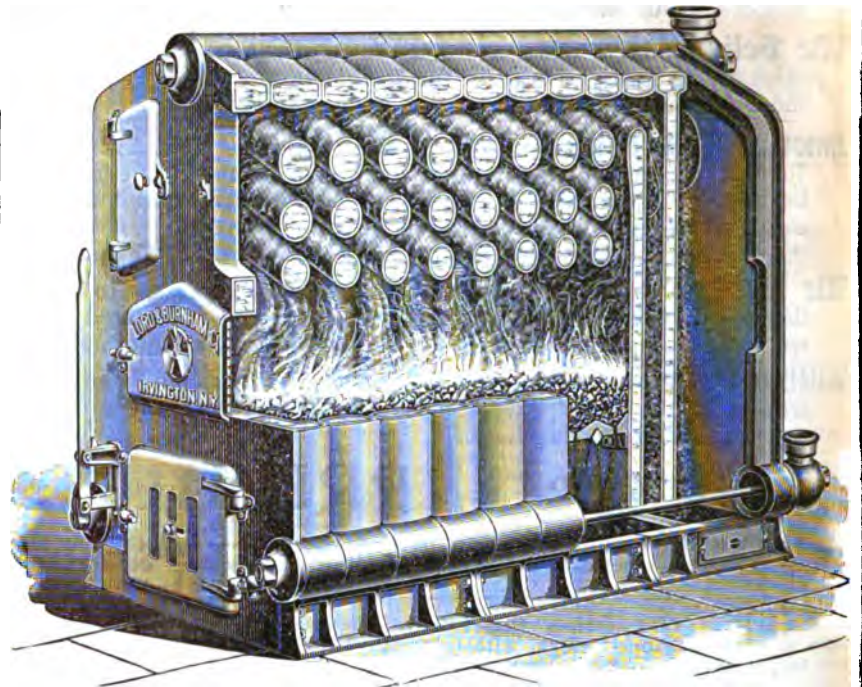
ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

LORD & BURNHAM CO., Horticultural Architects and Builders and Manufacturers of Heating and Ventilating Apparatus. (Established 1856.)

Plans and estimates furnished on application for Heating and Ventilating Apparatus erected complete, or for material only. Highest Awards at the World's Fair.



NEW SECTIONAL HOT WATER HEATER.

Specially adapted to large ranges. Will heat up to 16,500 feet of glass.
Highest economy. Moderate cost. Send six cents postage to New York
office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

Crimson Clover Seed.

DERBY'S GROWS. Pedigree dates back to 1887.
Crop of 1897 for Sale. Address
SAM H. DERBY, Woodside, Del.

Mention American Gardening when you write.

Delaware-Grown Crimson Clover.

Absolutely pure.
New crop.
Now ready.
BROWN SEED CO.,
Wyoming, Del.

Mention American Gardening when you write.

A YARD OF ROSES.



Copyright, 1896, by O. D. Gray, New York.

The illustration but faintly represents the beauty of this celebrated painting by the well-known artist, Mr. Newton A. Wells. The grouping and coloring has been performed with exquisite taste, and the reproduction we offer is worthy a frame, and a position on the wall of any one's room. This sketch, in eleven colors, is 36 inches long and ten inches wide, on heavy drawing paper, and sells in the art stores of New York for fifty cents. We will send "A Yard of Roses," securely packed in a tube to prevent injury, postpaid, as follows:

To all renewing their subscription and adding five cents to pay postage and packing.

To all sending us \$1.00 for their own renewal subscription and 75 cents for the subscription of a friend, we will send "A Yard of Roses" free and postpaid, as a premium to both addresses.

AMERICAN GARDENING, P. O. Box 1697, New York.

AMERICAN GARDENING

Intensive Cultivation is the Keynote to Success.

A WEEKLY JOURNAL, DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 137.
COMBINED SERIES VOL. LI.

NEW YORK, AUGUST 7, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Apples, Early.....	556	Controlling Growth by	Hollyhocks.....	555	Pears, Gathering.....	556	Vegetable Garden.....	550
Begonia Disease.....	553	Fertilizers.....	Home Plot, All About the	557	Pears, Hedge of Dwarf	552	Watering in Sunshine..	555
Cabbage, Keeping		Corn Smut.....	Horticulture in 1836 and		Plants Named.....	561	Window Gardening.....	557
through Winter.....	554	Fertility, Concerning...	1896.....	556	Poultry Notes.....	557		
Carnation, Wm. Scott..	559	Fruit Garden, The.....	Lawns in Parks.....	554	Private Gardeners.....	558	Illustrations.....	
Catalogues Received...	552	Fruits Received.....	Lily Disease, The.....	550	Raspberries.....	556	Current, A Cordon.....	549
Celery for Winter.....	550	Gloxinias.....	Lily Pond, Heating A...	549	Readers' Notes.....	555	Gloxinias.....	553
Chrysanthemums.....	550	Grapes Under Glass,	Market Reports.....	560	Societies, Reports of...	558	Lily Pond, Heating	
Clematis Dying.....	555	Commercial.....	Mich., Conditions in...	554	Squash Bugs.....	553	Plan and Section.....	551
Cordon Currants.....	555	Greenhouse Building...	Paint, Good.....	559	Strawberries.....	555	Pears, Hedge of Dwarf.	552

Heating the Lily Pond in Prospect Park.

To all lovers of flowers, the Lily ponds in Prospect Park, Brooklyn, N. Y., are now a point of interest. A space has been laid out in the park for three ponds, which are walled up with concrete and provided with a water supply and an outlet. One pond is used for the hardy native Water Lilies, another pond is exclusively used for the Egyptian Lotus, while the third pond, which is of absorbing interest to the multitudes who visit the park, is used for tropical species, the principal plant being the *Victoria regia*, although the pond contains other Water Lilies from the Amazon and Orinoco Rivers, and also the Water Poppy. In order to grow these

pond and piping is shown in fig. 153 from which it will be seen that the sides of the pond slope inward to the bottom, commencing at a point about 2 feet below the surface. A water line is maintained about 3 feet 6 inches above the main bottom, and the pond holds approximately 48,000 gallons. The water is heated by a No. 10 Invincible hot-water boiler, which presents a grate surface of about 11 square feet, and the boiler is rated to carry about 2,500 square feet of direct radiation for heating buildings. The piping is 4 inches in size, of the greenhouse castiron variety, with greenhouse fittings and rust joints. Two flow and two return mains are taken from the boiler to the piping in the tank. The flow mains rise from the side of the boiler, which is of the sectional type, and run on



FIG. 152.—BRANCH OF CORDON TRAINED CURRANT. (See page 155.)

flowers it is necessary that the water shall be artificially heated even during the summer months. We are enabled, through the courtesy of the editor of the *Metal Worker*, to lay before our readers the following details and accompanying illustrations of how the necessary heating is accomplished.

A plan of the tropical Lily pond, showing the location of the heating apparatus and the piping, which was designed and installed by John A. Scollay, 74 Myrtle avenue, Brooklyn, N. Y., is shown in fig. 154. The water in the pond is heated by contact with the piping through which hot water is circulated from the boiler. The pond is oval in form, 56 feet long, 38 feet inside, and about 4 feet deep. A sectional view of the

a brick foundation inclosed in a wooden box to the Lily pond.

On reaching the pond the two flow mains have a standpipe, which serves both as an air vent and an expansion pipe. From this point the piping has a fall all the way back to the boiler. After passing the standpipe the flow main drops down and runs around to a point near the main Lily bed where it connects with a Y, from which two 4-inch pipes are run around the pond, turns being made by means of 45 degree ells, as shown. On reaching the point where the return main leaves the tank, the two 4-inch pipes are connected into a Y and from it to the return main. This method of piping is followed in each end of the pond

The requirements laid down by the Park Commissioners were that a temperature of 90 degrees should be maintained in the water, regardless of the temperature or amount of water that it might be necessary to turn into the pond. The fires were first lighted June 2. The water, which had been taken from the street mains to supply the pond and change the water in it, has varied in temperature from 40 to 50 degrees, and the specified temperature in the pond has been readily maintained, sometimes running as high as 96 degrees when the weather was bright and clear and the sun strong.

When an outlet at one end of the pond draws off the hot water to reduce the temperature, cold water is brought in to restore the proper temperature and level.

An overflow pipe is provided at each end of the pond to prevent the water rising above the desired height. In operation it has been found that it is only necessary to attend to the fire in the boiler twice a day, and in damp, dull and cloudy weather, when little heat benefit is derived from the sun, no difficulty has been found in maintaining the temperature at 90 degrees or higher, with the water in the flow main seldom exceeding 120 degrees. The water in the pond is heated by contact with the pipes, in order to avoid a deposit of mud in the boiler that would be probable, owing to the earth for the plants in the pond and the dust that would blow into the pond and settle, and which would be carried into the boiler with the water in circulation.

The Vegetable Garden.

Beets sown now will be nice and young for winter use; the largest may be kept for culinary purposes, and the smaller ones set apart in a cool place and covered with earth, will be useful in spring to set out in the garden for early greens and beets. This is the quickest method of securing early beets in spring.

Celery for Winter. If planted out during the past unprecedented wet weather, would now be starting finely into growth, for the late period has been ideal celery weather. It is now time to have set out all that it is intended to plant, and if not already done, attend to the matter as soon as possible.

Endive is one of the best of salads for fall and early winter use, and the present is now a good time to plant for these purposes. Those requiring much salad should grow lots of endive, as it is of easy cultivation, and is also very pretty for garnishing.

Spinach.—Now is a good time to make a sowing of this for fall use. Sow on rich ground. It is a fine crop to follow an early crop, and is much appreciated when gathered young.

Carrot.—Early forcing carrot may still be sown. It is much better to use for many purposes while in the young state, and if it is sown now and kept properly cultivated and thinned out, it will in due season make nice young carrots for use in winter.

Corn Smut.—Carefully gather corn smut, and take it right away and destroy it by burning, as this will efface all germs of the fungus. It is a waste of time to pick it off and then throw in the chicken-yard or on to the rubbish heap, as the spores are kept dormant and only await a favorable opportunity to make their appearance the following summer.

Spare Ground.—Any ground in the vegetable garden that may not be needed for planting purposes, should be sown with crimson clover, or any other clover. The ground presents a better appearance if occupied by a growing crop, be it but a green one to be again plowed under before next planting time. Moreover, as is well known, clover adds much to the nitrogen of the soil, wherever it is grown and plowed in.

W. M. EDWARDS, Conn.

The Bermuda Lily Disease.

As already announced in these columns, the disease of the Bermuda or Easter lily has been made the subject of study during the past three years by the Division of Vegetable Physiology and Pathology of the United States Department of Agriculture. The investigations, carried on by Mr. Albert F. Woods, assistant chief of the division, are not yet completed, but it is believed sufficient information has been obtained to warrant a preliminary report on what has been accomplished. This report will soon be issued by the Department of Agriculture, but in view of the fact that bulbs are now coming in and that planting will soon begin, a brief review of the main facts set forth may be of value.

The lily disease is characterized by the spotting and distortion of the leaves and sometimes the flowers and a general stunting of the plants. When the flowers are spotted the plants are unsalable, regardless of the condition of the leaves. Where the flowers, however, and the upper whorls of leaves are not injured the plants may still be sold for certain decorative purposes.

The disease occurs in Bermuda, where the bulbs are grown in the field; in this country, where they are forced, and in all probability wherever this and related lilies are cultivated. In this country it destroys from 20 to 60 per cent. of the crop of *Lilium Harrisii* planted, and as to the losses elsewhere there are no figures available.

The disease has been attributed to worn-out soil, premature removal of flowers and stems, premature harvesting, improper propagation, bad treatment during forcing and the attacks of various insects and fungi. All these matters have received more or less attention, and experiments, extending through several seasons, have been

in well-drained, well-aerated soil, containing not more than one-fourth well-rotted manure. All injured bulbs should be thrown out and in watering exercise care in keeping the young foliage as dry as possible, for it may be injured by having water injected into the tissues. In feeding avoid the use of solutions of horse, cow and sheep manures, as they have a tendency to clog the soil, resulting in asphyxiation of the roots and consequent injury to the top. Soluble chemical foods may be used to advantage, but caution must be exercised in applying them.

The matter in the report is treated under the following heads: (1) Characteristics of the lily disease, (2) prevalence of the disease and its destructiveness in this country, (3) theories as to the cause of the disease, (4) evidences as to the causes influencing the disease, and (5) preventive measures.

B. T. GALLOWAY.

Chrysanthemums.

Scald.—Dull, cool weather, followed by a hot day, is usually the time when scalding takes place, the plants then being soft and easily wilted. The house should be kept very moist to keep the foliage stiff, and if this be done, scald can usually be prevented.

Golden Wedding.—Of all varieties this is perhaps one of the most susceptible to scald, and certainly one of the hardest to grow well. It does not need nearly so much water as the average; with the least overwatering the "yellows" appear and the foliage dies away at the bottom of the stem. But if one does happen to strike the proper conditions, Golden Wedding is a magnificent variety, though it is within the bounds of possibility that Modesto will crowd it out in time.

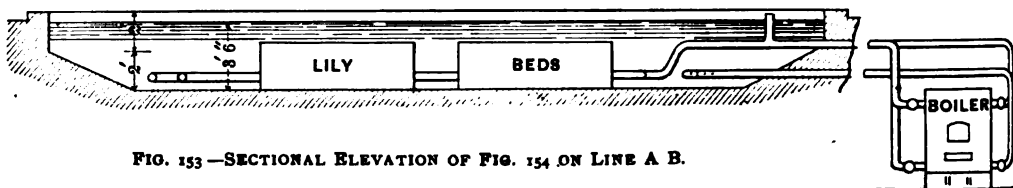


FIG. 133—SECTIONAL ELEVATION OF FIG. 154 ON LINE A B.

made to prove the truth or falsity of the various theories. As a result of the work the evidence is sufficient to warrant the statement that the trouble is not due to any one thing, but is brought on by a combination of factors, involving long-continued improper selection, propagation and cultivation in the field; the work of a mite (*Rhizoglyphus echinops*); injuries resulting from the punctures of plant lice, or aphides, and the attacks of certain bacteria and fungi, notably an *Oospora* related to the one associated with potato scab. The injuries from the mites, aphides and fungi are always more severe on plants which have been weakened by improper methods of propagation, selection, etc., while being forced.

In regard to preventive measures, it is plain that work must begin where the bulbs are grown in the field. Every plant that shows evidence of disease should be destroyed, and only the strongest and healthiest bulbs should be used for propagation. A second selection should be made when the plants from the scales are being transferred to the field. A third selection should be made when the bulbs are prepared for shipment, so as to reduce as much as possible the difficulties encountered by those who force the bulbs. In the field rotation of crops should be practised, for bulbs long grown on the same soil will have more of the mites and other parasitic organisms to contend against; hence will run greater risks of being weakened. The bulbs should be ripened with their stems on and should be dug only when fully matured and rested.

When forced, bulbs should be planted

Side Shoots should be removed as soon as they can be caught hold of. They all detract from the vigor of the main stem, and it is wonderful what a quantity of laterals a single plant will produce in a season. It makes a big difference to the flower if all the energy that would be spent in throwing out useless side shoots and suckers be concentrated in the proper channel. Plants should be picked over every morning. The work then does not take so long, and many a stray caterpillar and grasshopper will be found at the same time.

Benches should have the surface scratched over once a week. This will keep the soil sweet, and weeds will not become unsightly.

Pots.—If the soil comes away from the edge of the pot, it should be rammed around very firmly, for otherwise in watering the water will run down between the pot and the ball, which latter will get dry in the center, and the whole plant suffer in consequence C. TORRY, N. J.

Strange as it may seem, the reports are favorable for a large peach crop from the Hudson valley district. Grapes are also reported to be in heavy bearing. Nine years out of ten the report has been that the frost has killed the buds, the bugs have destroyed the prospects or a heavy wind-storm has robbed the trees of the crop after it has become set.

The raspberry crop this year in the vicinity of Rochester, N. Y., is said to be the largest grown for years. Red raspberries have been greatly benefited by the heavy rains. The prospect of an immense crop of long blackberries is assured.

Commercial Grape Growing Under Glass.*

The excellent paper recently given by Mr. William Scott before the New York Gardeners' Society and since published in full in *American Gardening* very fully treated upon the cultivation of the grape under glass; so we now direct attention to the commercial aspect and possibilities of grape culture under glass.

In October, 1887, A. F. Barron, in the third edition of his "Vines and Vine Culture" (page 96), says:

"A great trade in English winter grapes seems likely to become established with America. During the past two seasons regular consignments of English grapes have been sent from this country (England). They have been found to travel well and to arrive in good condition and prove of superior

done with the native or hardy varieties, who knows but that one day the same may be said of this same locality for its hothouse grapes? One essential feature in such a business is close proximity to the market and special facilities to reach it; these are possessions of Poughkeepsie to a marked degree.

A very natural question will by this time be uppermost in your minds: Is there a market for any quantity and at figures sufficiently profitable? Yes, both are at your command, if the proper quality be produced, and in sufficient quantity. As to what quantities of hothouse grapes New York already uses, many will be surprised to hear that every week for twenty weeks, from the end of October to the end of March, an average of three-fourths of a ton of grapes comes into New York City from England and Belgium. This is mostly of the variety Gros Colmar, and the average price netted by the

he was not satisfied with the returns, so he solicited me to look into the matter for him, which I did, and with this result. The agent to whom he shipped was not able to dispose of these goods direct to retail merchants so he disposed of them to two wholesale commission men, and they in turn served other wholesale houses, from which the fruit reached the retail man or storekeeper. There were thus really four commissions, to which had to be added express, or ocean freight, duty and brokerage, making in all over 100 per cent. charges, which the consumer had to pay, together with the net return received by the grower; and apparently the customer was satisfied. This last season with a better knowledge of our market, my friend will probably clear 85 cents per pound.

This actual case is cited that it may be known we are not dealing with fancies or theories or something guessed

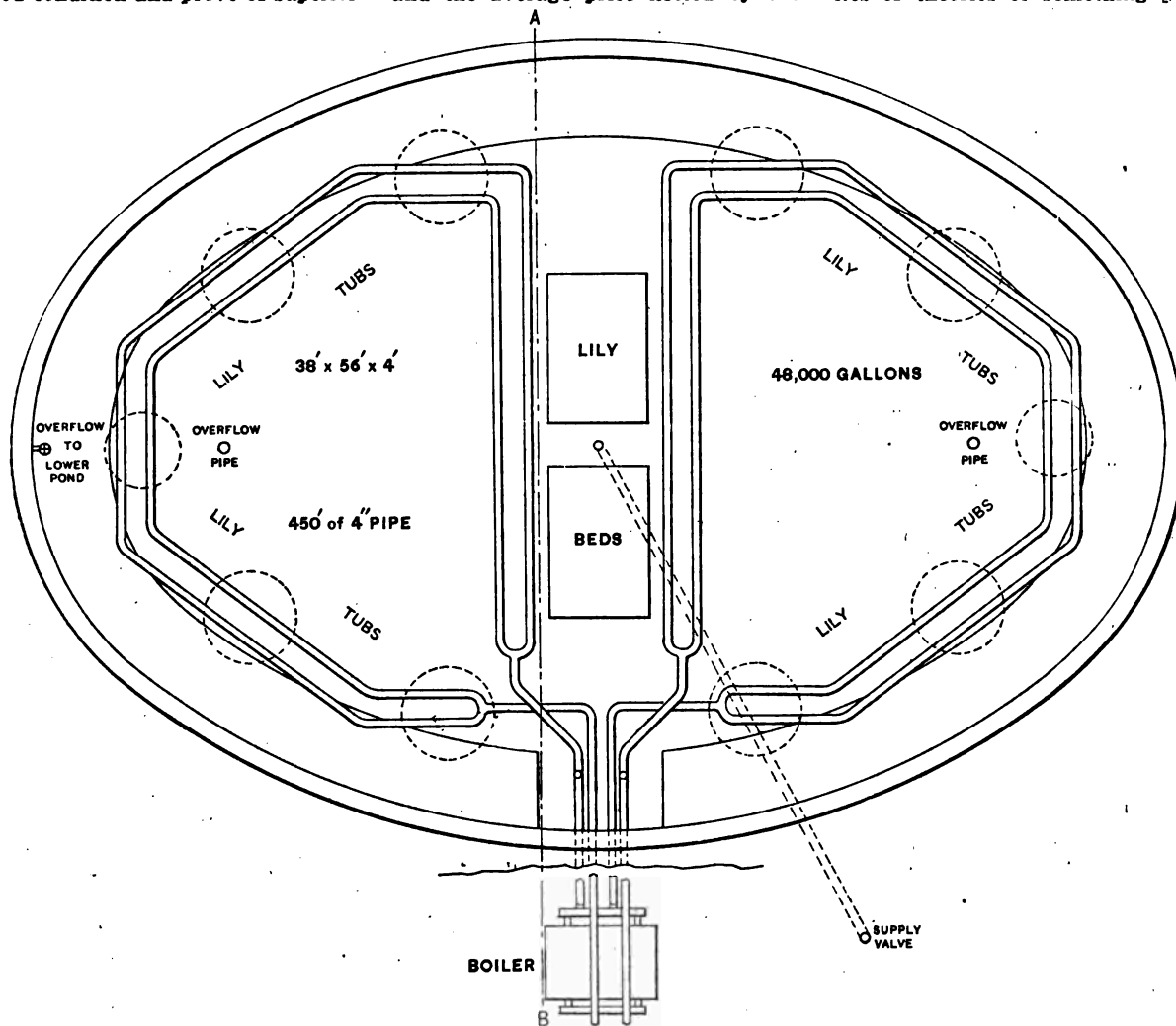


FIG. 154.—HEATING THE LILY POND IN PROSPECT PARK, BROOKLYN, N. Y.—PLAN. (See page 549.)

quality to American produce during the winter season. They are sent by the Cunard steamers, reaching New York about ten days after being cut; some are sold on arrival at New York, while others are sent on to Philadelphia, Boston, Pittsburg, Chicago, etc."

This paragraph is quoted in its entirety to prove that the subject is a live one and further to demonstrate that this branch of grape culture has been overlooked in this country. The subject is one that I have long had upon my mind, and I know of no better centre from which to start the ball rolling than Poughkeepsie.

The Hudson River Valley is famous for its native American grapes, and right here are produced some of the finest berries sent to our great metropolitan market. And if such is already

European grower this present season is 85 cents per pound, the selling price at wholesale ranging, according to market quotations as reported week by week in *American Gardening*, from 85 cents per pound for damaged or inferior berries, to \$1.25 to \$1.50 per pound for No. 1 quality, from some time before Easter, and until after that festival they are worth \$2 to \$2.50. Thus with the average price of \$1 per pound, every week an average of \$1,500 are sent abroad for what could well be produced here. As a matter of fact, the sum is really more than is quoted.

As an illustration of what profits there are in the article and the disadvantage under which the European shipper works, let us refer to an English grower of my acquaintance who, during the season of 1892-3, shipped 450 pounds per week for the entire season, which netted him 62 cents per pound. The grapes were of very fine quality, and

about; and, remember, that it is only one grower that is mentioned; there are to-day many growers shipping to this country and there are also more receivers than formerly. At present we know of five in New York City. Of what is done in other ports and cities we have no knowledge.

It is thus amply demonstrated that the industry is already of importance; that it will continue to grow admits of no shadow of a doubt, and while we are now discussing the need of taking this away from our brothers across the water and our legislators are considering the need of adding duty to protect us, we must thank our European friends for creating the market and making possible commercial grape growing under glass in this country as a profitable business, especially for winter grapes.

There is a striking analogy commercially between our condition to-day and

*Substance of lecture before the Dutchess Co. Horticultural Society by J. Withers.

that which existed in Europe until the year 1886, as is shown by a reference to the book already referred to.

The next question of importance is: Will the Gros Colmar and other late grapes thrive here? Our answer is emphatically, Yes! In our journeyings we have seen here as fine Gros Colmar grapes as were ever produced in Europe. For instance, at the establishment of W. H. Macy, at Macy Park, during last summer, we saw vines of Gros Colmar bearing 18 to 24 bunches of large size, with large berries and of magnificent color. Mr. John Shore, the gardener there, told me he found he simply had to crop them heavily, the growth generally being so vigorous; also that he had, for several years, carried a crop as heavy as the one in sight. He figures upon keeping the table supplied each year until Christmas, keeping his fruit when cut in the top of the water tower.

In Rhode Island, in several parts of Massachusetts, and elsewhere we have also seen the variety thriving. Sometimes it is a little subject to a curling of the leaf in very hot weather, but this can be prevented by applying a little shade to the border.

In a later issue will be given specific directions for embarking in the business.

Controlling Growth by Fertilizers

The possibility of suddenly altering the course of growth of plants by the use of fertilizers under present working conditions is a very dubious question. A general tendency of growth may be obtained by using different fertilizers, but no rapid and sudden changes can be made. On the other hand, it seems to me that under conditions vastly different from present practice, it may be possible to effect comparatively sudden changes by the use of different fertilizers. The first essential is a soil poor in plant-food, the poorer the better, yet in as good mechanical condition as the best greenhouse soil. Such soil may be prepared by mixing sand, crushed coke and coal ashes in proportions varying with the character of the materials employed. It will then furnish a medium to support the plants and through which plant-food may be transmitted to the roots. In this soil, practically free from plant-food, plants will make but little growth and finally die for want of nourishment. No better condition and no other so nearly approaching nature can be so easily secured for the study on a practical scale of the effect of different fertilizers on plant growth. Here, an application of nitrogen would soon produce a result due to it alone. Plants fed on a large amount of phosphoric acid and but small amounts of potash and nitrogen would quickly mature, there being no reserve store in the soil to interfere.

Good crops of tomatoes have been grown with the assistance of proper fertilizers in a soil such as I have described. I believe it feasible to grow flowers extensively under similar conditions. A careful experiment, conducted under the auspices of some florists' club, would let in a great deal of light and smooth away many of the present difficulties.

The science of fertilizers is well established, the art of using them in the greenhouse is not yet far enough advanced to be in its infancy. Fertilizers that work excellently on a farm will not do at all in the greenhouse. Enough work has been done to show that acid phosphates may and frequently do sour the soil, so that plants in the confined indoor space are ruined. Impurities, such as an excess of chlorin or sulphates, are known to cause very unfavorable effects in field work, they will certainly do more harm in a confined space, where they accumulate and remain in the soil.

There are no good grounds for argument against the statement that pure fertilizers are the only ones that can be used with certain profit by florists. Phosphate of potash, nitrate of potash and phosphate of ammonia are now used with marked success by at least one large firm of growers, and probably by several others. These materials come high, but the cost per pound of plant-food is but very little more

than in ordinary fertilizers. This extra cost is amply compensated for by the purity of the materials. They afford the ideal fertilizers with which to test and apply this suggestion of changing leaf development to flower production; all are soluble in water, and easily applied in solution. Different plants growing in a soil such as I have indicated, and fed with dilute solutions of these substances, would quickly show the effect of different elements of plant-food. The results will show the effect of nitrogen, of potash, or of phosphoric acid, uninfluenced by impurities which load up the soil, and by acid phosphates which make it sour. Under such conditions nitrogen may promote leaf-growth and retard flowering on a commercial scale, and phosphoric acid may push the flowers along when they are wanted.

In a matter so complicated as the growth of a plant, all conditions except the one studied should be eliminated if possible, so that any abnormal effect may be traced to its source. The effect of a single medicine cannot be determined when the patient is dosed up with a lot of others.

Isolated cases will doubtless be found to seemingly refute many of the statements that I have made. At the risk of being over-bold in statement, I have endeavored to make clear the difficulties in the way, and the possible means of attaining that millennium of the grower—when he can absolutely control his crop, stop it when the market is flat, and push it on when the opposite is the case. JOHN FIELDS.



FIG. 155.—HEDGE OF DWARF PEARS.

A Hedge of Dwarf Pears.

There are numerous shrubs that are suitable for making hedges about one's lawn, whether one prefers evergreens or deciduous shrubs, but the number is limited that can be used in hedgerows that are of both use and beauty. The barberry is one of the latter, these bushes making a very graceful, but not densely leaved, growth; but the barberry's fruit is not desired in large quantities, nor is it a desirable plant to have near wheat fields, as it harbors one stage of the "rust" fungus of the wheat.

On my place I am planting hedgerows of dwarf pear trees, using winter varieties of the fruit almost exclusively. Such a hedgerow is, of course, hardly suitable for the front of one's lawn, but for side rows, and for use in the rear of one's house, the dwarf pear is quite unobjectionable. As for beauty—well, any one who has seen a long row of these little trees in full blossom will not soon forget the sight. They are very attractive little trees, also, when in full leaf, without the bloom, as they should be kept well trimmed back to secure good fruiting, as well as a good hedge. It is surprising, too, what an amount of choice fruit one can thus raise upon even a small place. In my own case, I am running a pear hedge around a two-acre lot, and am using also some cress hedges in the rear of the buildings. It will take at least 300 trees to complete the outside row. As this will interfere very little with the planting of fruit trees over the whole interior surface of the two acres, it will be seen that on a given

amount of ground one can raise much more fruit by using this outside hedgerow method. It is possible to crowd the little trees in a hedgerow, because they will be on the outside, and can thus have plenty of air and sunshine, though very close in the row; and though the row of dwarf pear trees may be quite close to the inside, larger fruit trees, the latter are not crowded by the former, since they stand up above them. This sort of work is not advisable on large commercial orchards, but on the home acre, in the village lot, one wishes to make the most of every foot of ground.

Planting so many of these little pear trees, I selected winter sorts, and chose that king among pears, the Anjou, and the scarcely less inferior Lawrence. Both these pears do finely on the quince stock, and both are winter varieties. With such fruit one can store in a cool cellar and unload upon the market when the market is most in need of winter pears. With fall fruit, one is very nearly at the mercy of the market, for he cannot hold the fruit for any length of time.

My own trees are set about 4 feet apart. In future plantings I shall increase the distance somewhat. In setting the trees be careful to get the point where the pear stock and quince root join several inches below the surface, and for the first winter, at least, give the roots a mulch for protection.

W. D.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

DAVID B. WOODBURY, South Paris, Me.—Trade List of Pansy Seeds.

KEENE & FOULK, Flushing, N. Y.—Fruit and Ornamental Trees, Roses, etc.

HERB & WULLE, Naples, Italy.—General Catalogue of Bulbs and Plants.

SIEBRECHT & SON, Rose Hill Nurseries, New Rochelle, N. Y.—Pot grown Strawberry Plants.

HENRY A. DREER, Philadelphia.—Quarterly Wholesale Price List of Bulbs, Seeds, Plants, etc.

HENRI BEAULIEU, Woodhaven, L. I.—Price List of Seeds, Bulbs, Plants and Garden Supplies.

SIEBRECHT & SON, New Rochelle, N. Y.—Price List of Pot Grown and Layer Strawberry Plants.

M. J. LYNCH, 256 Main St., Poughkeepsie, N. Y.—Tested Seeds, Trees, Shrubs, Plants, Bulbs, etc.

THE LOVETT COMPANY, Little Silver, N. J.—Price List of Pot Grown and Layer Strawberry Plants, etc.

CH. MOLIN, Lyon, France (H. Beaulieu, Woodhaven, N. Y., agent).—Catalogue of Seeds, Plants, Trees, etc.

J. M. THORBURN & CO., New York.—Trade Price List of Turnip and other seeds adapted to the present season.

LETELLIER & FILS, Caen, Calvados, France.—Price List of New Hybrid Cineraria, Boule-de-Neige, with pure white flowers.

LOUIS VIEWEG, Seedsman and Nurseryman, Quedlinburg, Germany.—Seeds and Plants, American Raspberries and Blackberries.

NEIL, THE NURSERYMAN, Laporte, Ind.—Circular of the Gault Perpetual Raspberry. Also general list of Nursery Stock and Fruit.

FREDERICH SPITTEL, Armstadt Thuringia, Germany.—Colored plate of selected large flowered fancy Pansies under name. Some excellent varieties are included.

ELECTRIC WHEEL CO., Quincy, Ill.—Catalogue of the All Iron Wheels Runners, etc., for all purposes made by this firm. Wheels can be had for any wagon.

F. SANDER & CO., St. Albans, Eng., and Bruges, Belgium.—Descriptive List of Novelties for 1897; profusely illustrated. Those in search of desirable novelties should procure a copy of this list.

LETELLIER & SONS, Caen, France.—New Cineraria Boule-de-Neige (Snow Ball.) This is a semi-dwarf with white flowers and disks of creamy white, thus quite distinct from all other Cinerarias.

Gloxinias.

There are few tropical flowering plants more showy or more satisfactory than the Gloxinia. Its handsome tubular flowers ranging in color from pure white to deep purple, and from the faintest pink to deep rose, the length of time that plants are in flower (usually from three to four months) together with their bright green foliage, commend them at once to the favor of almost everyone.

The accompanying illustration (fig. 156) represents a batch of plants grown at Smith College Botanic Garden, from seed last season, and although most of them produced a few flowers last fall, they are now practically flowering for the first time.

Seed was sown the first week in March of last year in well-drained pans, the compost consisting of one-third leaf soil, one-third peat, and one-third silver sand, the whole sifted finely. The pans were placed in a temperature of 70 degrees and kept shaded. As soon as the seedlings were large enough to handle, they were pricked off into other pans. Until the

certificate of merit, and it is called Gloxinera, being considered the forerunner of a new race.

The Gloxinia is a native of Central America and perhaps it may be interesting to many of the readers of American Gardening to know that the name Gloxinia is not the correct one. The proper name according to the rule of priority in plant names adopted by botanists, is *Sinningia speciosa*, but the name Gloxinia is so well established that it will take years to disestablish it.

EDWARD J. CANNING, Northampton, Mass.

Grafting Cereus.

Would a *Cereus grandiflorus* do as well grafted on a five-year-old plant of *Cereus Macdonaldi* as it would grown on its own roots, and would it bloom sooner than to grow it from a rooted cutting? In case of grafting would it be best to cut all the stems back and graft on all or only cut one or two? It has three main stems.—C. M., Pa.

—We see no reason why it would not

leaves. The stock solution (see page 276) should only be diluted with from eight to ten parts of water for use on this pest. In small fields the old bugs can be destroyed by trapping. This is done by placing bits of boards around the plants for the adult bugs to hide beneath. These are visited two or three times a day. The bugs are killed by crushing, or by throwing them into a dish of kerosene. The adult bugs should be trapped during June and the first half of July.—F. A. S.

Begonia Disease.

For two years I have failed with my tuberous Begonias. Soil; leaf mold, garden soil and sand. Location; some in greenhouse, some in dwelling house, some in garden; all shaded most of the day from sun. The tubers were started by planting in small pots, unsprouted tubers, about March 1. In every case the plants sent up a few fine flowers, then quit blooming, and in many cases the buds dropped, and the leaves blackened more or less.—E. A. DODGE, Mo.

—The plants are suffering from a disease which is peculiar to the tuberous Begonias, and by many thought to be bacterial, but little is known about it. Experts sometimes treat it successfully, but their method is only possible where whole houses are devoted to the one plant. The main point is a change of atmospheric conditions for a time, so that the bacteria cannot thrive. Badly affected leaves and also all flower buds are cut away, and the plants are syringed several times during the day, and in the afternoon the house is thoroughly damped down and the ventilators closed. The effect of this is to produce a more rapid and new growth. Then when this works satisfactorily and new flower buds appear, the temperature is again brought back to the normal.

The treatment of our correspondent's plants seems to have been wrong, inasmuch as they have been kept too heavily shaded, and possibly a fetid atmosphere was the result. Tuberous Begonias resent such conditions perhaps more quickly than any other plant cultivated. The proper conditions and temperature for them are those of a light, airy, well-ventilated greenhouse with only natural sun heat, unless during very cold weather, when a little heat may be applied, if possible, and the ventilators opened, but in ventilating, care must be taken that cold currents of air never strike directly upon the plants; judgment is needed in watering, the ball of earth in the pot needs to be kept moderately moist, never remaining wet, nor yet ever becoming quite dry, while the plant is in a growing and flowering condition.

Soil for Strawberry Runners.

Is it necessary to use prepared soil or only that which strawberry plants grow in, when potting them?—Geo. B. W., L. I.

—If when laying the runners in pots the first time is meant by the question, only ordinary soil is needed. For other purposes see notes on strawberries in various issues of American Gardening.

Tomatoes Not Setting.

(To Mrs. T. C.)—Without knowing more of local circumstances, in fact, without seeing the whole conditions personally, no positive reply can be given. The flowers fall because they are not fertilized. Cold and damp may be accountable.

Why Do I Fail?

(To Subscriber)—It is absolutely impossible for us to give you any assistance unless you furnish full particulars. To merely ask "Why do I not have success with Peonies, Clematis, English Violet, etc.," is waste of time. What think you of our saying, "Why did our grandmother die?"

From northern Ohio the latest advices are: Apples still falling and will be comparatively small crop. Cherries and raspberries very good. Blackberries good. Grapes scarce. The locust has disappeared.



FIG. 156.—HOUSE OF GLOXINIAS.

plants were potted, all the water they received was given by the subirrigation method, that is, the pans were placed in pot saucers of water until they were sufficiently moist. It is fatal to Gloxinia seedlings to water overhead, and in fact, at no time must the plants be watered this way. As soon as large enough the seedlings were potted and grown on rapidly in a well-shaded house and kept rather close. Toward the middle of September the leaves began to show signs of maturity, water was then gradually withheld until the leaves had all died away naturally. It is most important that the leaves ripen well and should not be removed until there is no more life left in them, as they return to the tuber the starch and other substances they contain while in growth. As soon as the leaves are all off, the pots may be stored away on a shelf in a temperature of about 60 degrees or the tubers may be taken out of the pots and placed in sand in shallow boxes and stored in a warm cellar until toward the end of February, when they should be repotted and gradually started into active growth again.

The Gloxinia belongs to the family Gesneraceae, to which belong the Achimenes, Gesneras, Isiolomas, Streptocarpus, etc. New varieties may be obtained very readily by cross-fertilization. Among the novelties offered this year by Messrs. James Veitch & Sons, the well-known London (England) nurserymen, is a hybrid between a Gloxinia and a Gesnera. It is spoken of as quite an acquisition, the Royal Botanic Society has awarded it a

do well, and grafted, it would certainly bloom sooner than from a cutting. Do not graft more than two stems this year, then graft the other next year if the two take this year. The work should be done at once, as June, July, and August are the growing months. We suppose the true *Cereus*, round stems, is meant. If the flat-leaved or stemmed *Phyllocactus latifrons*, the graft would not unite.

Bugs on Squash Vines.

(To W. B. L.)—The insect sent by W. B. L. is the common squash-bug (*Anasa tristis*). Although the young of this insect pumps the juices from the leaves so rapidly that the latter soon look as if a fire had struck them, I have never known the bugs to attack the vines where the latter leaves the ground. Besides the adult insects feed very little, if any, during July, or the period during which they are busy laying their eggs. Hence, I mistrust that if W. B. L.'s vines are injured at the point where they leave the ground, it is the work of the squash-borer, or possibly of one of the "stem-rots" of the vine. The young squash-bugs can be reduced in numbers by thorough and persistent spraying with kerosene emulsion. It will be necessary to have some form of spraying machine for this work, as the emulsion must be applied to the under side of the leaves. The spraying should have been done every other day from July 20 to July 30, and so thoroughly that the emulsion will drip from the

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1894.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 1114 Cortlandt. P. O. Box 1897.

REGISTERED CABLE ADDRESS

Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

OUR remarks in last issue upon the subject of Nitrogen crops furnish a basis for some amount of thought, and thought is the most potent fertilizer that can be applied to the soil; it brings the largest crops. The first eye-opener is the importance of some "catch crop" for the improvement of the land; this is important, yet comparatively few realize it; how few understand to what extent the soil is willing and anxious to be at work. But nature abhors idleness as she does a vacuum; she will be at work producing something, and if we do not give her seed to plant, she will plant her own, and let us mourn the result—a glorious crop of weeds.

Whatever may be the arguments in favor of fallowing, the practice is not one that is open to the ordinary farmer in the neighborhood of great areas of population. He must follow the teaching of "intensive cultivation" or the getting from the land as much as possible as often as possible.

The soil needs no rest; on the contrary, it demands work, but it does desire a change of work, and that is why the rotation of crops is an agricultural necessity. This is shown plainly by nature's own plantings, where one crop follows another in rapid succession; one form feeds upon the waste of another, or, in other words, one plant puts into the soil the elements that another takes out, and Mother Earth gains a little in absolute fertility by each operation, if the sequence has been proper.

Reducing the theory as just stated to practical ends, we can say that crimson clover should be employed to make up for what the corn, wheat, or potatoes has taken out. We say crimson clover, because it is better adapted to the purpose than any other; its open hands are held out to grasp the nitrogen that abounds in the air, and it gives as freely as it receives. This plant is so well adapted to this purpose of soil enriching, from the fact of its being, in its native heath a winter-growing plant, and, in this climate, it is idle but a small part of the time, as our ground is rarely frozen up before the New Year, and between that time and early spring there are frequent periods where this clover will make considerable growth.

But there is an important consideration that is frequently wholly overlooked; that is, the proper selection of seed suited to the locality in which the desired crop is to grow. All plants adapt themselves to their environments; where they have nine months to grow and reproduce themselves, they will use it all. But take the same plant to a locality where it has but four months to grow, it will, as a general rule, soon adapt itself to the situation and ripen its seed in the time given. And it will make just as much growth in the four months as in the nine. For that reason it is advisable to obtain seed grown in conditions somewhat approaching those of the locality to be sowed.

Almost the whole of the seed offered is grown in Europe, where its growing season is longer than with us, and consequently, the plant does not make so large a growth here as there. But, if we were to save our own seed, in two or three generations it would make as large a growth here as there. It would, moreover, be less liable to winter kill, not because its nature would be changed, but because the extra growth it would make would give it more strength. On Long Island crimson clover seeds very freely, at least it did last season. Had that seed been saved it would undoubtedly have produced a much better crop for that locality than foreign seed.

This is a matter of great interest to our cultivators, and they should make a practical test with seeds of their own production. We hope to say more about "catch crops" on a future occasion.

IF the stand of Park Commissioner Rogers, as set forth in another column, be a true deduction from the facts, and it be allowed that "experience proves that lawns cannot be maintained, if all who wish may walk upon them at will," it is a sad commentary upon the intelligence of the American citizen. The argument, however, is not borne

out by the facts. For instance, in Prospect Park, Brooklyn, N. Y.; in Chicago, Ill., and elsewhere at home, also in many European cities, experience proves that lawns can be maintained, and an unlimited number of people be permitted to walk upon them at all times without serious injury.

Keeping Cabbage Through the Winter.

The old plan of burying, or putting cabbage in trenches during winter, or for winter use, has become obsolete, and a more simple and easy plan has been adopted. Where cabbage is grown on a large scale for shipping purposes, the best plan is to lift the cabbage and stack them two tiers deep and as closely as they can be placed in an orchard, or wood if convenient, and cover with leaves to the depth of two or three inches, the leaves to be kept in place by a slight covering of earth. In this way the heads will keep perfectly sound all winter, and they can be easily taken up as wanted for shipping.

For family use cabbages can be kept in the same way, only it will not be necessary to make the second layer. It is quite important to keep them a little below the freezing point. It has been suggested to keep them in some convenient building, but this plan has always resulted in failure, as the dry atmosphere is fatal; cabbage must be kept moist and cool, the slightest wilting renders it unfit for the table.

Conditions in Michigan.

A correspondent in Berrien Co., Mich., writes: "There is not a man here who has made a dollar with fruit this year; nearly all have quit picking blackberries as they did strawberries, raspberries and gooseberries. The bushes are full, but the returns do not pay expenses. Apples have nearly all fallen off the trees, peaches but few, pears good crop, grapes heavy crop, none killed by early or late spring frosts."

—What are the faulty means of distribution that bring about the conditions of which the writer of the foregoing tells us? Something is wrong, 'tis evident. In the larger cities there are hundreds of people to whom fresh fruit would be welcome if they could get it at a cheap figure, but no matter what the circumstances at the producer's and the consumer's generally has to pay the average price, never reaping the benefit of supply.

Fruits Received.

Gooseberries.—We lately received a number of samples of gooseberries from the Cairnwood orchards, Huntingdon Valley, Pa. Mr. Peder Pedersen, the manager, says that on that place they have planted over 1,300 fruit bushes, and it is intended to go largely into gooseberries of the large fruited sorts. The bushes are grown on the English plan and are doing well indeed, as the grand samples of fruit testify. Industry, Triumph, and White-Smith were specially fine samples, and the profusion with which the large berries hung on the branches was a revelation. Mr. Pedersen thinks that in a great measure his success is due to selection of stock for propagation. At all events, the fruits are as large as any one could reasonably demand and fully four times the size of the general run of those offered on the markets.

Japanese Plums.—Samples of two distinct Japan plums were lately submitted by Mr. Williams of Montclair, N. J. The moderate size of Ogon renders it a handy dessert fruit, and its clear golden color is very attractive. In flavor the variety is not so aromatic as many other of the Japan plums. Simon is especially fine, the brick red color is attractive, and the flavor peculiarly striking, recalling some of the aromatic pears. The flesh is firm and the fruit large.

Cordon Currants.

The red Currant at all times proves very amenable to training and can be got to fruit in a great number of forms. One excellent method is the horizontal cordon on the side of garden paths. Our illustration on page 549 shows a well-fruited branch from such a specimen grown on a trellis in the nursery of Ferdinand Boulon, Sea Cliff, L. I.

Another method of training, and one to which we wish to call attention at this time, not only produces excellent fruit in abundance, but also prolongs the season very considerably; that of vertical cordons on north walls. It is rare that such a position cannot be found around a country house, either on the barns or other outhouses, or even if need be, on some part of the dwelling itself, for the bushes are sufficiently ornamental to permit their use for that purpose when properly attended to.

To so train and cultivate the currant is a very simple matter, requiring but little time and no expense. The young trees may be planted about 15 to 18 inches apart and trained to one stem, or they may be induced in a young stage to make three leads which can be run up vertically at intervals of about 10 inches between the stems.

By strict attention to pruning so as to keep the spurs short, extra large racemes with heavy berries are possible, and are of special value for exhibition and other show purposes. In addition also, the lateness of the season to which the fruit may be kept is another advantage which the system possesses. Fruit thus grown can be easily protected from the depredations of birds and other pests, it being an easy matter to cover the bushes with nets or cheesecloth.

Lawns in Parks.

To the Editor of American Gardening.

All ought to agree that a public park should be designed, improved and maintained so as to better the health and add to the happiness of visitors. A quiet, restful, pleasant, beautiful place with pure air and water, ought to be the first requisite. The improvements should have for central thoughts, necessity, and simplicity. Drives, rambles, ample open wooded spaces, shelter, seats and resting places free of access to every one, with all the turf that can be induced to grow upon grounds so used, are all reasonable necessities. But lawns, shrubbery, and tree plantations for garden effects are just as necessary for the enjoyment of many, as any of the above.

Your correspondent, Pro Bono Publico, (page 525) says: "To exclude children from lawns or the cool secluded nooks of a park is as bad on the one hand, as is the desecration of a bit of fine landscape, by incongruous buildings, on the other. The parks are paid for by the people, and they should have the use of them."

It is certainly very pleasant to stroll across beautiful lawns, and innocent children playing upon them would be an attractive picture. A limited number might be permitted to walk upon lawns at times without serious injury, but in public affairs there can be no privileged class, and all must be allowed upon the lawns or all excluded. Experience proves that lawns cannot be maintained, if all who wish may walk upon them at will; and this is the vital point always omitted by those who urge that lawns should be opened to the public without restriction. The truth is, if their advice were followed there would simply be no lawn. And this is the exact situation. Either lawns must be prohibited in parks or the public must be prohibited from using them for by-ways and foot paths which is always done when thrown open.

To say that the public cannot use a lawn unless permitted to walk upon it, is merely begging the question. As well might one say that pictures upon a wall are not used because not walked upon as carpets. Lawns with groups of shrubs and trees are only pictures upon the park walls, so to speak.

In one of our parks at Youngstown, containing over 400 acres, is a natural

garden of perhaps twenty acres, so arranged by nature that walking upon its surface is practically impossible. Yet no other portion of the park is more useful. To look upon the rocks, moss, ferns, shrubbery, trees, and cascades preserved by nature from vandalism, is the height of enjoyment to all, and the most highly prized portion of the park area.

That garden art is only appreciated and desired by the rich is a very mistaken idea. Fortunately, one does not need wealth to appreciate a beautiful garden; and the rich have no monopoly upon cultivated taste and refinement.

I dislike class distinctions, however, and there really are none. The rich of today may be the poor of to-morrow and vice versa. In America we are equals before the law with substantially equal opportunities before us, and if there is any place where all thought of class distinctions should be banished, it is in the arrangement and use of our public parks.

No park should be either all lawns or all play grounds. A complete answer to Pro Bono Publico is, that all parks should be large enough not only for what he desires, that is possible, but for lawns and other necessary requirements.

VOLNEY ROGERS, Youngstown, Ohio.

Hollyhocks.

The old-fashioned Hollyhock in its modern, much improved state is among the most beautiful of flowers for the background of the flower garden.

Seed sown in February or March in a frame with gentle bottom heat will generally bloom during the coming summer. A good loamy soil is best, covering the seed to a depth of about one-half inch. As soon as the plants have attained the first rough leaves they should be transplanted into another frame without heat but protected from frost. As soon as the weather will permit, which in this latitude is generally from the first to the middle of May, the young plants should be set in the open ground where they are to remain permanently. If there are indications of late spring frosts, after planting out, they should be covered during the night, the covering being removed the next morning. By following these directions success is sure to come, and you will be well repaid for your trouble the following August and September by fine spikes of lovely flowers.

Those who do not possess a frame or hotbed may plant the seed in a box and keep it in a warm light place, but when possible the hotbed is undoubtedly the best, as it may be used for all kind of seeds—Stocks, Asters, Pansies, and a host of others.

If preferred, the seeds may be sown in July or August in the open ground and they will bloom the following year in August and early in September. Hollyhocks delight in rich, dry, loamy soil; the ground should be dug deep and well enriched with barnyard manure.

The plants should be set 3x3 feet, at least, and 3x4 feet is better, especially if you wish to have large handsome flowers.

Before severe freezing weather comes the plants should have some protection by laying on the crown a branch or two, sufficient to keep the litter or leaves from pressing too heavily on the plants and causing them to decay at the crown.

During the month of March following half the covering should be removed, shaking up lightly the remaining half. Don't allow the covering to remain on too long, as it will cause the plants to grow weak. During May and June give plenty of water, as the stalks and foliage absorb a great deal of moisture at that time.—W. B. LONGSTRETH, Gratiot, Ohio.

—The Hollyhock is a biennial and for best results should be treated as such. We should not like to see our plants flower the same year as raised from seeds.—Ed.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Clematis Dying.—I have noticed inquiries in American Gardening for cause of Clematis dying, but as yet no reply. I have had trouble with Duchess of Teck dying, partially, all at once, for a number of years, and this year *C. paniculata* is affected the same way. The portion of the vine affected, acts as if completely cut off at the ground; that is, it dies all at once to the ground, with no visible reason why it should. Is there any known cause or remedy? Other varieties of Clematis so far have been uninjured with me.—VOLNEY ROGERS.

Ants and Aphids.—C. A. L. inquires what relation the "ant" bears to the green fly. Your answer is good, but tell him to get a copy of the "Strand Magazine" for August at any news stand and read the article therein by Grant Allen.—F. E. SNYDER.

Watering During Sunshine and Other Things.—Friend Butterbach evidently does not understand the point, regarding safety in watering during sunshine. I never but once had potatoes injured, yet that once was enough to put me on guard. It has never occurred in the greenhouse, simply because I never gave it the chance. I would ask what the "variations of temperature" are in the Northern states, and if just as healthy men, beasts, and vegetables do not thrive there as well as, or even better, than in a section more resembling the greenhouse conditions, i. e., Florida? Does not the "variation" of temperature render them more hardy, or can it be better secured, than by having plenty of cool breezes, or ventilation? Not knowing the prime object sought for, or the methods employed in the strawberry experiment, Mr. Butterbach is hardly competent to pass an opinion; however, it has brought out a fact not generally known among strawberry-growers. If callas can be had at any time of the year, why not add them to the list of cut flowers from outside, especially if it can be done without injury to the root? Why use months for resting when weeks will do as well? They would command a good price when out of the usual season. Saving fuel is no object with me, as it costs only the cutting, and even that is returned in the value of ashes, as I use wood-burning furnaces. The first three paragraphs of the editorial, page 538, seems to fit this case completely. Au revoir!—HENRY SNYDER, Md.

Strawberries.—When two such able veterans as Mr. Hale and Mr. Dwyer are upholding distinctly opposite views on the planting of strawberries from points where the climatic influences are somewhat similar, side issues are of small account. However, Mr. Kellogg will confer a favor to readers of American Gardening if he will kindly name the strawberry containing all the good qualities mentioned in his note of July 19, viz., plants laden with immense berries of rich flavor, sound to the core, and of a texture so firm (at the same time) that they can be shipped anywhere. Then I have gone astray in thinking that new plants had to be obtained from old bed or from seed. Where have those dormant plants in spring come from, when plants are not taken from old bed, and the young unfriuted plants are not allowed to produce them?—JAMES HOLLOWAY.

Miss Bertha Stoneman, a student of botany at Cornell University, has been appointed professor of botany in the Huguenot college in Cape Colony, South Africa.

The Fruit Garden.

Apples, Early.—If you market, make only one grade, and let that be the best. Feed the others to the hogs; it pays better than selling a No. 1 reputation.

Gathering Pears.—A man always wants to leave on the trees more fruits than are well for the tree's health; indeed, it is a good practice to pick some of the largest Bartlett early in August; you get a little longer season and help the tree; the remaining fruits will well afterwards. Many people like to feel they have something to bite, even in a Bartlett. Too often the fruit looks very handsome, and is mushy, because some of us wait to see them get larger or take on that yellow tint. Don't wait, but pick when quite green, at least ten days before they are likely to be used. Again, don't drop them around because they look hard.

Another pear that needs some thought about gathering in order to have it good is Clapp's Favorite, a pear too often soundly abused by amateurs, because "it rots at the core." And so it will—unless picked at least two weeks before it would ripen on the tree.

A close rival to the Bartlett is Souvenir du Congrès. Tree not so vigorous nor so compact a grower as Bartlett.

Raspberries.—Cut out the old bearing wood and give the rows a thorough spraying with Bordeaux.

JAMES HOLLOWAY, N. Y.

Horticulture in 1836 and 1896.

Within the last century there have been more inventions and greater advances made in the arts and sciences than in any former period of the same length of time in the history of this globe. Horticulture has kept pace with these and is to-day more advanced than ever before. Sixty years ago the word horticulture was hardly mentioned. Now it stands next to grain raising in importance—not only in the pleasure and comfort that it gives to the human family, but also in a commercial point of view.

To go back three-score years seems a long look to the rear; yet that is what some of us can do, and remember well the condition of our fruits, and compare them with those of the present day. Then about all the strawberries we saw were found in meadows and fence corners, small but high-flavored. Now we have more than 100 varieties—large, luscious ones in abundance.

One might be safe in stating that there is now a car load of strawberries grown to every quart grown then. I remember when they were first taken to market in buckets and baskets, and were measured out in tin quart measures. Now they are put up in neat quart boxes, shipped in crates of twenty-four and thirty-two quarts each, all over the country. Not long since a friend in southwestern Missouri wrote to me that he sent a crate of Captain Jack strawberries one time to Albuquerque, New Mexico, that had to go sixty miles by stage to reach its destination, yet they arrived in eating condition, and, by the way, I may tell that same variety originated here not twenty yards from where I write this. It is still a favorite with some growers. Another valuable one was raised by a brother of mine, the Cumberland, which has but few superiors if properly grown.

Quite recently another brother has raised a black-cap raspberry that surpasses anything of the kind yet produced in this country. He has recently sold the stock for \$1,000. I have been a little personal in this, to show that the spirit of horticulture was born in the family, hence no wonder that it is still my hobby.

Then the black-cap raspberries were chiefly gathered in old clearings, strung on a stem of timothy and carried home in that way. Now the improved varieties are planted by the 100 acres. The only red ones then were what we called Purple Cane and the Red Antwerp.

Now the varieties can be named by scores.

Blackberries were all wild and the planting of them in gardens was not thought of. Now hundreds of plantations, large and small, can be seen all over the country. Currants were then the white and red Dutch (and they are still grown). Now we can count the varieties by the dozens.

Cherries, the Mayduke, Oxheart and Bleeding Heart were the improved varieties. The English Morello was a way-side tree. The Black Morello was common, but nearly abandoned on account of the black knot. Of the Mazzard, a black and red, there were trees sixty feet high, and three feet in diameter at the base, and trees that would bear a two-horse wagon load in a season. These were small, however, and by no means choice. Now we have a hundred varieties of select fruit of these.

Peaches.—Early York was then the earliest we had of budded trees, but plenty of good seedlings. The Early York ripened in August and was the earliest. Now we have a host of varieties, ripening from June until November.

Grapes.—The Alexander was the pioneer; then Isabella and Catawba, soon followed by the famous Concord, from which has descended a host of valuable varieties, both white and black. The Martha was the first seedling from it that became famous. It was sold to Mr. Knox, of Pittsburg, Pa., for \$500. He made a nice thing out of it, not less than \$10,000. Since then other white ones from it and from the Concord have crowded it out in a measure. Apricots we had growing on the terraces, but they seldom bore fruit. Prunes and plums we had a few, but the main crop of plums was from the native wild trees. Now, orchards of ten acres of wild goose alone are planted.

Pears.—We then had mostly seedling, and of very ordinary quality. Now we have double the number of varieties, which can be in eating nearly the whole year. Apples were then grown mostly for home use, and there were but few varieties compared with the legion we now have.

But to refute the idea that fruits run out, I will state that the Rambo, Red Romanite, Prince's Harvest, Winesap, Newton Pippin and Yellow Bellefleur that have been grown for 100 years still hold their place in every good collection. But what a multitude of new and valuable ones have been produced since then, and still they come.

Then each farmer raised principally for his own use and to sell in the towns near him. Now tens of thousands of acres are planted, and it gives railroads considerable work hauling them to their destinations, and mighty steamers to transport the fruit to foreign countries (3,000,000 barrels in 1895).

Then California was a Mexican State, and its future greatness as a fruit country was not dreamed of. Now she sends train loads of it across the Rocky Mountains to the East, and her grapes and wine to foreign lands. It is to-day the greatest fruit country on the globe.

Next comes Missouri, my adopted State, of which I am proud, and why not when she was admitted into the Union the same year that I was first allowed to breathe the air of this great Republic? May the good work or horticultural progress go on, and the time come when every man, woman and child will have all the choice fruit they need; a condition that at this time does not exist, for not one man in ten who owns land enjoys what he might if he possessed the true spirit and love of horticulture.

And here I will state that I do not see why agriculture and horticulture should not be taught in our common schools. In one hour I can show 100 boys how to bud or graft, so that they can change any worthless fruit tree into a good variety. And what a pleasure it is to the ladies to bud a new choice rose into a strong rose stock, and have lovely roses in two months after. If twenty years younger I would be tempted to go over the country as a

sort of horticultural evangelist and teach the people these arts that would add so much to the pleasure of life. S. MILLER, in Rural World, St. Louis, Mo.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.

We the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligation made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.

WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

Business Cards.

C. D. Zimmermann, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1897, New York City

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

HULSEBOSCH BROS., bulbs and plants, Englewood, N. J.

LOWEST PRICES on earth. Trees and Plants. Neil the Nurseryman, La Porte, Ind.

TRANSPLANTED CELERY PLANTS, all the leading kinds. John A. Smethers & Son, P. O. Box 104, Berwick, Pa.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York

EGYPTIAN ONION sets, for immediate delivery if wanted, \$1.00 per bus. F. O. B. Streator, La Salle Co., Ill. Address R. D. Kline.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

CELERY PLANTS. Transplanted only. First class, leading kinds. Greatly superior to seed-bed plants. Carefully packed: good for two weeks transit. 40c. per 100, \$5.00 per 1000. R. M. Welles, Towanda, Pa.

MANDOLIN AND GUITAR strings at bargain prices. Best quality Silver Steel Wire, 25c. per set, postpaid; 5 sets, \$1.00. Banjo strings, set 15c. Satisfaction guaranteed. Edgar P. Walts, General Delivery, Akron, Ohio.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

WANTED, steady position on gentleman's place; by an industrious, honest and sober German, married, one child; thoroughly understands the care of horses, carriages, garden, cows, etc., best of references. A. Sorgenfrei, Box 200, Tarrytown, N. Y.

SITUATION wanted.—Gardener, experienced greenhouse hand, well up in agriculture and landscape gardening, wishes head position on gentleman's estate, under improvements or assistant in greenhouses; reference. Address General, care American Gardening.

BLINDNESS PREVENTED

The Absorption Treatment a Success. Hundreds successfully treated for all diseases of the eyes or lids without knife or risk at their homes and at our Sanitarium, the largest and most successful institution in America. "Don't want to be blind." Pamphlet Free.

THE BEMIS EYE SANITARIUM, Glen Falls, N. Y.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Shifting Chrysanthemums.

In the window, as in the greenhouse, the main point is to keep the plants growing without check. They want rich soil, even and sufficiently abundant watering, and all the fresh air possible. If placed where the windows can stand open night and day, so much the better. Whenever the pots are moderately full of roots, shift into fresh feeding ground. This is to be continued until quite near the blooming season.

Hyacinthus Candicans in the Window.

This fine summer bulb is behaving in a very satisfactory manner. Potted in June, it has now a blossom stalk of full height, with buds just ready to open. By the first of August it will be beautiful, indeed. The foliage is of noble proportion, equal, or more than equal, to that of the *Amaryllis*—and the blossoms are thrown so high that none of the effect is lost. Altogether, one could hardly think of anything better as a variation from the ordinary run of window plants. Two or three full-sized bulbs in a large pot may make a show fine enough for the most pretentious place. Yet this plant is essentially one for the home gardener with small means, as it grows readily from the seed, which is not expensive, and under good care the bulbs bloom the second year.

For Late Autumn Bloom.

If Tuberoses in bud, about the end of August, be very carefully lifted and brought on slowly they will add to the window garden at a season when extra help is much needed and appreciated. Stocks, too, are a good adjunct at this time; sow the seed in August, pot off singly as soon as of sufficient size, and congratulate yourself on your forethought when early winter winds are howling.

A General Repair Shop.

Late in summer, when, as so often happens, many of the standbys seem to be failing, a visit to the repair shop will work reparative wonders for them. Verbenas, Phloxes, Lobellias, Pansies, and many another plant that has become sprawling and unkempt may here be carefully pruned of seed pods and decayed leaves, and loosened and enriched as to surface soil. New growth will start as if by magic, and bloom at once follows. If only one or two be put through this process of repair at one time they will scarcely be missed, before they are back in their places, and contributing as of old, to the general beauty. A little liquid manure or fresh soil may also prove a helpful adjunct now.

Striking Cuttings.

There are many plants which will come on better for winter use if the cuttings are struck soon, than if the matter be delayed till fall. It is quite true that the majority of plants root more readily and strongly in a cool temperature. But if one wait until fall to strike cuttings, plants will seldom be of much value before spring. One may take advantage of a cool spell, which is almost certain to come some during August, and get the "slips" in then. Geraniums, if wanted for winter bloom, need to be put in thus early, and *Alternantheras* are difficult to start in winter, on account of the low temperature. They are best carried over from the present season, being rooted in August.

Proportionate Size of Pots.

This is a point which proves a great puzzle to the novice, who almost invariably uses pots twice too large, or more. It must be that he bases his judgment on the expected, rather than the actual size of the plants; on the size of top rather than the amount of root growth. A large amount of earth in the pot will get and hold more water than a small plant can possibly appropriate. This soil is apt to become soured and sodden, and can be nothing but a detriment to the plant. If the tiny plant

ARMSTRONG & McKELVY
Pittsburgh.
REYHER-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FARNESTOOL
Pittsburgh.
ANCHOR } Cincinnati.
ECKSTEIN }
ATLANTIC }
BRADLEY }
BROOKLYN } New York.
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MISSOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALON
Salem, Mass.
CORWELL
Buffalo.
KENTUCKY
Louisville.

WHITE LEAD is like a great many other articles offered for sale; some good, some bad. (See list of the brands which are genuine, or good.) They are made by the "old Dutch" process of slow corrosion. Avoid getting the other sort by making sure of the brand.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write

really needs a pot so small that it cannot be easily kept moist during summer heat, it is best to set it within another of larger size, with a loose layer of moss between.

An Exhibition Pen.

A certain breeder of exhibition stock reports, in a late issue of *Poultry Monthly*, that he received in two months, from a show pen containing four females, 183 eggs. This is 45 eggs per hen out of a possible 61 or 62, if they had laid every day. This is good laying, not given as phenomenal, especially; but to show that exhibition stock is not necessarily inferior in egg-producing power. Were it possible to keep it up throughout the year, it would figure up well towards 800 eggs per hen. Generally speaking, that which is possible to the exhibition fowl in this line is more easily possible to the cross-bred fowl, because the latter has the advantage of the extra thrift gained by out breeding.

Invalid Poultry Keepers.

It used to be the fashion to recommend poultry keeping as just the one thing for invalids. In these later times we read things like this: "We must caution the invalid, as we would the lazy man or woman, to keep out of the poultry business. We know of no business which is so exacting in its requirements, nor which demands longer hours, nor closer application." Isn't there a middle ground somewhere? And is not the fact that those in the business engage so small an amount of help partly responsible for the long hours and the exactions? With the right kind of help and enough of it, there are many classes of invalids who need not find the business so extremely exacting. But there's the rub. Where can they get that help?

Milk for Fowls.

Those who have abundant milk for use in the poultry yard are favored, indeed. It is most excellent for both chicks and fowls, and may supply in large measure the place of meat. The great point to be observed is, that it is not to be allowed to become sour and ill-smelling. Sweet, it may be used either as a drink or for mixing with soft feed. Sour, it is better curdled by heat, when both the thick and the thin portions are perfectly safe to use. But it is well, when using much of the curd, to be sure that the fowls receive, also, some food of a slightly laxative nature. Of these, bran is a familiar example.

Fancy Chicks.

It must be highly satisfactory to a breeder of fancy fowls to be able to give a report like the following, taken from a late poultry paper: "Customers state that eggs have been received in perfect condition, percentage of fertility high,

hatches good, and chicks live and thrive." Now all this is just right, and the last is best of all. But it is no better than should be the case in every poultry run, where proper care is taken, and where the size of the breeding yard can be limited to the right number of hens to a cock. The difficulties with infertility, and bad hatches, and dying chicks do not, as a rule, lie primarily with the fowls themselves; but rather with the caretaker who cannot be pushed to the point of doing all the right things to insure success. We insist upon this as a fact.

The New Stock.

Princess Alice has, for some time, held the distinction of being the best all around perpetual blooming stock. Perhaps the new class, of which White Pearl is the forerunner, can hardly be called a competitor of Princess Alice, because it is so different in makeup. It is very dwarf and tiny in all its parts. The small and very double flowers of clearest white are very thickly set along the spikes, and it is expected to prove particularly fine for cut flower, or florists' use. Fifty cents a packet may seem a little high to the average grower, but perhaps he will be willing to pay it if he is particularly fond of Stocks. If not, another year will probably bring them to his hand at a lower price. In connection with this new dwarf, it is interesting to note that there are sorts offered this year under the names of Colossal and Mammoth which form the strongest possible contrast to the wee White Pearl.

Clean Pots for Thirsty Plants.

The more thirsty a plant is, the more, perhaps, does it need a clean pot, partly because it will have to be watered so frequently, and is thus likely to become clogged. For the same reason, plants of this character like a pot not too close in grain, though it must be said that there are some cheap pots made that are too coarse and porous for any plant that will endure sunshine. For a plant in shade possibly no pot can be too porous.

MYRA V. NORRIS.

"The Water Garden."

Owing to the expensive character of this work, the publishers have been compelled to set the price at \$1.50. The volume is now on the press, and every effort will be made to publish it at the date given in the advertisement elsewhere. Orders are coming in rapidly, and all who wish to secure a copy of the first edition should apply promptly. The work, intrinsically, will be of undoubted value, and the typographical appearance of the book itself a magnificent product of the printer's art.

W. & D'S. CELEBRATED SURE CROP.

Mushroom Spawns. 8 lbs. for \$1.00.


Lillium Harrisii, Roman Hyacinths, Freesias, Paper White Narcissus, Callas, Etc.

Special PRICES on application.

WEEBER & DON, Seed Merchants and Growers.

114 Chambers St., NEW YORK CITY.

Mention American Gardening when you write.

DWYER'S SUMMER and AUTUMN LIST

 Of Pot Grown and Layer STRAWBERRY Plants, CELERY, VEGETABLE Plants, FRUIT Trees and ALL NURSERY STOCK will be mailed free to all who apply for it.
T. J. DWYER, Cornwall, N.Y.
Box 175.

Mention American Gardening when you write

LET US SUPPLY YOU WITH YOUR.....

Celery and Cabbage Plants.

Celery—Giant Pascal, White Plume, New Rose and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000

Cabbage—Succession, Flat Dutch, Drumhead, and other vars., 25c. per 100; \$1 per 1000; \$8.50 per 10,000

For prices on large quantities, please apply to

R. VINCENT, JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

Offer No. 80.

FOR ONE NEW SUBSCRIPTION

200 CELERY PLANTS

AS FOLLOWS:

50 Plants
White Plume.50 Plants
New Rose.50 Plants
Golden Self-
Blanching.50 Plants
Giant Pascal.

This offer is from a first-class, reliable grower, and will be mailed, postpaid, for one new subscription to AMERICAN GARDENING. Orders for celery plants will be filled from now until August 15th.

AMERICAN GARDENING, P. O. Box 1697, N.Y.

Built to Sit On, Not to Straddle.**THE WHEELER BICYCLE SADDLE.**

Every rider who has given the WHEELER REFORM a trial prefers it to all other saddles. Endorsed by physicians. Especially recommended for ladies.

We will send a Wheeler Bicycle Saddle as a Premium for Three New Subscriptions at \$1.00 each. Purchaser pays express.

AMERICAN GARDENING, P. O. Box 1697, NEW YORK**PRIVATE GARDENERS.****Appointments and Doings.**

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

F. Fowler has been appointed gardener to Mr. Stuttle, Naugatuck, Conn.

Anton Weiss, a landscape gardener and an old resident of Nutley, N. J., has been missing more than a week. He left for New York to transact some business, intending to return the same day. He was known to have about \$100 on him.

Obituary.

On July 26 at Chambersburg, Pa., John W. Lawrence died, aged 66 years. He was born at Ryde, Isle of Wight, England, in 1831, and learned his craft under his father. At the age of sixteen he went for two years to Kew Gardens, then for six years at the Royal Gardens, Windsor, having there special charge of growing grapes and peaches under glass. He was for 23 years at Farnham Castle as gardener to the Bishop of Winchester, then for six years gardener at Newstead Abbey, the home of Lord Byron. In 1880 he came to America and carried on his profession at Shippensburg and Harrisburg, Pa., until ill health compelled him to give up the work to which his life had been devoted.

On July 18 at his home in Madison avenue, New York City, John Callaman, aged 50 years, committed suicide by hanging. It is said he had become despondent owing to lack of employment.

American Institute Fruit Show.

Professor H. E. Van Deman, Parkesley, Va., will superintend the fruit department of the American Institute Fair to be held in Madison Square Garden, New York city, September 28 to October 23.

Mr. Van Deman was formerly U. S. Pomologist and his close acquaintance with the fruit-growing interests of the country should have good results in bringing forth a good display of fruit.

Mr. E. G. Fowler has had to retire from the position (which he so ably filled last year) on account of pressure of business and failing eyesight, which latter affliction will cause much concern among Mr. Fowler's many friends.

Pittsburgh, Pa.

Superintendent William Falconer, of Schenley Park, is on a tour of inspection to eastern parks. He left on July 24 and expects to be away for several weeks, visiting Philadelphia, New York, Brooklyn, Buffalo, and other large cities, for the purpose of inspecting the large public parks to see if he can find any points which would improve Schenley Park, if adopted there.

Boston.

The exhibition at Horticultural Hall on Saturday, July 24, was hardly up to the standard at this season of the year. The prizes on cut flowers were for sweet peas and herbaceous plants. The sweet pea prizes were fairly well competed for and were awarded as follows: Display of named varieties, filling thirty vases, arranged with any foliage, first, M. B. Faxon; second, Mrs. H. A. Jones; display of named varieties in vases, six sprays in each vase, first, James Wheeler, gardener to Joseph H. White, Esq.; second, E. A. Weeks; third, Mrs. H. A. Jones. The competition on herbaceous plants was close, and the prizes were awarded as follows: N. T. Kidder (William Martin, gardener), first; Reading Nurseries, second; Carl Blomberg, gardener to Oakes Ames, Esq., third. J. E. Rothwell exhibited a small but interesting collection of orchids, including two or three choice cypripediums. Harvard Botanic Gardens made a fine display of hardy perennials. William Thatcher, gardener to J. L. Gardner, Esq.; James Com-

ley, gardener to the F. B. Hayes estate; James Greene, gardener to James L. Little, Esq., and others made interesting exhibits of cut flowers. Several collections of native flowers were also tabled. Certificates of merit were awarded to James L. Little (James Greene, gardener), for Begonia Haageana, and the Harvard Botanic Garden (Robert Cameron, gardener), for Podophyllum Emodi.

Orange, N. J.

The New Jersey Floricultural Society met on Monday, August 2, twenty-five members being present. The proposal to hold a fall show was under discussion, and a number of exhibitors manifested their interest by announcing their readiness to exhibit under any circumstance, and other members showed their willingness to work and help by undertaking to sell from 5 to 20 tickets each, others by a guarantee of \$10 each in case of a shortage; but notwithstanding this, the executive is still confronted with the danger of financial loss, and is very shy of assuming the responsibility of an exhibition on the scale of the last two seasons.

A committee appointed for the purpose has been hard at work trying to make arrangements with some of the institutions of the Oranges, but with very poor results; some ignored the matter entirely, while others wished to shirk all responsibility, yet, on the other hand, want to share in possible profits. The Ladies Improvement Society of the Oranges was the only body that has promised assistance and that was by presiding over booths, etc.

The members present decided to hold a show of some sort, small or large, and left the ways and means open for further consideration. Four new associate members were elected, two of these nominations being presented by Dr. Mandeville.

Mr. A. D. Rose read a paper entitled "Flower Shows," presenting some very forcible truths on how an exhibition should be conducted. He championed the one man judge system, stating that one good man was better than three, whether they were good or bad. Select a competent man and pay him for his work.

Greenhouse Building.

Despite the depression of the times the number of new glass structures being erected this season is as great as usual. In fact, several of the prominent builders state that they have been and still are very busy. But there is every indication that so soon as the general business of the country regains its equilibrium there will be a greater rush in greenhouse building than has ever before been known.

Among some of the new houses either already erected or now in course of construction are:

Hon. Gardiner G. Hubbard, West Washington, D. C., one rose house 20x50 feet.

The White House, Washington, D. C.; re building the conservatories.

Mrs. Walker, Waltham, Mass., one house 10x77 feet, and a palm house 30x50 feet.

Mr. Dumaresq, Chestnut Hill, Pa., general house 19x100 feet.

Mr. B. Thayer, Lancaster, Mass., a range of houses.

Mr. A. Mack, Somerville, Mass., a general range of houses.

C. F. Dietrich, Millbrook, N. Y., one house 24x41 feet, one house 62x24 feet, one house 6x62 feet, and a violet house 16x94 feet. These are in addition to a very large range which already exists.

Major L. Ginter, Richmond, Va., one palm and one rose house.

Mr. W. A. Proctor, Cincinnati, O., one octagon, and one general orchid house. The foregoing are the work of Hitchings & Co., Mercer street, New York. Messrs. Lord & Burnham, Irvington, N. Y., have already completed or are building the following:

A substantial addition for J. S. Bailey, Jamaica Plains, Mass., consisting of rose, chrysanthemum, orchid, and other houses.

Mr. Hugh J. Grant, Oradell, N. J., a range of houses.

Davenport, Ia., City Parks, one palm and two propagating houses.

Mr. Richard Mortimer, Tuxedo, N. Y., a general range.

Mrs. A. H. Johns, Bernardsville, N. Y., a general greenhouse.

Mr. H. C. Frick, Pittsburg, Pa., palm house and general range.

Mr. G. W. D. Holloway, Decorah, Ia., one conservatory.

This same firm is also architect for the Horticultural buildings, New York Botanical Gardens, Bronx Park, also for the Horticultural building, Buffalo, (N. Y.) Botanic Gardens, and also for the new conservatory at the Executive Mansion, Washington, D. C.

Carnations for Private Use.—Wm. Scott.

On page 526 of AMERICAN GARDENING, Mr. James Hartshorne, Ill., states in response to a request for a list of Carnations for a private place, that William Scott is not as good a flower as Albertini, when it is off crop it keeps off too long, and that it bursts badly in winter.

This may be the case in Illinois, but in New Jersey we raise it for one of the best. I have been cutting from Scott since October, and the flowers are some of the best in the house now. I never had any burst calyx, and it is one of the most constant bloomers I have.

I had Albertini and discarded it on account of its bursting the calyx. This is the first time I have ever heard any fault found with Scott, and I would like to hear the opinion of some of your readers.

—N. BUTTERBACH.

Good Paint.

What is the best paint? This is the question the thrifty gardener is constantly asking. Paint is used to protect from decay incident to exposure to the elements, as well as to beautify and renew. The old dingy house can, by the application of a new surface of paint, be to a large extent changed. Paint is not very expensive when you get the best, but the labor of applying it is costly. What, then, is the best paint for wear? What will best preserve from decay and remain unaffected by exposure?

Paint is (or should be) composed of pure linseed oil mixed with certain dry powders or mineral substances, called pigments, which experience has shown are best adapted to this purpose. Paint is applied in a liquid state, and after exposure to the air becomes hard, or, in common parlance, is said to dry. If the dry powder or pigment was applied alone it would soon rub off. If it was mixed with water the water would dry out and the powder would come off, to the disgust of every one.

What is wanted is a binder which will not only harden and dry, but which will embrace the powder or pigment so it cannot be removed. This binding material must be insoluble and practically unaffected by water, else the paint would be washed off the building with the first rain. Pure linseed oil is the best material known. It fulfils the requisite conditions of a binder, or vehicle for paint. When it dries it does not dissipate into the air like water, alcohol, or even coal oil. It does not evaporate at all, but absorbs oxygen from the air, thereby forming a tough, leathery substance which envelops the pigment and holds it to the surface, and if dried under proper conditions, it forms an elastic waterproof coating, adapting itself to the changes of temperature. Therefore, pure linseed oil alone should be used.

What shall be combined with pure linseed oil to make the best paint? The experience of many centuries points to pure white lead. This substance has the faculty of mixing most readily with linseed oil. It assists the oil to dry by combining with it, the oils rendered waterproof and the resulting dry film for a long time remains elastic, so that it adapts itself readily to expansion and contraction of the surface, without a tendency to scale off. Unless there is moisture present, either on the surface or absorbed in the wood, when the paint is applied, pure white lead paint well rubbed in will stay where it is put. If the surface is wet the oil is repelled from it, and a good job

Potash.

An absolute necessity for every crop.

Free

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write.



THREE NEW CANNAS.

40 NEW IRIS.

SIEBRECHT & SON, - 409 Fifth Avenue, New York

Mention American Gardening when you write.

Bay Trees,
Hardy Palms,

AND EVERYTHING
FOR DECORATING

"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND
DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address **THE AMERICAN JADOO CO.**

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

cannot be expected. If there is water or sap in the lumber the heat of the sun, or of the building, will draw or drive it to the surface, and blistering will follow. When these blisters are pierced the water will often run out. See, then, that the surface is all right before you paint. If very old and dry, the oil may be absorbed before it can set or dry, and the pigment left as a dry powder, so that in the first coat plenty of oil should be used, not only to act as a binder, but to allow for possible absorption.

There are additional reasons why pure white lead is the best pigment. Among others, it has greater opacity than any other substance, therefore hiding the surface better; consequently fewer coats are required. We have said that the cost of paint is not very great, but it is the labor of applying that is expensive. Therefore, when you can cover as well with two coats of white lead paint as with three or four coats of other paint, it follows that the lead paint is the cheapest by far. Any substance that is added to white lead, except for the purpose of coloring, diminishes in some way the value of the paint. Zinc is sometimes used. Now zinc is very inferior in covering to white lead, and besides, in drying it forms with the linseed oil a very hard, unelastic surface, which is apt to crack and scale off. When repainting becomes necessary, the surface is such that it will not readily hold the new coat, so that the entire lot of old paint has to be burned off, a very expensive operation, if a first-class job is wanted.

The substance most commonly added to white lead is barytes, and it is added simply because it is cheap, and to make weight. Barytes is a powdered rock, which is found largely in Virginia, Missouri, and other parts of the country. It is not opaque and has no action in the oil, and if ground or mixed with oil alone it will neither cover nor hide the under surface, nor form an elastic waterproof binder with the linseed oil, which we have heretofore described.

Within the last fifteen or twenty-five years a large demand has been created

for what are known as "ready mixed paints," or paint prepared with oil and drier ready for use, which appeals to the user as a great convenience. Some makes of these appear to give fair satisfaction, but the very general complaint as to their want of durability has caused the whole class to fall somewhat into disrepute. The cause for this is not hard to find. We have previously shown that the base of the best paint for general use should be pure white lead and pure linseed oil. Now white lead in its nature is so heavy an article, so dense are its particles (it is this that gives it its great value as a covering pigment) that it cannot be held in suspension for any length of time in pure linseed oil. As a matter of fact, most ready mixed paints contain but little white lead, other and cheaper substances, inferior as pigments, being substituted therefor, and in order to enable the paint to dry quickly various driers containing turpentine and benzine are introduced. The effect of these is to thin the oil and render it less capable of holding the various pigments in suspension. To counteract the tendency to settle, the oil is treated to make it thicker, alkalies and water which form soap or emulsions with the oil being frequently used. It is not difficult, then, to see why such paints so often prove disappointing to the user; nor does the expense stop here, because if he desires to repaint with a pure article and secure the best results the old coats must first be entirely removed.

The moral of all this is, the best is the cheapest in the long run. Better results are obtained, greater durability and satisfaction, besides at the present time the best is actually the cheapest. Any one desiring to use paint can buy absolutely pure white lead, under the guaranty of a responsible manufacturer, pure linseed oil, equally guaranteed, and pure colors, and can mix them himself ready to use at a no greater cost per gallon than inferior articles, which do not cover nearly so much or so well.

Why, then, not always buy the best, the very best?—J. A. S. in the Independent.

WHOLESALE MARKETS.

New York.

Business can only be spoken of as being fair. Large bulks are difficult to move and prices are inclined to fall rather than rise.

Potatoes which so far have been good property are weakening in price, \$2 per barrel for either Long Island or Jersey is top notch or fancy price, the bulk of the sales being made between 75c. and 87c. per barrel.

Tomatoes are still poor, both in appearance and quality and low prices prevail; there is room for more highly colored ripe fruit, and these would make fair prices.

Muskmelons are still dragging with prices low and irregular.

Hothouse grapes are selling slowly at from 50c. to 75c. per pound.

Good mushrooms are in demand for a limited quantity.

Apples—Nyack Pippin, hand-picked, per barrel, \$1.50@2; Bough, hand-picked, per barrel, \$1.25@1.50; Astrachan, hand-picked, per barrel, \$1.25@1.75; near-by, windfall, per barrel, 50c.@\$1; Southern, per crate, 25@60c.

Peaches—Georgia and South Carolina, fancy, per carrier, \$2.25@; good to cheap, per carrier, \$1.25@2; poor to fair, per carrier, 50c.@\$1; North Carolina, poor to choice, per carrier, \$1@2; Virginia Troths, per carrier, \$1@1.50; Maryland and Delaware, early, per crate, 75c.@\$1.25; early, per basket, 50c.@\$1; Jersey, early, per basket, 25@75c.

Pears—Bartlett, Virginia, per box, \$1@1.25; Jersey, per barrel, \$1.50@2.50; up-river, per barrel, \$1.50@2; Clapps, up-river, per barrel, \$2@2.50; per keg, \$1@1.25; Bell, nearby, fair to prime, per barrel, \$1.50@1.75; Keffler, southern, per barrel, \$1.50@2.50; Le Conte, southern, poor to fancy, per barrel, \$1.50@3.50.

Grapes—Delaware, North Carolina, per 24-pound case, \$1.25@1.75; Niagara, North Carolina, per 24-pound case, \$1.25@1.75; other white, North Carolina, per 24-pound case, \$1@1.50; Moore's Early, North Carolina, per 24-pound case, \$1@1.50; Champion and Ives, North Carolina, per 24-pound case, 75c.@\$1.25; North Carolina, per 10-pound basket, 10@25c.; Delaware, South Carolina, per 24-pound carrier, \$1@1.25; white kinds, South Carolina, per 24-pound carrier, \$1@1.50; black kinds, South Carolina, per 24-pound carrier, \$1@1.25.

Plums—Wild Goose, per quart, 4@6c.; Wild Goose and other table varieties, per eight-pound basket, 25@50c.

Apricots—New York state, per eight-pound basket, 20@25c.; per five-pound basket, 10@15c.

Currants—Large red, per quart, 2@5c.; bulk stock, per pound, 2@4c.

Blackberries—Up-river, per quart, 5@8c.; Monmouth Co., Jersey, Wilson, per quart, 3@6c.; South Jersey, cultivated, per quart, 3@6c.

Huckleberries—Shawangunk Mountains, per quart, 7@8c.; Pennsylvania, blue, per quart, 6@8c.; Jersey, per quart, 4@6c.; Southern, per quart, 3@6c.

Raspberries—Up-river, red, per pint, 3@8c.

Melons—Watermelons, South Carolina, per 100, \$10@20; watermelons, North Carolina, per 100, \$8@15; watermelons, Virginia, per 100, \$7@14; muskmelons, Maryland Gem and J. Lind, carrier 50c.@\$1; per one-half barrel basket, 50@75c.; Norfolk Gem and J. Lind, barrel, 75c.@\$1.50; Norfolk Gem or J. Lind, carrier, 50@75c.; Norfolk and North Carolina, bushel basket, 30@60c.; Norfolk and North Carolina, per barrel, 50c.@\$1; Norfolk, Christina, per barrel, \$1@1.50; Baltimore, Gem, and Lind, basket, 40@50c.

Celery—Fancy large, per dozen, 50@60c. fair to prime, per dozen, 20@40c.; small and poor, per dozen, 5@15c.

Corn—Hackensack, per 100, \$1.25@1.50; other Jersey, per 100, 50c.@\$1.25.

Cabbages—Jersey and Long Island, per 100, \$2@3.50.

Cucumbers—Jersey, per barrel, \$1@

1.50; Jersey, per bushel box, 50@60c.; Norfolk, per barrel, 75c.@\$1.25; cucumber pickles, Jersey and Long Island, per 1,000, \$1.50@2.50.

Egg plants—Jersey, per barrel, \$1.75@2.50; Jersey, per bushel box, 60@75c.

Green peas—Western New York, per bag, \$1@2.50.

Lima beans—Maryland, per one-half barrel basket, \$1.50@2.50; Jersey, Potato, per bag, \$2@3; Jersey, flat, per bag, 75c.@\$1.37.

Onions—Maryland, Virginia, and North Carolina, one-half barrel basket, \$1@1.25; Virginia and North Carolina, per barrel, \$2@2.50; Jersey white per barrel \$3@3.75; Jersey white per basket \$1.25@1.75; other Jersey per barrel \$1.50@2.50; Orange County red per bag \$1.75@2.25; Connecticut red per barrel \$2.25@2.50.

Peppers—Jersey, per barrel, \$1@1.25; Jersey, per box, 40@60c.

String beans—Long Island, per bag, \$2@2.50.

Squash—Marrow, per barrel crate, 75c.@\$1.25; yellow crook-neck, per barrel, 50@75c.; white, per barrel crate, 50@75c.

Tomatoes—Monmouth County, Jersey Acme, per box, 50@75c.; other Monmouth Co., Jersey, per box, 20@40c.; south Jersey, Acme, per box, 50@60c.; other south Jersey, per box, 20@35c.; Philadelphia, per basket, 10@20c.; Maryland, per carrier, 25@75c.; Norfolk and North Carolina, per carrier, 40@60c.

Turnips—Russia, per barrel, 50@75c.

Boston.

Fairly large receipts of watermelons; general stock selling 12@15c.; with fancy large good demand 17@18c. Cantaloupes are in full blast, every receiver has them; stock, as might be expected, better than last week; nearly all coming from Virginia in the bushel baskets bring 35@45c.; in barrels or barrel crates \$1.

Some fine hothouse melons grown from Montreal seed and weighing about 20 pounds each, bringing \$1@1.25 each; readers will understand it is only the very wealthy or high-priced hotels that can afford to purchase at such figures. The biggest one weighed so far, touched the scales at 22½ pounds! It was grown under glass by one of our near-by farmers, who last year purchased a melon direct from Montreal, saved the seed, and is now getting his harvest.

North and South Carolina grapes are in very good demand. High-colored Delawares \$2 a carrier; poor color, \$1.50; Concord, \$1@1.25; Niagara, \$1.50 a carrier.

Hothouse black Hamburg grapes, 25c. a pound, in light demand.

Green corn quite plenty, 18@25c. per dozen; all the restaurants have it and it tastes mighty good.

Green peppers, 25c. a dozen.

Some Georgia Elberta peaches, fancy, bringing \$2.25@2.75 a carrier.

New Hampshire blueberries find a large sale at 10@12c. a quart; native blackberries are in as good demand at 10@12c., while the Jersey stock does not slide so easy even at 5@8c.

Mushrooms dull, stock generally very poor; a few fancy meet a fair sale.

Native celery (started under glass), \$1.50 a dozen, round radish, 10@15c. dozen bunches; beets, plenty and dull at 25c. a bushel; with turnips in very good demand, 50@75c. a bushel.

Summer squash, 2@3c. each; it has not been a good season, therefore those who have any are getting very good returns.

High-colored marrow squash, quick demand, \$1.75 a barrel.

Peas from Portland are pleasing the trade at \$3 a barrel.

String beans generally poor, some small pickling stock, \$1.50 a bushel. There is a ready sale for shell beans at \$1.50 a bushel.

Potatoes are easier by 75c. a barrel; best stock early this week quoted \$2.50@2.75; it is not believed any large quantity will be put on this market, therefore every one is looking for a good healthy demand for potatoes during the next four or five weeks.

Few Virginia yellow sweets on the

(Continued on next page.)

AGENTS WANTED.

Read this partial description of the best book of the kind for women which has ever been published, then write us for terms and territory.

HOUSE PLANTS

AND
HOW TO SUCCEED WITH THEM.

BY
LIZZIE PAGE HILLHOUSE.

Scores of books have been written on flowers and their cultivation, but it has been reserved to Mrs. Hillhouse to cover a field of highest interest to women hitherto untouched, and to provide a reference book and complete guide for all her sisters who, loving plants, would ever be surrounded by them did they but know where to turn for such advice as to their preservation and instruction in their culture as would be open to them to follow, easily understood, yet thoroughly practical.

"I have bought book after book," the author says, "in a vain search for that knowledge which would enlighten me as to how to prolong the lives of my precious pets, when noting with alarm their distressed appearance, only to find them all a delusion and a snare, so technical or ambiguous as to be far beyond my reach or apprehension. Therefore, for the benefit of fellow sufferers, I have determined to put down what little I have found out from bitter experience, knowing it will be practical and true, as far as it goes."

"HOUSE PLANTS" has been written by a woman for the countless thousands of women who have no conservatory or hothouse, and are compelled to grow their plants in the home, and it gives freely of the knowledge which the author has been gathering through many years of observation.

Recognizing the fact that no book adequately covering the subject has ever been published, Mrs. Hillhouse has undertaken to fill the deficiency, and most ably and effectively has she accomplished the task. The result is a book of information and instruction, written in simple language, which will be prized and consulted by every woman so fortunate as to become its possessor. Of all books of reference issued for domesticated women, "House Plants" will take its position second only to the much prized and ever handy family cook book.

The amateur will be both surprised and delighted with the great range of plants which this book tells us it is possible to successfully raise in the house. Chapters are devoted to Bulbs, Cacti, Ferns, Flowering Plants, Foliage Plants, Lilies, Palms, Shrubs, Vines, Creepers and Basket Plants, and one on plants unclassified. A separate chapter on the propagation of plants is extremely interesting, as it is here so many fail.

Again quoting from the author, "In writing this little book, I have endeavored to keep strictly within the lines of my personal experience, and to select for description and suggestion as to treatment only those plants which I knew could be grown successfully in our living rooms or houses. This, undoubtedly, may be done if my instructions are followed."

"How little most people—bright people, too—know of the marvelous and amazing creations of the plant world. Those silent monitors, the flowers, are not dumb, but speak to us through the delicacy of their scents, their intricate shapes, complex habits, and the glorious penciling of their heavenly colors, that no human artist can command."

HOUSE PLANTS, 12mo., 220 pages, cloth, profusely illustrated, and with complete and ready reference index to all plants mentioned. Price \$1.00. A. T. De La Mare Ptg. and Pub. Co., 2 to 8 Duane St., New York, publishers.

market, about \$3.50 a barrel; little more size would be beneficial; red sweets steady at \$3 a barrel.

Cucumbers are strong at 2½c. each for good stock; seconds are dull and in light demand.

Yellow turnips, whether from Jersey or near by, are quickly taken at \$1.50 a barrel; practically no difference in the quality. Egg plant quiet; \$1.50 for the three-peck box.

Cauliflowers are poor, having very little head; dangerous to quote, but some line ones bring \$1.50 to \$2 a dozen.

A good many Illinois tomatoes are now arriving and bring 50¢@60c. a crate; hot-house stock, 10¢@15c. a pound; with some home-grown stock, \$2.50@3.50 a bushel.

New parsnips, \$1 per dozen bunches; new carrots, 3¢@5c. a bunch; near-by onions brought in every morning bring \$1 a bushel; western New York stock, \$2.25 a barrel.

Very healthy demand for new apples; new Astrachans, \$2@2.25 a barrel; some fancy stock \$2.50@3; half-barrel basket, Jersey, \$1@1.25; some Massachusetts Williams not quite up in color, 75c.¢@1; if higher color, could quote \$1.25@1.50 a bushel.

There are a few pineapples around, but the bulk of the crop has been gathered in.

Parsley worth 50c. a bushel; mint, 35c. dozen bunches; garlic, 6¢@10c. a bunch; cabbage, 2½¢@3c. each.

No muskmelons on the market; the storms have about killed the currant and raspberry crop, and there is a better demand for currants, but few are offered at 8c. a quart; red raspberries 8¢@10c. a pint; no demand whatever for blackberries or raspberries.

Arrivals of Le Conte pears mostly show very poor condition; those which are about perfect bring \$3 a barrel.

Estimates have been made and given regarding apple crop of New England; Maine, New Hampshire, Massachusetts,

and Rhode Island have been directly heard from, and if we say there is one-fourth of a crop we are giving a correct idea as trees hang to-day.

E. F. Landis of Model City, N. Y., is introducing a new barrel which he claims, exceeds anything ever produced.

Philadelphia.

This market has cleared up well during the past week. On every day a very large stock has been on hand of both fruit and vegetables and buyers have been plentiful.

Peaches have fallen off in supply, and only a small percentage have been No. 1 stock.

Cantaloupes have been very plentiful, the best have been from Georgia, but prices rule low. Many Jersey melons have come in, but are not ripe enough.

Blackberries are falling off in quantity. Apricots from the Seneca Lake district have arrived; these are mostly small and have traveled poorly and sold at 15¢@20c. per basket of six quarts.

Apples—Hand picked, per barrel, \$1.50 @2; windfall per barrel, 40¢@75c.; Delaware and Maryland, per crate, 60¢@70c.

Pear—Le Conte, Georgia, per barrel, \$2@2.50; per basket, 75¢@90c.

Peaches—Georgia, per crate, \$2@2.75; fair to good, per crate, \$1.25@1.75.

Blackberries—Jersey, cultivated, 4¢@7c. per quart.

Huckleberries—Jersey, 5¢@7c. per quart; Delaware and Maryland, 4¢@6c. per quart.

Melons—Watermelons, South Carolina, fancy, per 100, \$25@30; fair to good, \$10@15; muskmelons, Georgia, per barrel, \$1.25@1.75; per basket, 50c.; Norfolk, per barrel, 75c.¢@1.50; per basket, 35¢@50c.; Jersey, Jenny Lind, per basket, 40¢@60c.

Corn—Jersey, per 100, 80c.¢@1.30.

Celery—Fair to good, per dozen, 25¢@40c.

Egg plant—Jersey, choice, 80c.¢@1.25

per basket; fair to good, per basket, 50¢@75c.

Lima beans—Maryland, per one-half barrel basket, \$1.75@2.25; Jersey, per basket, 40¢@60c.

Onions—Maryland, silver-skin, per one-half barrel basket, 75¢@90c.; Jersey, white, per barrel, \$2.75@3.50; Jersey, common, per basket, 60¢@80c.

Peppers—Jersey, per crate, 50¢@75c.

Squash—White, per barrel, 60¢@75c.; marrow, 50¢@60c.

Tomatoes—Jersey have fallen in price very much this past week, and the market has been glutted with so much unripe fruit. On Saturday stock could be bought at from 10¢@20c. per basket. This week prices have gone up a trifle; choice fruit selling at from 40¢@50c. per basket.

Potatoes—Jersey, per basket, 45¢@60c. and selling well.

Plants Named.

[Specimens of plants for identification must be ample; mere scraps will not do, and no notice can be taken of such.]

During a trip in the woods, I discovered a few strange flowers which I send you, and would like name and order. There were five or six flower stalks in a clump with no other foliage or stems, color perfectly white, although similar in substance to a potato sprout grown in a dark cellar. They grew in very open woods and were in full sunshine.—A. I. WILLIAMS.

—The plant sent is the Indian Pipe or Corpse plant (*Monotropa uniflora*; N. O. Ericaceæ). It grows on roots of other plants as a parasite, not uncommon. = (To William Goldthwait)—*Spiraea sorbifolia*.

(To C. J. R. N., Canada)—The leaf is evidently taken from a young growth of some Maple, but without fuller material, specific identification is not possible.

TO BE PUBLISHED AUGUST 20.

The Water Garden

(PROFUSELY ILLUSTRATED.)

BY WILLIAM TRICKER.

This work will contain nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work.

On heavy enamelled paper. Elegantly bound. Large octavo. Price, \$1.50.

THIS volume, which has been prepared by the foremost aquaculturist of the country, and to whose efforts the present increasing popularity of the Water Garden is largely due, is intended to serve as a **SOUND, PRACTICAL CULTURAL HANDBOOK** for amateur and professional alike.

The work should find a place in every library and in the home of all gentlemen interested in gardening; it will prove indispensable to the private gardener, whether he is at present cultivating an aquatic garden or with a view of preparing himself to take charge of one at any moment. It is scarcely necessary to dwell on the value of the book to the commercial man; every one in trade will require it.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A full descriptive list of Nymphæas and all other water plants, as well as of all trees, shrubs, etc., adapted for marginal effects, is included.

—+ ORDERS RECEIVED NOW. +—

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8 Duane Street, P. O. Box 1697, New York City.

We Believe every reader of AMERICAN GARDENING feels proud of his paper and the practical, uplifting work it is engaged in; it is raising the standard of Gardening, and maintains the dignity of all engaged in the profession.

We Believe the cause of good Gardening to be eminently a missionary one; from which it follows that the circulation of AMERICAN GARDENING can most readily be enlarged through the efforts of its subscribers. Our circulation, therefore, is an index of our subscribers' interest in the paper.

We Believe our readers are anxious to see AMERICAN GARDENING reach the highest possible development in its work of horticultural education. The legitimate aim of a class paper is to increase its influence through an extension of its circulation.

American Gardening is the most successful of all, and has the largest circulation of any weekly Journal devoted to Gardening and Fruit Culture, but has scope and the disposition to add to its list tens of thousands of patrons. "Come with us and we will do you good," is a living truth in our case; all our new friends are loud in their praise of the value of the paper to them. The cause of "AMERICAN GARDENING" is the cause of American Horticulture.

We Believe that our friends are the ones on whom to call to push circulation. Understanding thoroughly the value of the paper to every one interested in gardening, they can best express its spirit and comprehensiveness and succeed in making subscribers.

With a View to obtaining the assistance of our friends in the propaganda for new subscriptions, and in order that they may have something tangible whereby to remember their successful efforts, we have compiled the following list of

SUMMER PREMIUMS SUMMER

To which we invite your attention in the hope that each and every reader of the paper will endeavor to send us AT LEAST one new subscriber before the close of the season.

American Gardening for 1896. Containing 832 pages of text and illustrations, with complete index. The most full, complete, and desirable volume on Gardening, Fruit Growing, and kindred subjects ever issued. Few works on horticulture can compare with this in value to the student or the practical man. *Handsomely bound in cloth, with leather back and edges.*

This most desirable volume will be forwarded, express paid, to any address, for only seven new subscriptions at \$1.00 each.

American Carnation Culture. By L. L. LAMBORN. A work on the Classification, History, Propagation, Varieties, Care, Culture, etc., of the Divine Flower. Nothing has been left unsaid from which any practical benefit could be obtained. Illustrated. Third edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Beautifying Country Homes. By J. WEIDEMANN. A handbook of landscape gardening. This is the most elegant and useful work on the subject ever issued in this country. It is beautifully illustrated with numerous fine wood engravings, and with 17 full-page and 7 double-page colored lithographs of places already improved. It contains general directions for lawns, roads and drives, walks, hedges, trees and shrubs, gardens, ornamental grounds, hints on burial lots, etc., etc. The beautifully colored plans of improved places are accompanied by descriptions giving the names and positions of the various trees and shrubs employed in planting, thus providing a complete planting map. Cloth, 4to. Reduced from \$15.00 to \$10.00.

Given for 20 new subscriptions at \$1.00 each.

Bulb Culture (Henderson's). By PETER HENDERSON. Contains special cultural directions for over 200 varieties of Bulbs. Compiled with great care, and its information is accurate, reliable and up to the latest. 25 cents.

Given for 1 new subscription at \$1.00 each.

Bulbs and Tuberous-Rooted Plants. (Their History, Description, Methods of Propagation and Complete Directions for their Successful Culture in the Garden, Dwelling and Greenhouse). By C. L. ALLEN. The author of this book has for many years made bulb growing a specialty, and is a recognized authority on their cultivation and management. He has taken the initiative to make bulb growing a special industry in this country, and writes from his own long and extensive experience. The subject is treated in a very exhaustive manner. *Handsomely illustrated, cloth, 12mo. \$2.00.*

Given for 5 new subscriptions at \$1.00 each.

Canning and Preserving Fruits and Vegetables, and Preparing Fruit Pastes and Syrups. By ERMENTINE YOUNG. This work gives a full account of the best methods by which the surplus fruits may well be saved for home use and for the large market demand, and a handsome profit accrues

to the home workers. A practical chapter on evaporation of fruits is embodied in the book. Paper, 20 cents.

Given for 1 new subscription at \$1.00 each

Chrysanthemums and Their Culture. By EDWIN MOLYNEUX. Sixth Edition. By far the best practical work yet written on this subject. 50 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemum Culture for America. By JAMES MORTON. This is the only 'Mum book published for American use, and is an excellent and thorough work; especially adapted to the culture of Chrysanthemums in America. The field is fully covered. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Elliott's Practical Handbook of Landscape Gardening. By F. R. ELLIOTT. Designed for city and suburban residences and country schoolhouses, containing designs for lots and grounds, from a lot 30x100 feet, to a 40 acre plat. Cloth, 8vo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Ferns and Fern Culture. By J. BIRKENHEAD, F. R. H. S. How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, Wardian cases, dwelling houses, etc. A thorough and complete work by a renowned specialist. 128 pp., thoroughly illustrated, 16mo., cloth. 75 cents.

Given for 2 new subscriptions at \$1.00 each.

Fruit Culture, and The Laying Out and Management of a Country Home. By W. C. STRONG, ex-president of the Massachusetts Horticultural Society, and vice-president of the American Pomological Society. Illustrated. New revised edition, with many new additions, making it the latest and freshest book on the subject. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Fruit and Fruit Trees of America, or the culture, Propagation and Management in the Garden and Orchard of Fruit Trees generally. By A. J. DOWNING. Second revision and correction, with large additions. By CHARLES DOWNING. This work has no equal in the country, and deserves a place in the library of every pomologist. It gives descriptions of all the finest varieties of fruit, native and foreign, cultivated in America, and contains the names and synonyms of over 10,000 varieties. Over 1100 pp., with several hundred outline engravings, including supplements. 8vo., cloth. \$5.00.

Given for 12 new subscriptions at \$1.00 each.

Grape Culturist. By A. S. FULLER. New and revised edition, 1894. One of the best works on the culture of hardy grapes, with full directions for all departments of propagation, culture, etc. Illus., cloth, 12mo., \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Grape Growers' Manual. (The Bushberg). An exhaustive work on the cultivation of the grape, with accounts of diseases, insects, etc., by specialists. The descriptive list of varieties is specially useful and complete; the typographical method of designating importance of varieties is a feature. Pp., 200. Royal 8vo. Illustrated. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Gardening for Pleasure. By PETER HENDERSON. New and enlarged edition. A Guide to the Amateur in the Fruit, Vegetable and Flower Garden, with full directions for the Greenhouse, Conservatory and Window Garden. This is a complete encyclopedia of horticultural information, treating on soils, fertilizers, the lawn, garden designs, culture and care of plants, greenhouse building, heating, cottage and window gardening, the orchard, and many other important subjects. A monthly calendar of operations is also appended, which will act as a first-class guide to the amateur horticulturist. Illus., cloth, 12mo. \$2.00.

Given for 4 new subscriptions at \$1.00 each.

Gardening for Profit. By PETER HENDERSON. A guide to the successful culture of the Market and Family garden, profusely illustrated. Although written mainly for the market gardener, the amateur interested in vegetables or fruits can easily adapt its teachings to the smallest requirements. Cloth, 12mo. \$2.00.

Given for 4 new subscriptions at \$1.00 each.

Greenhouse Construction. By PROF. L. R. TAFT. A complete treatise on Greenhouse structures and arrangements of the various forms and styles of Plant Houses for professional florists as well as amateurs. All the best and most approved structures are so fully and clearly described that anyone who desires to build a greenhouse will have no difficulty in determining the kind best suited to his purpose. The modern and most successful methods of heating and ventilating are fully treated upon. Special chapters are devoted to houses used for the growing of one kind of plants exclusively. The construction of hotbeds and frames receive appropriate attention. Over one hundred excellent illustrations, specially engraved for this work, make every point clear to the reader and add considerably to the artistic appearance of the book. Cloth, 12mo., \$1.50.

Given for 3 new subscriptions at \$1.00 each.

How to Grow Cut Flowers. By M. A. HUNT. A thoroughly practical treatise on the cultivation of the Rose and other flowering plants for cut flowers. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

How to Know the Wild Flowers. By MRS. WILLIAM STARR DANA. A guide to the names, haunts, and habits of our common wild flowers. The most handy and easy reference book for amateurs. With 100 illustrations by Marlon Satterlee. 12mo. \$1.75.

Given for 5 new subscriptions at \$1.00 each.

Henderson's Handbook of Plants and General Horticulture. By PETER HENDERSON. This has long been acknowledged as the standard American work on general horticulture, giving history geographical distribution and cultural directions for all cultivated fruits and flowers. Illustrated. Cloth, 8vo. \$4.00.

Given for 9 new subscriptions at \$1.00 each.

Insects Injurious to Fruit. By PROF. WM. SAUNDERS. A work of great value to all fruit growers, written by a man of science as well as a practical agriculturist, and the result of careful and minute observations and experience. It treats, under separate chapters, of the injurious insects which prey upon our fruit trees, vines and bushes, together with their mode of operation, and contains careful directions as to the best means of destroying them. With over 400 pages, 440 illustrations. 12 mo. Cloth. \$2.00.

Given for 5 new subscriptions at \$2.00 each.

Johnson's Gardener's Dictionary. This is a new and revised edition, greatly enlarged, of "Johnson's Cottage Gardener's Dictionary," first published in 1846; containing a full and reliable list of every plant in cultivation, names printed in bold type, rendering reference easy. An important feature of the work is the placing of synonyms alongside the correct name, instead of in a separate list. The habitat of each variety is given along with the date of its introduction. The cultural directions are brief and to the point. Insect foes, diseases and their remedies are fully described, and figures of some of the former have been given. Handsomely bound in one volume. \$4.00.

Given for 9 new subscriptions at \$1.00 each.

Landscape Gardening or How to Lay out a Garden. By EDWARD KEMP. Intended as a guide in choosing, forming or improving an estate (from a quarter of an acre to a hundred acres in extent), with reference to both design and execution, with numerous fine wood engravings. Cloth, 12mo. \$2.50.

Given for 6 new subscriptions at \$1.00 each.

Parsons on the Rose. By SAMUEL B. PARSONS. New and revised. A treatise on the propagation, culture, and history of the Rose. Illustrated. \$1.00.

Given for 3 new subscriptions at \$1.00 each.

Peach Culture. By JAMES ALEX. FULTON. New, revised, and enlarged edition. The only practical guide to Peach Culture as followed on the Delaware Peninsula, but essential to those cultivating this fruit in any other part in the United States. Fine cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Popular Flowers and How to Cultivate Them. By E. S. RAND, JR. Illustrated. New edition, with appendix, revised and enlarged. Crown, 8vo. \$2.00

Given for 5 new subscriptions at \$1.00 each.

Poultry Culture. By K. FELCH. How to raise, manage, mate and judge thoroughbred Fowls. Cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Practical Floriculture. By PETER HENDERSON. A guide to the successful propagation and cultivation of Florists' Plants. As in every work from this gifted author's pen nothing has been left unsaid that bears on the subject. Illustrated. Cloth, 12mo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Profits in Poultry. Useful and ornamental breeds and their profitable management. This excellent work contains the combined experience of a number of practical men in all departments of poultry raising. It is profusely illustrated and forms a unique and important addition to our poultry literature. Cloth, 12mo. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Secrets of Rose Culture. By W. J. HATTON. In this neat volume are described all the newest and most improved designs for building rose houses, heating, ventilation, management, and much other valuable information on rose culture. The latest and best varieties of roses for every purpose and condition are named, and their special values pointed out, 162 pp. Illustrated, 12mo., paper. 50 cents.

Given for 1 new subscription at \$1.00 each.

Strawberry Culturist. By A. S. FULLER. Containing the history, sexuality, field and garden culture of strawberries, forcing or pot culture, etc., fully illustrated. Flexible cloth, 12mo. 25 cts.

Given for 1 new subscription at \$1.00 each.

Success in Market Gardening. By W. W. RAWSON. Illustrated. This work is written by one of the most successful market gardeners in New England, who gives here the results of his life-long experience in the growing of vegetables out-of-doors and under glass, with special adaptation to the climate of New England. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

The Art of Propagation. By J. JENKINS. A concise, practical treatise on the rapid multiplication of vines, plants, trees, etc., detailing the management in propagation of seeds, bulbs, cuttings, etc., and the manner of operating in grafting, budding, inarching, etc. Ample illustrated. 30 cents.

Given for 1 new subscription at \$1.00 each.

The Amateur Orchid Cultivators' Guide Book. By H. A. BURBERRY, F. R. H. S., orchid grower to the Right Hon. Jos. Chamberlain, M. P. Tells how to grow Orchids, in cool, intermediate, or warm houses, successfully. There is a calendar of operations for each month, and full information as to the treatment required by all orchids mentioned in the book. Just published. New edition, colored plates. \$1.75.

Given for 5 new subscriptions at \$1.00 each.

The Nursery Book. By PROF. L. H. BAILEY. This is a complete handbook of propagation of plants treating on seedage, separation and division, layerage, cuttage, graftage, including grafting, budding, inarching, etc. It tells plainly and briefly what everyone who sows a seed, makes a cutting, sets a graft, or wants to know. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

INCUBATORS. Self-regulating. Catalogue free
G. S. SINGER, Cardington, O.
Mention American Gardening when you write

NEW CREATIONS IN FLOWERS.

If you want to know about them send
10 cts. for Mrs. Theodosia B. Shepherd's

New! Catalogue of Rare and Beautiful
Flowers.

Many New Begonias, New Cereuses,
Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.
Mention American Gardening when you write.



PEACE WITH TURKEY.

"Another year's experience with the Page Fence
simply more firmly grounds me in the belief that it
is the best fence on earth. . . . I am certain
that quite a number of your agent's sales here this
year are due to the satisfaction which this fence
has given me." F. E. DAWLEY.
(Director New York State Bureau Farmers Insti-
tutes and proprietor of 13 acre turkey yard, Fayette-
ville). Send for cut and particulars.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION.

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

LORD & BURNHAM CO.,

Horticultural Architects and Builders. . .
Steam and Hot Water Heating Engineers.

(Established 1856.)



Largest Builders of Greenhouse Structures. Plans and construction embrace
latest improvements. Six highest awards at the World's Fair. . . .
Send four cents postage to New York office for latest catalogue. . . .

NEW YORK OFFICE:
180 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

GLASS For Greenhouses, Grap- GLASS eries, Conservatories, Hothouses and Hotbeds. VANHORNE, GRIFFEN & CO.

13, 15 & 17 LAIGHT ST., AND NEW YORK
62, 64 & 66 VARICK ST.,

Mention American Gardening when you write.

STANDARD POTTERY POTS

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
Kearney and Westside Avenues, JERSEY CITY, N. J.
BRANCH WAREHOUSES: Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

Crimson Clover Seed.

DERBY'S GROWS. Pedigree dates back to 1887.
Crop of 1897 for Sale. Address
SAM H. DERBY, Woodside, Del.

Mention American Gardening when you write.

Delaware-Grown Crimson Clover.

Absolutely pure.
New crop.
Now ready.
BROWN SEED CO.
Wyoming, Del.

Mention American Gardening when you write.

A YARD OF ROSES.



Copyright, 1894, by O. D. Gray, New York.

The illustration but faintly represents the beauty of this celebrated painting by the well-known artist, Mr. Newton A. Wells. The grouping and coloring has been performed with exquisite taste, and the reproduction we offer is worthy a frame, and a position on the wall of any one's room. This sketch, in eleven colors, is 36 inches long and ten inches wide, on heavy drawing paper, and sells in the art stores of New York for fifty cents. We will send "A Yard of Roses," securely packed in a tube to prevent injury, postpaid, as follows:

To all renewing their subscription and adding five cents to pay postage and packing.

To all sending us \$1.00 for their own renewal subscription and 75 cents for the subscription of a friend, we will send "A Yard of Roses" free and postpaid, as a premium to both addresses.

AMERICAN GARDENING, P. O. Box 1697, New York.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 138.
COMBINED SERIES VOL. LI.

NEW YORK, AUGUST 14, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Apple Shippers' Convention.....	566	Endive.....	566	Peaches.....	568	Societies, Reports of.....	574	Clothes Post, an Improved.....	566
Apples, Good Keeping..	575	Fertility Again.....	570	Pears.....	568	Sweet Pea Cupid.....	572	Newport, the Cliff Walk at.....	567
Beans.....	566	Fruit Garden, The.....	568	Poultry Notes.....	576	Turnips.....	566	Rosa Rugosa, A Hedge of.....	567
Carbon Bisulphide.....	571	Fruits of Experience.....	568	Private Gardeners.....	574	Vegetable Garden.....	566	Roses, Artistic Growth of.....	565
Chrysanthemums.....	570	HomePlot, All About the.....	576	Radish.....	566	Window Gardening.....	576	Vineland, Newport.....	569
Diseases of Shade and Ornamental Trees....	572	Market Reports, N. Y....	577	Readers' Notes.....	572			Yucca Filamentosa.....	569
Disinfecting Nursery Stock.....	572	Boston and Phila.....	578	Roses on the Clothes Post.....	566	Illustrations.			
		Newport, R. I., Some Gardens at.....	567	Roses Under Glass.....	577	Azalea Amcena at Newport.....	568		
		Orchid Beetle, the.....	575	Society of Am. Florists.	574	Boston Ivy at Newport.	571		



FIG. 157.—ARTISTIC EFFECT OF ROSES GROWING NATURALLY. (See page 566.)

Roses on the Clothes Post.

Many city lots are rendered yet smaller in appearance by four or six sentinel posts, supporting inartistic lines of sagging rope. And in my own place, though a trifle larger, I determined to be rid of them at any cost. Pondering over the problem, I at length solved it. The wooden clothes-line posts were dug up and carried to the wood pile; they will do for kindlings.

Sending for the blacksmith, I instructed him to make some iron posts of two and a-half inch gas piping 10 feet long. Each of these, when finished according to directions, was as follows: Two legs or struts of angle iron, two feet long, placed at an angle of about 45 degrees downward, strongly bolted to the iron post at a point two feet above its base. These struts, which are each shod at the end with a square or shoe of iron, are intended to bear the principal strain upon the post, and keep it upright.

A flat iron strip, about a quarter of an inch thick by an inch wide, is riveted to each side of the post near the top; they are then sprung out in a heart-shaped curve—the two pieces giving a span of six feet at their greatest width apart—and brought gracefully down to the point where the post enters the ground; here they are securely bolted against the sides. Horizontal strips of lighter rounded iron run across this heart-shaped span at distances some 10 inches apart. The top of the post ends in a round ball, and on the face of the post, at the point where the heart shape rises and curves outward, is a stout hook well turned up.

That part of the trellis which will be above ground, is painted a very dark inconspicuous green. The underground portion is protected against rust by metallic paint. The lower end is firmly embedded in the soil to a depth of two feet. Against the square shoes a convenient boulder has been placed; and likewise another boulder at the foot of the post, on the side opposite that on which the line will pull. In filling in, the earth was carefully pounded.

All the posts or trellises, now complete, are stationed at suitable distances around the inner edge of a carriage drive which skirts the lawn; they are, therefore, on the outer margin of the lawn, which is left free and clear. The hooks on the trellis posts all face inward over the lawn.

At the foot of these trellises are planted the hardiest of monthly blooming climbing Roses; and when they are a mass of flowers from bottom to top, as they are the greater part of the season, I feel rather elated at an achievement which elicits praise from all beholders.

Should some untoward winter destroy the cherished climbing plants, I shall only have to purchase new ones, trusting that before this occurs, industrious hybridizers will have produced more blooming climbers that will be entirely hardy. As it is, these so-called partly hardy ones which I use, give me but little trouble and the greatest satisfaction.

Coming as I do from a land where we have flowers outdoors nearly all the year, I sometimes lose patience with the scentless hardy running Roses generally grown North, and blooming only in June. I use Gloire de Dijon, William Allen Richardson, Waltham Queen No. 3, Marie Lavelly, an excellent variety, Caroline Goodrich, Fursten Bismarck, and Marie Henriette. These are heavily mulched with long manure, two or three feet around the base or roots. The tops are laid down and well protected with leaves and a light covering of manure to keep them in place. This, however, should not be done too soon; moderate cold does not injure them.

LIZZIE PAGE HILLHOUSE, N. J.

—Our illustration fig. 158, shows the

construction of the trellis as above described, and is reproduced from the author's "House Plants." On the first page of this issue we present a view in Mrs. Hillhouse's garden which gives some idea of the graceful effect that may be had from allowing a rose to ramble in its own wild way on a suitable frame. It is a matter of much wonder that such graceful and charming effects are not more often reproduced in the thousands of gardens where such could be so easily done.

The Apple Shippers in Convention.

More than half a hundred members of the National Apple Shippers' Association were present in the parlors of the Hotel

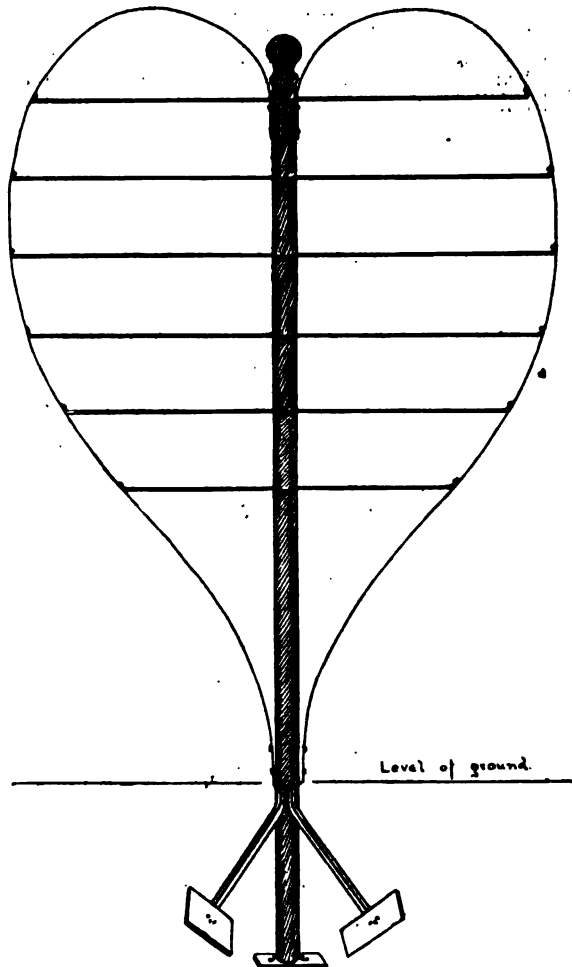


FIG. 158.—AN IMPROVED CLOTHES POST.

Iroquois, Buffalo, N. Y., when President E. P. Loomis called the convention to order at eleven o'clock, August 5. The representative of American Gardening, however, soon discovered that these people are a rather exclusive set, and they came out in broad hints that outsiders are not wanted. The chairman of the executive committee, who evidently had the sympathies of his hearers, stated that the National Apple Shippers' Association is not a philanthropic society, that the public at large has nothing to do with its aims and efforts, and that the members come together for the furtherance of their private ends and purposes. The members claim to have handled about two-thirds of last year's enormous crop, estimated by them at about 75,000,000 barrels. What they evidently are aiming at, is to make the most money out of the business of distributing the apple crops of the country, without regard to the interests of the growers, or of the consuming public either. The association, indeed, is so exclusive that they have rejected many applications for membership, simply on

the ground that the applicants were not making a big enough business of handling apples. Their chief discussions are not for the public, but are reserved for executive sessions. In one sense this policy seems short-sighted. The shippers surely depend on the growers, and both might well work together for their common welfare and interest. Surely it is for the advantage of the shipper to have the grower know what kinds of apples are wanted, and how they should be handled and packed so as to induce the buyer to pay the best prices for them.

President's Address.

President Loomis, in his annual address, referred to the role the apple played in history and legend, beginning with Adam and Eve, and of the great modern development of the apple industry. Forty years ago the apple trade was very insignificant. Then any kind of package, and any kind of apple was good enough. Now we want a well-made barrel of accurate measurement, and only the finest fruit. The increase of the business has been steady and enormous. There are thousands of modern cold storage houses in which millions of barrels are held for long periods and better prices. The Albemarle Pippin, as grown in Virginia, is considered the finest of all apples, and most in demand. At least, it brings the highest price in the English market. The president states his belief that in California a 1,000-acre Spitzenburg apple orchard would yield the income of a California gold mine. He also warns against holding apples for export until spring, when there is competition in the English markets from other foreign countries. The outlook for an apple crop and a paying market this year is good. Poor stock, poor packing, and other mistakes in handling the crop have been the great difficulties to be overcome. The address was received with great favor.

The Present Apple Crop.

The secretary estimates this year's crop in the United States to be about 60 per cent. of a full crop. The quality is promising. Letters from various prominent applemen were read. English dealers state that the shipments, last season, were not in excess of the consuming capacity of the English people. The trouble was the poor stuff, poor packing, poor carrying facilities, poor ventilation, and want of cold storage.

The Vegetable Garden.

Beans.—If a sowing of the Early Valentine wax be made now, the pods will be ready for use in the fall when fresh vegetables will be getting scarce.

Turnips.—This is the proper time to sow early turnips and rutabagas on spare ground for winter use. The ground for these is to be thoroughly rolled at this season after the seeds are sown, or seeds may not germinate freely.

Radish.—Sow in succession every ten days for fall supply. To grow good radishes, the ground should not be allowed to become dry, otherwise they will be tough.

Lettuce.—We generally sow a quantity of this now. We prefer the three varieties—Trianon Cos, Golden Queen, and Curled Silesia or Simpson; the Trianon Cos frequently grows much finer during the cool nights of September than at any other time of the year.

Corn Salad may be sown now.

Endive.—To blanch fit for use, tie up the leaves while dry, or simply cover over with a board for a few days.

Cardoons.—A portion should now be ready to be tied and earthed up to blanch in much the same way as celery. When blanched this is a delicious vegetable and enjoyed by many.

W. M. EDWARDS, Conn.

Some Newport Gardens.

The famous Rhode Island summer resort, where wealth and fashion annually disport themselves during a part of each season, is always looked at by garden lovers with certain longings. For its size, it has a multitude of gardens, some very fine, some of but average merit, but, as in

three miles with none to molest or make afraid.

To a stranger the wonder is how it happens that such a walk through some of the finest gardens in the country came to be and to continue all these years. The Newport millionaires who build palaces on these cliffs and call them "cottages," do not open their grounds thus

Charles II., bearing date July 8, 1668, and which was continued as the constitution of the state down to November, 1842, and some of whose peculiar features are still in force. The grant thus made did "ordain and appoint that these presents shall not in any manner hinder any of our loving subjects, whatever, from using and exercising the trade of fishing



FIG. 159.—THE CLIFF WALK, NEWPORT. R. I

all other things, the reputation is of the few, not of the many, and the few are well worth a visit.

The Newport Cliff Walk, shown in fig. 159, is one of the principal attractions of the place. It is open to every one who chooses to enter, and though extending along the borders of private grounds can be traversed its entire length of nearly

to the public of their own sweet will, and yet there is not a person on earth aside from themselves who can justly claim title to this walk or show a legal claim for his right of occupancy. But in Rhode Island every citizen claims the right to visit the shores and claim a part of the ocean at least as his own. This doubtless came about from the grant of King

upon the coast of New England in America; but that they and every one of them shall have free and full power and liberty to continue and use the trade of fishing upon the said coast, in any of the seas thereto adjoining, and any arm of the seas or salt water, rivers, and creeks where "they have been accustomed to fish," etc. And there is a deed of convey;

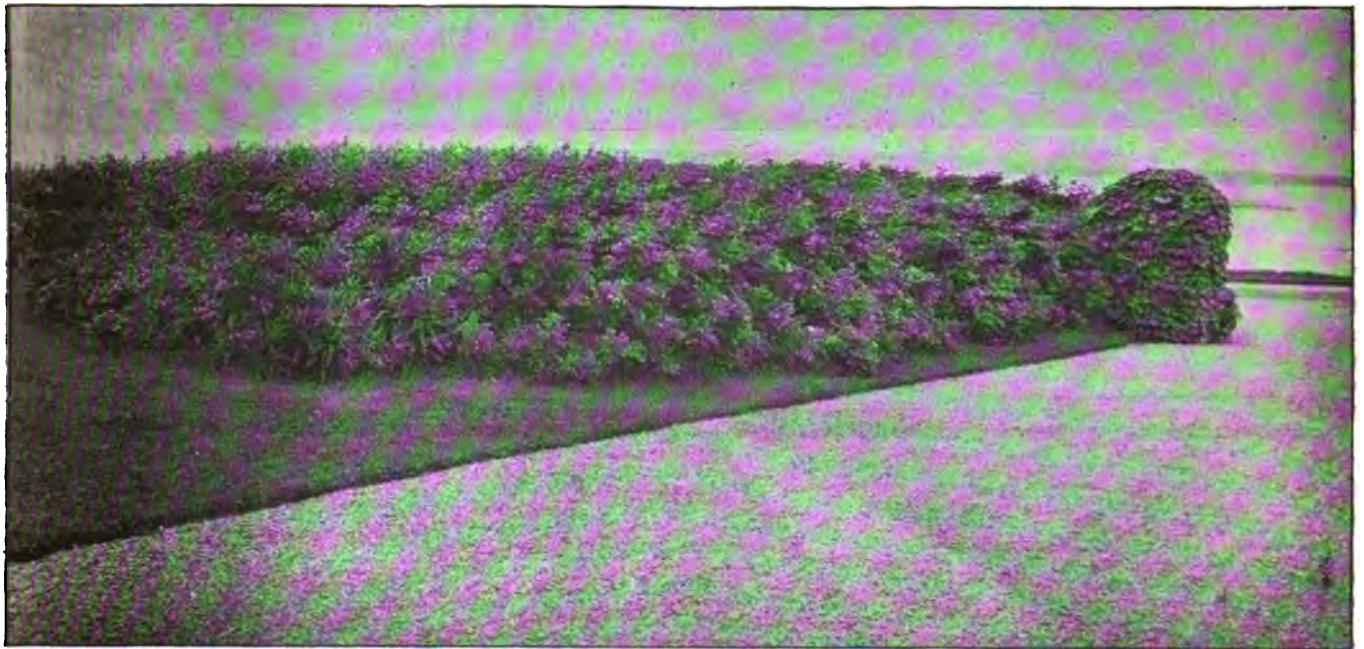


FIG. 160.—HEDGE OF ROSA RUGOSA IN A NEWPORT GARDEN.

ance from one of the early settlers of the island covering the farms of this very cliff, which reserves the right to fishermen to spread their nets on these shores in the prosecution of their "profession."

Newport is famous for its hedges and clumps of *Rosa rugosa*; here the rose is frequently used as a wind break, and is found to stand admirably the winds and gales of the sea. The accompanying picture (fig. 160), shows a hedge of the same in the grounds of Robert Goelet, (P. Carr, gardener).

A noble residence and garden is that of Mr. G. P. Wetmore. The trees and shrubs here show the advantage of age, also the great care that has been taken of them by the veteran gardener, Robert Christie. The excellent bed of *Azalea amena* in flower, as seen in (fig. 161) is a type of what may be seen here in other places. Mr. Christie of late years has devoted a good deal of attention to Cannas,

terson); Mrs. H. H. Brooks (gardener, James Hill); I. T. Burden, Esq., (gardener, W. S. Nicoll); J. W. Ellis, Esq., (gardener, Alexander MacLellan); Mrs. J. M. Fish (gardener, Charles D. Stark); Ogden Goelet, Esq., (gardener, J. R. Johnson); J. P. Kernochan, Esq., (gardener, P. Reynolds); Mrs. P. Stevens' estate (gardener, S. Peck); C. Vanderbilt, Esq., (gardener, R. Lawrie); F. W. Vanderbilt, Esq., (gardener, R. Hinnick), and W. S. Wells, Esq. (gardener, A. S. Melkie).

The Fruit Garden.

Pears.—Margaret, or Petite Marguerite of some growers, is one of the very best of the early kinds; not for commercial purposes though, it having no particular beauty to make it sell at a season when Bartlett's are everywhere in the

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Too much cannot be said about keeping the surface broken up around the berry plants, except raspberries, now.

We will now slack up on cultivating the two-year-old peach orchard for this season, in order that the new wood may have a chance to ripen.

Have you layered those gooseberry bushes yet? The junction of the old and new wood should be buried deep enough to be in the moist soil the balance of the season, with the tip of the new growth above the surface.

There was an excellent crop of very fine cherries with us this year. Even the sweet varieties did better than for many years past.

If you see any of the disease called anthracnose on your raspberry canes, cut



FIG. 161.—BED OF AZALEA AMENA ON MR. WETMORE'S ESTATE, NEWPORT, R. I.

and has been very successful as a hybridizer.

There are few, if any, prettier residences and grounds than Vineland (fig. 162), now the property of H. McKay Twombly, Esq., but better known as the Lorillard home. Alex. Fraser is the gardener now in charge.

Our other views are a showy mass of *Yucca filamentosa*, as seen in the gardens of T. M. Davis, Esq., (gardener Hermann Lipse), also a view of the residence which is clothed with *Ampelopsis tricuspidata* (Boston Ivy), from which its use as a seaside vine can be estimated. Lastly, in fig. 165, is a representation of the famous sunken flower garden of J. J. Van Alen, Esq., where Arthur Griffin is gardener.

In the foregoing selection, a few typical views have been taken, and there are a host of others of equal merit not included. Among other leading horticultural places may be named those of Mrs. W. Astor (gardener, Hugh Williamson); E. J. Berwind, Esq. (gardener, Bruce But-

markets. But where one has to depend on a constant home-grown supply, it is a first-class pear to have, being one of those unobtrusive little fruits which is not soon dropped. If once used, where quality is the criterion. The tree is a vigorous upright grower, and seldom fails to produce a supply of its greenish-yellow, brownish-red cheeked fruit.

Peaches.—Mountain Rose will be in season about the same time. This is a good time to visit some good fruit grower in your neighborhood and ask what he is growing. If you don't find out what you expected, you will learn something else; that is, if you want to do so.

JAMES HOLLOWAY, L. I.

The Pennsylvania peach crop is all right. It is estimated that 100,000 bushels will be shipped from the region between Chambersburg and the Susquehanna River.

them out at once. Better not have more than two or three canes in a hill and have them healthy.

Huckleberries are quite scarce in Michigan this year, except the low bush varieties which grow on the highlands.

To induce sleep, try for supper a good dish of onions fried in butter; that will generally keep a person quiet until morning.

You might as well take some of the premiums at your county and state fairs. Put up your finest fruit in the most attractive shape. A lady near by took fourteen premiums, mostly firsts, principally on canned fruits and baked goods.

We have some of the Schaffer raspberry on low land as an experiment. Their productiveness was a surprise to many. We took care to have furrows to carry off all surface water as soon as heavy rains would come.

Keep layering your strawberry plants during this month just where you want them to set, and as soon as enough are



FIG. 162.—ONE OF NEWPORT'S GARDENS.—VINELAND. (See page 567.)

set keep all runners cut off after that if you want plenty of fruit next year.

On many places there is much waste land which might as well be made use of as to be a harbor for weed seeds to ripen and insects to multiply; this land could be set to raspberries and blackberries, and if inconvenient to cultivate can be heavily mulched with marsh hay or straw and

be made to produce instead of lying idle.

Have you kept the young orchard which was planted to pears, cherries, and apples well cultivated up to this time? If so, it will be better off if let alone the balance of the season.

A good heavy mulch for the currants, if you have it; if not, plenty of manure and good cultivation will do.

When a rainy day comes, look over the tools to see if they are in the best of trim for work.

What a large heavy growth those Marshall strawberries are making.

We are going to set out a good quantity of the Cuthbert raspberry this month by setting with the spade. As the handle of the spade is pushed forward a couple of gills of water will be poured in with the plant and soil firmed against the roots. The demand for this variety seems to increase here rather than diminish.

We are now planning and mapping out some of our fruit plants for planting next spring. Why do we do this now? For the reason that we can give much attention to preparing the ground and putting the land in the best condition for receiving the plants in the season.

The Snyder blackberry; how it is loaded with a fine lot of fruit this season! It seems to be trying to do its best.

Close pruning, plenty of manure and moisture are what bring the blackberries and lots of them, but if the moisture be left out the other agencies will avail nothing.

CHARLES NASH, Mich.



FIG. 163.—YUCCA FILAMENTOSA IN A NEWPORT GARDEN. (See page 567.)

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY

A. T. DELAMARE PUBLISHING CO. LTD.

ROSE AND DUANE STS.

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt. P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florenz, New York.

Publishers' Announcements.

Cheques, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESSES.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 5 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Fertility SOIL fertility and man's usefulness are, in a great measure, dependent upon the same conditions, alike they are governed by the same law—application. Each will do just what is given it to do. If kept at it, and given the proper attention, the soil will produce enormously, but if allowed to remain idle, it will show to advantage the fruits of idleness, and so with man; give him plenty of work and show by word and act that his work is appreciated, and there is no limit to his industry. The busy man is always the one to call upon for any special, important work; he knows the value of time and how to economize it; every blow he strikes, every word he speaks, carries with it purpose. The result is he builds broad, high, and fast; he seems to have plenty of time for everything, excepting to say "I cannot."

The idle brain is the poor soil of purpose; it never produces anything useful; it never has time. Ask a task of the idler

and he has not the ambition to say no, neither the will to do; his life is a crop of weeds. There is no analogy between this kind of man and the soil; Mother Earth never has a tired feeling, neither does she ever show a spirit of unwillingness; give her an opportunity and she will cover herself with glory. The only thing she does resent is nakedness, she insists upon being clothed beautifully, and she will add the useful to the beautiful.

Nature delights in her productions, the greater the crop the greater her pleasure. There is ever a proud smile on the field that yields 200 bushels of shelled corn, or 400 bushels of potatoes to the acre, while there is a sickly look to the field whose productions are half-starved, or even worse.

The delight of the field is to be so clothed that the sun cannot reach it after the young plants are sufficiently large to absorb its rays. Besides that, nothing impoverishes the earth so quickly as the sun shining upon its naked surface, and drawing from it the moisture that justly belongs to the plant.

Much has been said and written on the improved implements of husbandry; much needs be said in certain lines. Our harvests could not now be gathered in the old-fashioned way; the reaper and mower, the hardened steel plows, and the potato-diggers, have made farming on a large scale possible, and at the same time profitable. On the other hand, the wheel cultivator, or the method of farming that makes its general use possible is very injurious to the farmer. This may seem strange talk and at war with the teachings of the day. If so, look at the results.

Take a run over a farm in England, France, or any other part of the continent of Europe, where hand labor alone is employed, or so far as that goes, look at some of the farms in our own country which are worked in the same way, and see which is the cheaper and the better method.

We have been taught that it is the cheap labor in England that enables the cultivator there to produce seeds and vegetables better than our farmers can do. This is a great mistake, for the labor employed on an acre in England costs more than it does here; it is method and thorough cultivation that gives the advantage.

True, we can harvest a crop more cheaply than it can be harvested by our foreign brother; but, on the other hand, he can produce it for less than it costs us. Contrast the methods of the market gardeners near our great cities with those of the ordinary farmer, and see the results. These small farmers can support a family, and lay aside something annually from the products of a five-acre farm; while the owner of a 100-acre farm is steadily growing poorer.

We have a case in point when speaking thus; there is a farm of 72 acres, worked on the same plan as our five-acre farms, near the cities. It is that of George W. Hallock & Son, Orient, L. I. Here the cultivator is rarely seen, and indeed, not at all outside the potato field. The soil is protected from the burning rays of the sun by the profuse growth of vegetables.

But let us be more explicit. We recently saw growing on this farm a crop consisting of about 20 acres of carrots and onions, the seed of which was sown in al-

ternate rows or drills, the distance between which was seven inches—about one-fourth the distance awarded each, when grown in the ordinary way. Of course, here the cultivation is all done by hand, and, in the most careful manner. The onions, many of which are grown from sets, are ready for the harvest by the first of July, and those from seed by the 15th of the same month. The fields are cleared as speedily as possible, so the carrots, in rows 14 inches apart, have the field all to themselves. This is extreme farming, as the soil is called upon for all it is capable of producing, and its capabilities are shown by an average yield, for the past three years, of 800 bushels of onions and 800 bushels of carrots from each of the 20 acres.

On this farm early potatoes are a specialty, and the harvest commences the first of July, when several, say from three to five, acres are dug, the ground plowed and replanted with corn or carrots daily until the harvest is completed. Here Nature's wishes are respected, the plants absorb all the sun's rays, and there is no loss of moisture from evaporation, the crop gets all the heat and all the moisture essential to its growth; the soil is always moist and soft, allowing the roots to run at freedom, undisturbed by the cultivator teeth, so there is not the least possible check to its growth.

This highly successful system of farming was looked upon by those who trod the "good old path" as supremely ridiculous, for the first year or two, and all of the old school farmers predicted failure, and stood aghast when they saw this new departure called for fertilizers, barnyard and commercial, at the rate of \$100 per acre!

But Nature smiled, while man was sad because of the wicked waste at a brother's hand. The harvest came and 450 bushels of potatoes per acre was the reward for skill and courage combined. No greater compliment can be paid the Messrs. Hallock, than to say that all their neighbors saw a light, and are now guided by it. Extreme farming is intensive cultivation and it is intensive cultivation only that will be profitable to the farmer of the future.

To Boom American Food Products.

It is proposed by the Agricultural Department at Washington to send representatives to England to lecture on the superiority of American food and meat products. The plan, says the Michigan Tradesman, is to educate the people who are ignorant as to the best method of cooking fruit products, as well as to recommend their consumption.

—This is all nonsense. The English people can cook "fruit products" as well as the average American, and any nation would resent such patronizing as our contemporary suggests is contemplated.

The evergreen idea that the diseases of our fruit trees may be successfully combated by causing poisons or fungicides to enter into circulation within the tree's body is again being ventilated; this time in the Rural New Yorker. Dr. Halsted's emphatic comment fits the case exactly; he says "bosh!"

If the apple growers are alive to their own best interests they will surely profit by the report of the secretary of the National Apple Shippers' Association. Despite the large crop of last year, shipments to English markets were not in excess of the demand there. "The trouble was the poor stuff, poor packing," and so on. Verb. sap!

Bisulphide of Carbon.

Its Use in Buildings and on Green-house Plants.

To the Editor of American Gardening.

In answer to I. W. B. Mass., (page 525), I would refer him to my article on page 488. I could not hope to take up too much of your valuable space by naming individually every insect that the fumes would destroy; the item at the end of the original communication plainly stated that all household goods, etc., could be effectually freed from all insect pests.

For a room 12 feet square, put one-quarter of a pint of the liquid into a basin and set it upon the floor of the room, having beforehand securely stopped up all cracks, crevices, chimney openings, key-holes, spaces beneath the door, etc., leaving the sash unfastened so it can be opened from the outside. Put

the more efficient, but is too volatile and does not diffuse with sufficient rapidity. When, however, it is mixed with vaseline, its volatility is reduced, and its diffusibility is increased, the former proving advantageous in light and calcareous soils, the latter in heavy soils.

The vaselined sulphide is applied in the same way as the ordinary sulphide, depositing some at the foot of the vine stock and spreading the rest over the surface; this treatment is found to be effectual, and with it phylloxera is no longer seen in the roots, vegetation is luxuriant, and numerous new rootlets indicate a decisive increase in vitality. The manuring on a test tract of land had not been altered for six years, therefore the improvement was solely due to the bisulphide of carbon. (P. Cazeuueve, U. S. Department of Agriculture. Farmers' Bulletin, No. 19. Bisulphide of Carbon). This is the great French remedy for the phylloxera, 150,000 acres being now

with red spider and aphids. A large box was constructed wherein to place the plants; a stationary glass tube was inserted in a hole in the top of the box, the lower end of this tube being provided with a sponge to retain the liquid which was poured down the tube, and the top was provided with a cork stopper so as to retain the fumes.

Pelargoniums infested with aphids were treated to one-half drachm carbon bisulphide for three hours; this was thoroughly effective and no injury was done to the plants.

Chrysanthemums infested with brown aphids: one drachm for two hours; effectual; no injury to plants, although the shoots were tender.

Cinerarias were treated in the same manner for aphids, and with success in every case.

I myself put several cut worms into the bottom of a five-inch pot, filled it with soil, and put one teaspoonful of carbon



FIG. 164.—RESIDENCE OF T. M. DAVIS, ESQ., NEWPORT, R. I., SHOWING FINE GROWTH OF "BOSTON IVY." (See page 567.)

in the liquid during the morning and let it remain six hours, then open windows, doors, chimney openings, etc., and let all smell of the vapor escape before going in with a light. There should not be any light or fire of any kind in any part of the house, while the bisulphide is being used, nor until after ventilation is complete, or an explosion may take place.

In answer to Mr. George Thomas, Chester Co., Penn., the only safe way "to know more fully of results," is to personally experiment and take notes. For his information, however, I would submit the following:

The introduction of American grape vines to replace those destroyed by parasites in French vineyards has not arrested the use of insecticides for the protection of French vines still attacked by phylloxera; and for this purpose carbon bisulphide (either pure or with water), sulpho-carbonates and submersion continue to be employed with more or less success. The carbon bisulphide is by far

subjected to treatment with it, and it applies equally well to all other root-inhabiting lice. The treatment is made at any season except the period of ripening of the fruit, and consists in making holes about the vines one foot to 16 inches deep, and pouring into each about one-half ounce of bisulphide, and closing the hole with the foot. These injections are made about one and a-half feet apart, and not closer to the vines than one foot. It is better to make a large number of small doses than a few large ones. Hand injectors and injecting plows are employed in France to put the bisulphide into the soil about the vines but for limited tracts a short stick or iron bar may be made to take the place of these injectors.

For root maggot a teaspoonful is poured into a hole at the base of the plant, covering as above.

Professor F. M. Webster, Entomologist of the Wooster, Ohio, Experiment Station, made several experiments in March, 1895, upon greenhouse plants infested

bisulphide upon the surface, turning a tin can over all to keep in the fumes; in five minutes all the worms were dead.

Professor Hilgard, California Experiment Station, could give experience upon grape phylloxera; he was the originator of the use of bisulphide of carbon. I hope I have given such results that "Thomas" will not "doubt," but will experiment.

G. M. STRATTON.

Saving the Elms.—The Common Council of Albany, N. Y., has appropriated \$1,000 for the sprayers and solution needed to preserve the elm trees of the city from the ravages of the elm beetle. Albany has set an example, which many smaller cities might imitate to profit and satisfaction.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send us stamp for our new catalogue.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader, are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multiplicity of counsel there is wisdom and safety. Write us often.

Disinfecting Nursery Stock.—I have read the various articles in American Gardening with much interest, and especially the one on "Bisulphide of Carbon," on July 10, by G. M. Stratton. Exhaustive as that article seems to be, there is one phase of the subject on which I would like information, viz., what the fumes of bisulphide of carbon destroy the germs of insects? If not, what will? I shall plant an orchard next spring; my stock will come from various sources. My location is in the Rockies away from other orchards, and therefore presumably free from most of the insect pests common to fruit trees. On receipt of fruit trees and other plants, I wish to destroy any insect life such as aphids, leaf roller, etc. How can I best do this, as I think it easier to do this while plants are in bulk than after they are established in orchard?—GEORGE L. HOOPER.

—Certainly prevention is better than cure. Tests with hydrocyanic acid gas for the purpose suggested have given much satisfaction, and on the Pacific Coast it is largely used. So far, in the East, its efficacy has not been put to any severe test except in an experimental way. Professor W. B. Atwood has reported favorably on its use, however. The method of treatment prescribed by him is briefly as follows: A small building about 10 feet square, from 7½ to 10½ feet high, is closely packed with nursery stock. The building is provided with a door 3 feet wide, a partition running through the center, and a trap door at the top for the purpose of ventilation. An earthenware or porcelain fumigating pot is placed inside the door, cyanide of potash is placed in the vessel, water poured over the same and then to this is added the sulphuric acid, which generates the gas by decomposing the cyanide of potash. The door is immediately closed and remains closed for 30 or 40 minutes, after which the trap door is pulled down and the air permitted to go through the room for at least ten minutes before a man may venture into the room.

Sweet Pea Cupid.—In your issue of July 17, I saw a note on Sweet Pea Cupid, which I think is misleading. I have it this year for the first time, and find it fully up to the promises given in the catalogues. I had it planted for a border around a large bed, and it has been for the last three months the admiration of the whole town. This Pea should be regarded as a border plant and not for cutting. It is the most showy plant for a border I have seen for some time. I had it in a very rich soil, but deep and loose.—HENRY BEWARDER, Cal.

—This only supports our original views, that the climate is accountable for the vagaries of many plants. This particular one is of no use with us.—ED.

How is Your Garden?—At this time of the year, I think the lawns and the flower garden should be in great beauty anywhere; they are then a credit to the gardener who keeps them. The grass should have but one color and that a perfect green; the weeds need to be looked after and destroyed whenever seen; the shrubbery should be well trimmed, the gravel walk kept well raked and clean, and the driveway likewise. If you, reader of American Gardening, have any insect troubling your garden, you have no excuse to make. If you will look through the back numbers and back volumes of American Gardening you will see that every opportunity has been given us how to get away with them.—FRANK A. CARTHON, California.

Diseases of Shade and Ornamental Trees.*

BY B. T. GALLOWAY AND ALBERT F. WOODS.

Speaking generally, the diseases of trees may be divided into two classes: (1) Those in which conditions of soil and climate are the controlling factors, and (2) those where parasitic enemies, such as insects and fungi, are the principal agents involved. Some of the more important insects were described in the Yearbook for 1895, and therefore the present remarks will be confined for the most part to the diseases in which conditions of soil and climate and parasitic fungi are involved.

No sharp line can be drawn between the two classes of diseases to which reference has been made. Complications, however, are always involved, and these become more intricate the more they are investigated; in other words, the tree is ready at all times to adapt itself, within certain limits, to surrounding conditions, and in doing this elements of weakness may be developed which will result in disease or death. The adaptability of trees, therefore, to environment is a most important matter in considering the question of diseases, and to properly understand the latter it may be well to briefly review some of the more important points involved in the former.

It is a matter of common observation that different types of soil and climate support different kinds of trees and other plants. It is not always, however, because we find certain kinds of trees growing in certain soils and under certain conditions, that the peculiarities of the soil and surroundings account for their growing there. Such trees may grow very much better under different conditions if an opportunity is offered; otherwise they will continue to grow where they are, at the same time tacitly protesting against their environment.

An important matter for consideration in the question of adaptation of plants is the fact that the individual is much more susceptible to changes than is the species as a whole. For example, an individual White Oak tree in a moist, warm region would make a growth which would quickly dry up if moved to a region where moisture is deficient, but where other White Oaks were growing, whereas if it had been started from the first in the dry region it would have adapted itself to the conditions and thrived there. Conversely, the tree growing in a dry region or place, if moved to a wet location, is liable to suffer, as it is unable to adjust itself to such a sudden change. It is a common practice to transplant trees from the forest to yards and other places where the conditions of soil and air are quite different from those under which the plant originally grew. In such cases it is difficult to get the trees to live, owing to their inability to adjust themselves to the new requirements. If they do not entirely succumb to the effects of changed surroundings, they may, during the period in which they are trying to adjust themselves, be attacked by parasitic enemies, which will simply result in death in another form.

From such facts as here adduced it would appear that disease or death of trees is largely the result of combinations of unfavorable factors, and that where these latter are favorable to the performance of the normal functions of the trees they might continue to live indefinitely. Unlike an annual or biennial plant, a tree renews itself each year by a thin layer, which forms between the old bark and the wood. This layer is the starting point for the next generation, so that we have a great mass of dead and dying generations within, coated outside with a live generation, which is just as distinct individually from previous generations as a new plant produced from a cutting or bud is distinct from the parent, and which, therefore, strictly speaking, is never old.

As long as the conditions for obtaining food and water from the soil and for conducting these to every part of the tree are

favorable and the effects of climate are not detrimental to growth, the living portion of the tree should be as vigorous as ever. These conditions, however, are seldom attained, and as a result the duration of life is long or short according to the ability of the tree to overcome the difficulties in the way of its development. Thus, if there is a continual drain on the supply of soil foods, with no addition, the tree will eventually starve to death or become so weakened that it will succumb to the attacks of parasites; a period of drought may kill many feeding roots, branches, and leaves, and as these decay, openings will be left for parasitic fungi; a period of cloudy, wet weather may do the same by asphyxiating many roots and leaves; a severe cold spell may "kill back" young growth and injure the young leaves in the spring; a late, warm, and moist fall after a dry summer may induce a fall growth which cannot mature sufficiently to withstand winter cold, and is thus "killed back"; insects may defoliate the branches and borers mine the trunk and limbs, and thus cut off the distribution of food and water and make openings for the entrance of parasitic fungi; parasitic fungi may attack some part of the tree under certain favorable conditions without the tree being previously injured; a tender vegetative growth, although perfectly healthy and normal, may at a certain phase of development be unable to resist the attacks of certain parasites, while later the parasite may not be able to gain entrance; the chemical composition of the juices, or the prevalence of sugar, starch, and acids or bases, may make it possible for parasites to attack the tissues during certain stages of growth, and thus produce disease.

DISEASES DUE TO SOIL CONDITIONS.—LACK OF FOOD AND WATER.

A disease known as "stag head" or "top dry" frequently results from lack of proper food in the soil. The trouble manifests itself by the gradual death of the top of the tree, the lower branches remaining green, but making little active growth. It is common in forests, especially where the conditions have been changed by cutting out or burning the undergrowth, by greatly thinning out the trees, or by excessive draining of moist areas. It often appears in parks where the natural undergrowth has been cut out and the trees have been thinned, thus exposing large areas to the sun and the washing effects of heavy rains. In such cases there is at first, as Hartig points out, an accelerated decomposition of the humus which covers the soil. At the same time the manufacture of sugar and starch by the leaves is increased, owing to an increased supply of light. Stimulated by this increase of food, all the benefited trees make a more vigorous growth, dormant buds developing into leaves and branches, especially in the previously shaded lower parts of the trees. This may continue for a few years, or until the stock of humus and other available food material is reduced. The soil then dries out to a considerable depth during the summer, and as a result many of the upper feeding roots are killed, the natural processes which render plant food available are interfered with, and starvation begins. As the soil becomes poorer and poorer the lower branches appropriate most of the food and water and the upper ones, not being able to obtain their share, die.

Trees planted in parks, in yards, and along streets are especially subject to this disease. Growing year after year where there is no addition to the available soil foods, especially nitrogen, and where the soil is dried out by the sun and grass, starvation necessarily follows. The tree therefore gradually stops growing, the branches and limbs slowly die, and other diseases set in, until finally the last branch is dead. Another cause of this trouble is often found in the process of grading, which removes what good surface soil there is, leaving one not only of poor physical quality, but also lacking in nitrogen, if not in other available soil foods. In planting trees in such places a hole, possibly of sufficient size, is dug, and the tree is set in this, probably with some richer soil, which will furnish food

*In Yearbook of the U. S. Department of Agriculture 1896.

for an indefinite period, according to its quality and amount. If the quality of the soil is poor and the amount small, the tree will begin to starve in five or six years; if the quality is better, and the amount larger, it will last for a much longer period. But no matter how good the soil may be to start with, unless the food supply is properly renewed it is sure to become exhausted as far as the tree is concerned, and starvation, with all its incidental troubles, will follow.

Preventive measures.—It is evident that a constant supply of proper food is necessary to prevent this disease. If the soil is naturally rich, well drained, and of good texture, little need be done in the way of improving it. Wherever practicable, the ground underneath the trees should not be completely sodded, but should be planted to low-growing, shade-enduring plants, so that most of it may be worked and top-dressed each year, thus keeping up the food supply and the proper aeration of the soil. The poorer the soil the greater the precautions that must be taken in this direction. When trees are to be set in very poor soil, as is often the case in cities, a hole at least 8 feet long,

important process of fixing atmospheric nitrogen in soils deficient in air, especially its most important element, oxygen, while other similar organisms may even cause the destruction of what nitrates there are present. This is particularly true of wet soils and those of very close texture. The presence of much water between the soil grains prevents the circulation of air, and there is consequent loss of nitrates, the most valuable of all soil foods. But aside from this important consideration the plant roots themselves require a plentiful supply of oxygen in order to carry on their own life processes. Growth cannot take place without it, neither can the formation of reserve materials. These processes are especially active in roots. A deficiency of oxygen for roots at once becomes apparent by cessation of growth, and, if too long continued, by the death of the roots, followed by starvation and death of the whole plant.

Trees are often injured in poorly drained soils during a wet period. Of course, if the presence of water is constant and the tree has grown up under these conditions, it will produce many surface and water

paved. This trouble is especially liable to occur along streets, where the ground water is only a few feet from the surface. During prolonged rainy weather the water rises, making the soil wet up close to the surface. The pavement adds here to the evil of poor under-drainage, preventing evaporation and aeration.

Another means of cutting off the soil air is by filling and deep planting. It often happens in grading that soil is filled in around trees, sometimes to a depth of several feet. In naturally well-aerated soils the damage that may result from this practice is not so great or so soon apparent. No special harm may result in such soils if the amount added is not more than a foot in depth, but where it exceeds this more or less rapid asphyxiation of the roots, and lower part of the trunk will follow. The tree may not be killed, but it will at least be greatly checked and stunted in growth, making it more subject to other diseases.

The same troubles often result from too deep planting, especially in heavy soils. The deeper roots rot, and the tree makes a slow, stunted growth, and sometimes lasts for many years, when it either

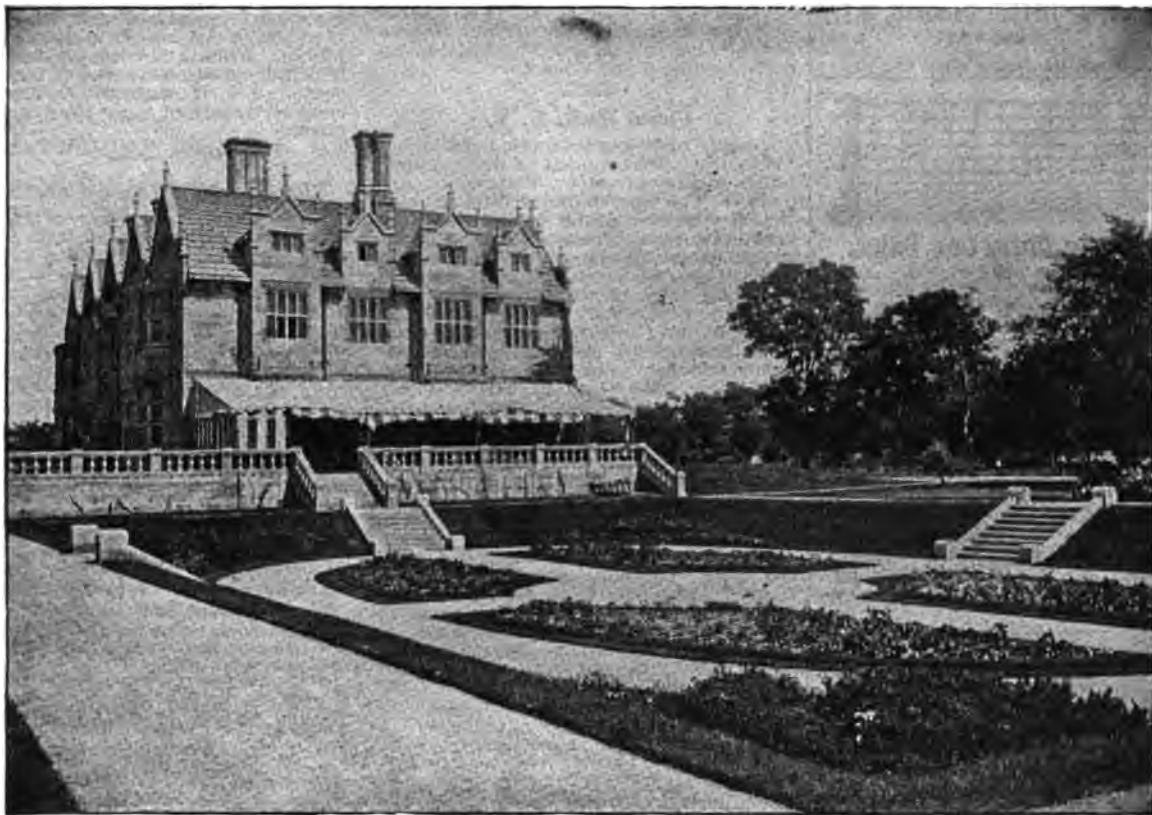


FIG. 165.—RESIDENCE OF JOHN J. VAN ALLEN, ESQ., AND SUNKEN GARDEN AT NEWPORT, R. I. (See page 567.)

2 feet deep, and 8 feet wide should be excavated and good soil substituted for that removed. Along streets and walks as large a parking as possible should be left around the tree. Each year this should be spaded as deep as possible without injuring the roots, and then top-dressed with good rotten manure, enriched by a sprinkling of ground bone. Grass or weeds should not be permitted to grow in this area, nor should the ground be allowed to become trampled down. If these precautions are taken, the health and life of the trees will be extended many years beyond what they would under less favorable conditions.

IMPERFECT CIRCULATION OF AIR IN THE SOIL.

The proper aeration of the soil has an important bearing on the health of trees. The amount of air and its circulation are affected by the size and arrangement of the soil grains, amount of water present, proximity of pavements, filling, grading, etc. Whatever may be the cause of imperfect aeration, the effects are far-reaching and important. In the first place, nitrifying organisms cannot carry on the

roots, thus adapting itself to a wet situation. We refer here, however, especially to soils which are too wet only at certain periods—low places, underlaid by hard pan; where, ground water comes close to the surface, or in stiff soils, which, becoming saturated, hold water for a long time. The roots produced in the rather dry or moist soil are injured or killed during wet periods, especially the deeper ones, like the tap-root and the lower laterals. A prolonged wet period followed by a very dry one is liable to completely kill the tree under such conditions. In some of the close-textured soils of the West and Southwest, naturally deficient in aeration, trees often suffer or are killed during the rainy season, or by excessive irrigation. When the roots are not killed, they are so weakened as to be made subject to the attacks of various root-rot fungi.

Trees planted along the paved streets of towns or cities nearly always suffer from a lack of aeration of the soil. The exchange of gases between the soil atmosphere and the air is greatly retarded by pavements and walks and by the hard-packed surface of roads which are not

dies of its own accord, is blown over by the wind, or death is hastened by some parasitic disease. Large numbers of young trees set only a few inches too deep are killed in this way.

Preventive measures.—In all cases where there is a lack of aeration steps should be taken to keep the ground around the trees stirred. In cities parking must be left, and where the ground is hard it should be frequently spaded to a depth of 6 to 8 inches, as already described. When the ground has been filled in around the trees, the latter, if not too old, may be saved by removing small patches of bark down to the wood. This should be done at points beneath the soil so as to induce the formation of new roots from the wounds. Some trees, like willows, poplars, beech, and hornbeam, but especially shrubs, produce adventitious roots just beneath the surface of the ground, and these are able to preserve the trees though the deeper roots may be killed.

(To be continued.)

Our publishers will supply any book wanted. Send your orders.

W. & D's.**Celebrated Sure Crop.****MUSHROOM SPAWN. 8 lbs.
FOR \$1.00.**Lilium Harrisii, Roman Hyacinths, Freesias,
Paper White Narcissus, Callas,
Etc., Etc.

Special PRICES on application.

WEEBER & DON,

Seed Merchants and Growers.

114 Chambers St., N. Y. CITY.

Mention American Gardening when you write.

**DWYER'S SUMMER and
AUTUMN LIST**Of Pot Grown and Layer STRAW-
BERRY Plants, CELERY, VEGE-
TABLE Plants, FRUIT Trees and
ALL NURSERY STOCK will be mailed
free to all who apply for it.**T. J. DWYEN, Cornwall, N.Y.**
Box 175.

Mention American Gardening when you write.

**Competitors Carry One Point.**Certain manufacturers who use cheap material
cut together without provision for the demands on
nature (contraction and expansion) are able to pay
big commissions. This is the one claim for
superiority with which they often try to bribe
agents to desert us. They seldom win, as a con-
scientious man will refuse to handle inferior
goods even for greater profit.**PAGE WOVEN WIRE FENCE CO., Adrian, Mich.**

Mention American Gardening when you write.

FOR SALE.Advertisements not to exceed eighty words will
be inserted under this heading at TWO CENTS PER
WORD each insertion, payable in advance.The address will be charged as part of the advt.,
and each initial, or a number, counts as one word.
No cuts or display type allowed.**HULSEBOSCH BROS.,** bulbs and plants, Engle-
wood, N. J.**GLASS** at wholesale, rock bottom prices. Also
paint for greenhouses. The Reed Glass & Paint
Co., 456 W. Broadway, New York**DO YOU WANT** the best flower pots? If so, send
address to The Whildin Pottery Co., 718 Wharton
St., Philadelphia. Three shipping points, can save
you freight.**SNYDER BLACKBERRY,** Early Ohio Black Rasp-
berry, Cuthbert's and Brandywine Red Rasp-
berry plants, 50c per 100; \$4.00 per 1000. Victory
and Cherry Currant, and Downing Gooseberry, 1
year, \$1.20 per 100; \$10.00 per 1000. Strawberry
plants, \$1.25 per 1000. A. Y. Cathcart, Bristol, Ind.**Situations Wanted.**Advertisements will be inserted under this head-
ing at ONE CENT PER WORD each insertion, payable
in advance. The address to be counted as part of
the advertisement. No advertisement inserted for
less than fifteen cents per insertion.**WANTED** position as gardener. English, married,
age 41, life experience in the culture of stove
and greenhouse plants, forcing grapes, mush-
rooms, etc., and the routine of flower and kitchen
garden; excellent references. Apply Florist and
Gardener, Post Office, Bridgeport, Conn.**WANTED**—A position as head gardener or gen-
eral superintendent on a large country estate.
by a Scotchman, who has had 17 years' experi-
ence in this country; 15 years in last situation; abili-
ties and references cannot be questioned. Only
those requiring the services of a first-class man need
apply. Address Practical, care of American Gar-
dening.When ordering goods subscribers will
confer a favor on the publishers by stating
they saw the advertisement in AMER-
ICAN GARDENING. We admit only re-
sponsible business houses in our adver-
tising columns. Avoid delay and disappoint-
ment by giving name and address legibly.**PRIVATE GARDENERS.****Appointments and Doings.**Gardeners and others knowing of recent
appointments and movings are requested to
forward particulars of the same for publica-
tion in this column. No charge is made.Mr. W. L. Palmer, late head gardener
to Mrs. G. H. Perkins of Rochester, N. Y.
has been engaged as head gardener to E.
F. Searles, Esq., of Methuen, Mass., who
is building an extensive range of glass,
and laying out over 2,000 acres of land
into park and ornamental grounds.Mr. Anton A. Voorneveld, formerly
superintendent for Ira Parker, Concord,
N. H., has started into business for him-
self. He will raise cucumbers under glass
for the Boston market.**Port Chester, N. Y.**The newly formed horticultural society
is now well launched. At a meeting held
on July 24, the previously adopted title
of the body was under discussion, and as
it was considered that the name of Port
Chester was too local and the society will
henceforth be known as the "Westchester
County Gardeners' Association." It was
also decided to hold a fall exhibition on
on November 5 and 6 next.**Floral Park, N. Y.**A party of 30 gardeners and specialists
visited the establishment of John Lewis
Childs by invitation, on Wednesday, Au-
gust 4. The chief point of interest was
the 80 acres of Gladioli with the 3,000-
000 odd corms. The kinds coming under
special observation being the superb hy-
brids of the Childs section. The coloring
and markings of these, together with
their great size, make these forms very
valuable for garden use. After viewing
these and others, the party was enter-
tained at lunch. Mr. Childs had intended
to preside, but through indisposition,
was unable; however, the interests of
the guests were well taken care of by E.
S. Miller, the manager. Another wander
was made over the balance of the 150
acres, which is under cultivation, and
many rare and beautiful subjects among
hardy plants were discovered, while
among annuals were some fine Zinnias
and Star Phlox; another subject of inter-
est was Rudbeckia laciniata "Golden
Glow." This charming double form is
likely to be of great value to lovers of
outdoor flowers and of special service as
a cut flower. Mr. Samuel Henshaw of the
New York Botanical Gardens, proposed
a vote of thanks to Mr. Childs for the
great treat he had afforded all present.
Mr. William Plumb, superintendent of C.
P. Huntington's estate at Throggs Neck,
seconded this, and it was heartily car-
ried.**Cohocton, N. Y.**The Sweet Pea exhibition on August 5
and 6 was an object lesson of intensive
cultivation and considerably in advance
of last year's effort.The center seats of the church, where
the display was held, were covered over
by boards lined with dark green cloth, so
that no harm was done to the pews or
woodwork. On this staging was banked
Palms, Ferns, Begonias, and a general as-
sortment of blooming plants, each in a
jardiniere, and on the outside clear
around the whole was a double ledge of
Sweet Peas—thousands and thousands of
high-grade blooms of all the standard
varieties, and including the entire list of
novelties, with a competition of 25 en-
tries for a single premium. Altogether it
was the closest competition in my experi-
ence.Of the novelties, Prima Donna is cer-
tainly the finest light pink Sweet Pea.
Aurora, striped salmon on a white
ground, is a very distinct, attractive, and
noble flower. New Countess is much the
best lavender, and Brilliant the best red.
Red Riding Hood has such a pleasing
shade of color and is so odd in outline,
that really it may be classed as a good
thing. In a bunch by itself, it shows off
to excellent advantage.Gray Friar continues to gain in popu-
larity, also Mrs. Joseph Chamberlain and
Lady Beaconsfield.Her Majesty still stands pre-eminent.
The strong point in favor of the double
Sweet Peas is their durability as cut
blooms.Many premiums were offered by leading
seedsmen—Peter Henderson & Co., Henry
A. Dreer, W. Atlee Burpee, Dingee & Con-
ard Co., and others.For social good fellowship and general
horticultural interest, commend me to an
intelligent rural neighborhood, who are,
en masse, lovers of nature and worship at
flora's shrine. GROVE P. RAWSON.**Boston.**Perennial Phloxes and Antirrhinums
were the specialties for which prizes were
offered by the Massachusetts Horticul-
tural Society on Saturday, July 31, but
the exhibits were far from being up to
the standard. M. B. Faxon made a good
showing of Sweet Peas, embracing 112
named varieties. Mr. William Thatcher
showed a new seedling Delphinium, for
which he received honorable mention. J.
Warren Clark showed a fine collection of
gladioli, the first of the season. M. H.
Walsh exhibited four fine specimens of
Hydrangea cyanoclada hortensis, full of
bloom. William Martin, gardener to S.
T. Kidder, Esq., showed Cattleya Harri-
soni, and J. E. Rothwell received first-
class certificate of merit for Cypripedium
Corningii.**The Society of American Florists.**The annual convention of this body
takes place at Providence, R.I. next week,
from Tuesday, 17th to Friday 20th, both
included. Many gardeners will attend
this gathering, and will have an oppor-
tunity of visiting their brothers at New-
port, R. I. (Some characteristic views
are given elsewhere.) Herewith is a part
of the official programme:**TUESDAY, AUGUST 17, 1897.****First Day—Opening Session 10.30 A. M.****ADDRESS OF WELCOME,** by Mayor Edwin D.
McGuinness, of Providence.**RESPONSE.****PRESIDENT GRAHAM'S ADDRESS.****REPORTS.**—Secretary, Treasurer, Standing
Committees, Special Committees.**APPOINTMENT OF EXHIBITION JUDGES.****MISCELLANEOUS BUSINESS.**On the afternoon of the first day the Judges
will examine and prepare their reports upon
the trade exhibition.An enjoyable programme for the entertain-
ment of the visiting ladies will be arranged for
this afternoon by the Ladies' Committee of the
Florists and Gardeners' Club of Rhode Island.**First Day, Evening.****PRESIDENT'S RECEPTION.**—Tuesday evening
will be devoted to the President's Reception,
under the auspices of the Florists and Gar-
deners' Club of Rhode Island.**WEDNESDAY, AUGUST 18, 1897.****Second Day—Morning Session 10 o'clock.****SELECTION OF PLACE OF MEETING FOR 1898.****NOMINATION OF OFFICERS.****REPORTS OF JUDGES ON EXHIBITS.****DISCUSSION OF RECOMMENDATIONS IN PRES-
IDENT'S ADDRESS.****A PAPER**—Subject, "Root Galls of Cultiv-
ated Plants," By PROF. B. D. HALSTED,
Agricultural Experiment Station, New Brun-
swick, N. J.**DISCUSSION.****A PAPER**—Subject "Trees and Shrubs
such as should be grown by every Florist,"
By CHAS. J. DAWSON, Bussey Institute, Bos-
ton, Mass.**DISCUSSION.****A PAPER**—Subject, "Florists as Scien-
tists versus Artisans," By F. W. BARR, Agri-
cultural College, Durham, N. H.**DISCUSSION.**On Wednesday afternoon a Shooting Tourna-
ment will take place at Johnston, a suburb of
Providence. Intending participants should
communicate with the Chairman of the com-
mittee on Sports.Sessions of the American Carnation Society,
(2 P. M.), the Chrysanthemum Society of Amer-
ica, the Florists' Protective Association
(3 P. M.), Florists' Hall Association of America
(4 P. M.), will be held on Wednesday afternoon.

Second Day, Evening Session, 8 o'clock.
A LECTURE—Subject, "Our Favorite Exotic Plants in their own Homes." With beautiful stereopticon illustrations. By PROF. G. M. L. GOODALE, of the Botanic Garden of Harvard University, Cambridge, Mass.

THURSDAY, AUGUST 19, 1897.
Third Day—Morning Session, 10 o'clock.
ELECTION OF OFFICERS.
DISCUSSION—Subject, "A Year's Progress in our Business."

SECTION I.
The Carnation—Opened by WM. NICOBOLSON, Framingham, Mass.
The Chrysanthemum—
The Rose—
On Thursday afternoon the Bowling Contest between teams representing various cities, will take place at the alleys of the Providence Athletic Club. Intending participants should communicate with the Chairman of the local committee on Sports.

Third Day, Evening Session, 8 o'clock.
DISCUSSION—Subject, "A Year's Progress in our Business."
SECTION II.
Decorative and Greenhouse Plants—Opened by ROBT CHRISTIE, Newport, R. I.
Bedding Plants—Opened by J. J. BUTLER, Newport, R. I.
The Retail Business—Opened by THOS. J. JOHNSTON, Providence, R. I.

FRIDAY, AUGUST 20, 1897.
Friday will be devoted to recreation. The Florists and Gardeners' Club of Rhode Island, have chartered a commodious steamer, and will invite the members of the S. A. F., with their ladies, to an excursion down the bay. On invitation of the Florists, Gardeners and Associates' Club of Newport, a landing will be made at Newport where the visitors will be the guests of the local club for the day. An elaborate program including a shore drive is in course of preparation, full details of which will be announced in due time.

The Trade Exhibition.
This will be a grand exposition of the latest improvements in all requisites for the florists' business; models of greenhouses and apparatus; new and rare plants; garden implements; bulbs; seeds and supplies.

A Special Medal Competition.
The Society of American Florists offers six silver and six bronze medals to be competed for at Providence, as per the following schedule:
CANNAS display of 15 varieties in pots, not to exceed 25 plants in all.
TUBEROUS BEGONIAS, 25 plants.
CALADIUMS, 12 fancy foliage varieties in pots, one plant of each.
AQUATIC PLANTS, display of out blooms, to be kept in good condition throughout the exhibition.
HARDY CONIFERS, collection in pots.
The silver medals to be awarded for the best in each of the above classes, and the bronze medals for the second best. One silver and one bronze medal additional to be left to the discretion of the committee to be awarded to any display of plants, showing advancement in culture or of special value to the trade.

The Dendrobium Orchid Beetle.

A writer in Gardeners' Chronicle calls attention to the destructive habits of this orchid pest. He says that he has proved by experiment that the beetles will and do breed in our orchid houses, a fact which up till now, has been doubted, and, indeed, declared improbable. The name of this beetle is *Diaplexes dendrobii*. "It is a pretty brownish-grey beetle, from one-half to five-eighths of an inch long, with long antennae, and with whitish or yellowish lines along its upper surface. The grub, which lies inside the pseudo-bulb, is whitish and legless (but still very active,) with scaly brown head and biting jaws. When full fed it makes a cocoon out of the fibres of the hollowed-out pseudo-bulb, from which cocoon, after pupation, the beetle emerges. "*Diaplexes* is injurious, both as imago and as larva. The grubs mine into and tunnel out the pseudo-bulbs, till, it may be, merely the outer skin is left, while the beetles feed on pseudo-bulb and leaf and root.

The Fink Apple and Some Other Good Keepers.

Some years ago a Perry County (O.) farmer who had removed to Kansas wrote back to the old home about attending the Franklin County fair at Ottawa, and his surprise (and delight) at seeing on the exhibition table a Fink apple which had taken the first premium at one of the Ohio fairs the fall before and had subsequently been taken to Kansas by a visitor. Fink, when properly managed, is one of the best long keepers and in addition is one of the finest cider apples known, especially for boiling down to make apple butter. The tree is a thrifty and remarkably upright grower, and an early and profuse bearer. The fruit is usually of medium size and a little below, though under favorable conditions it becomes over three inches in diameter. Color whitish yellow with a brownish blush. It was introduced to public notice by the late William I. Clarke, one of the early Ohio nurserymen.

The Fink apple originated, over fifty years ago, in the seedling orchard owned by the family whose name it bears, near the nice old town of Somerset, the ancient county seat of Perry County, O., and the town in which the boy Philip H. Sheridan resided when the late General Thomas Richey—then member of Congress from that district—sent him to West Point Military Academy. On the introduction of the fruit to the Ohio Pomological Society the secretary, Mr. F. R. Elliott, author of the "Western Fruit Book," could hardly be persuaded that it was not Tewksbury Blush. But though there is a similarity in the appearance of the two the latter is not equal to Fink in several respects, and the trees of the two are very distinct.

Fink has often been kept a year and a few times two years, the fruit of three seasons being exhibited together at the pomological meetings in fall and winter. But apples kept so long are not worth much, and there is no need of keeping them so long. Nine months is long enough, until the early apples begin to ripen.

A New Jersey variety, Turn-Off-Lane, is similar to the two foregoing in size, but is striped with bright red. It keeps pretty well. A much better variety is Johnson, an apple from Southern Illinois. The quality is superior and the color is finer—a beautiful shade of deep crimson all over the surface. Tree a vigorous, upright grower and a good bearer. The fruit is larger than the others mentioned and keeps well.

A still larger variety—too large indeed when the tree is not full—is Dr. Stayman's fine seedling of the old Winesap and in quality it has few if any superiors. The color is red, striped, not as bright as some, but a very good color. Tree very vigorous with strong shoots, and a great bearer after it gets fairly under way. This variety—called Stayman's Winesap at first but now Stayman—is coming to the front. Whether it will be equalled by the other seedlings of Winesap now coming into notice, Paragon, Arkansas, Gilbert, etc., can hardly be said yet, and our experience with it thus far has not quite satisfied us that it will keep as long as Stuart's Golden, a differently flavored apple, though both are fine.

Clermont is not much known yet, but it may be said to be a Newtown Pippin with a somewhat warmer color and a much better habit of tree. It originated in Southern Ohio, in the county after which it is named. It is larger than Fink and fully as solid, and it keeps until late in spring.

Gilpin—the old Romanite, or Little Romanite, or Carthouse, with some other synonyms—is a good keeping apple when well grown, but on thin soil it is generally lacking in flavor, becoming a "wooden apple," as the late Dr. Petcolas, a noted apple grower of Southern Ohio, used to say. It is fine for cider.

For high quality in connection with long keeping few varieties equal Stuart's Golden. It usually lasts until the middle or end of April with only ordinary care; longer when special pains are taken, and it is one of the finest dessert apples. Size medium and above, roundish-oblate; color yellow with a blush frequently. Tree vigorous, spreading, very productive. Origin Fairfield County, O.

Salome, which is doing so well in Northern Illinois, and Onstine Greening and Whinery's Late Red, both from Northern Ohio, where they are well spoken of, will of course all ripen too early when grown south of 40 degrees.

The fine new Tennessee variety, Jones' Seedling, the name of which has recently been changed to the more convenient one of Allison, is well worthy of attention. The tree is a thrifty, upright grower and the fruit is large and beautiful; and being a winter apple in Williamson County (latitude about 36 degrees) it is promising for more Northern localities. As a rule the late fall and winter apples of the Southern States are improved when grown in the North, while the winter apples of the North deteriorate when taken southward.

With the summer apples the rule is reversed. The Southern summer varieties when brought North are of comparatively little value, while the Northern summer apples are usually improved by being grown under more Southern skies.—National Stockman and Farmer.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.
F. J. CHENEY & CO., Props., Toledo, O.

We the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligation made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.
WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.



Steel Wheels

Staggered Oval Spokes.

BUY A SET TO FIT YOUR NEW OR OLD WAGON

CHEAPEST AND BEST

way to get a low wagon. Any size wheel, any width tire. Catal. FREE.

ELECTRIC WHEEL CO., Quincy, Ill.

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's
New Catalogue of Rare and Beautiful Flowers.
Many New Begonias, New Cusces, Rare Cacti, etc., not offered by others.
Venture-by-the-Sea, - California.
Mention American Gardening when you write.

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist
Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1897, New York City.

AGENTS WANTED.

Read this partial description of the best book of the kind for women which has ever been published, then write us for terms and territory.

HOUSE PLANTS AND HOW TO SUCCEED WITH THEM.

BY
LIZZIE PAGE HILLHOUSE.

Scores of books have been written on flowers and their cultivation, but it has been reserved to Mrs. Hillhouse to cover a field of highest interest to women hitherto untouched, and to provide a reference book and complete guide for all her sisters who, loving plants, would ever be surrounded by them did they but know where to turn for such advice as to their preservation and instruction in their culture as would be open to them to follow, easily understood, yet thoroughly practical.

"I have bought book after book," the author says, "in a vain search for that knowledge which would enlighten me as to how to prolong the lives of my precious pets, when nothing with alarm their distressed appearance, only to find them all a delusion and a snare, so technical or ambiguous as to be far beyond my reach or apprehension. Therefore, for the benefit of fellow sufferers, I have determined to put down what little I have found out from bitter experience, knowing it will be practical and true, as far as it goes."

"HOUSE PLANTS" has been written by a woman for the countless thousands of women who have no conservatory or hothouse, and are compelled to grow their plants in the home, and it gives freely of the knowledge which the author has been gathering through many years of observation.

Recognizing the fact that no book adequately covering the subject has ever been published, Mrs. Hillhouse has undertaken to fill the deficiency, and most ably and effectively has she accomplished the task. The result is a book of information and instruction, written in simple language, which will be prized and consulted by every woman so fortunate as to become its possessor. Of all books of reference issued for domesticated women, "House Plants" will take its position second only to the much prized and ever handy family cook book.

The amateur will be both surprised and delighted with the great range of plants which this book tells us it is possible to successfully raise in the house. Chapters are devoted to Bulbs, Cacti, Ferns, Flowering Plants, Foliage Plants, Lilies, Palms, Shrubs, Vines, Creepers and Basket Plants, and one on plants unclassified. A separate chapter on the propagation of plants is extremely interesting, as it is here so many fail.

Again quoting from the author, "In writing this little book, I have endeavored to keep strictly within the lines of my personal experience, and to select for description and suggestion as to treatment only those plants which I knew could be grown successfully in our living rooms or houses. This, undoubtedly, may be done if my instructions are followed."

"How little most people—bright people, too—know of the marvelous and amazing creations of the plant world. Those silent monitors, the flowers, are not dumb, but speak to us through the delicacy of their scents, their intricate shapes, complex habits, and the glorious penciling of their heavenly colors, that no human artist can command."

HOUSE PLANTS, 12mo., 220 pages, cloth, profusely illustrated, and with complete and ready reference index to all plants mentioned. Price \$1.00. A. T. De La Mare Ptg. and Pub. Co., 2 to 8 Duane St., New York, publishers.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Crossing for Broilers.

The ever-present beginner was giving forth his views the other day. He was wiser than most beginners, for he had studied up the theoretical side of the question for many months, in advance of his proposed work. He was but repeating what he had learned, too. He pinned his faith to a cross of Black Minorca and Black Langshan, he said. He was not working for broilers, but for eggs. In the working out of his plan, however, he will strike some snags. When the business has increased so that he wants 300 or 400 young pullets every year, he is bound to have about the same number of cockerels to sell, either as broilers or roasters, and then he will begin to say big, long, bad words about the black pin-feathers. There are two ways out of this. One is to raise white fowls; the other is to pinch the heads of the offending cockerels as soon as they can be distinguished; thus saving their feed, and saving all the pin-feathering, and keeping the bad words for a worthy object. One prominent raiser of White Leghorns for eggs alone thus disposes of all the small cockerels, claiming that it is money in his pocket to do so. If one raise the broilers, White Leghorn or White Wyandotte is the favorite cross.

The Water Lily Seedling.

We are told that these can be brought into bloom in four months from sowing, if a good, strong, regular temperature is maintained. This is one of the most difficult things for the window gardener. "To maintain that temperature is just what you can't do," said one to the writer, a short time ago. "I was over to Dreer's the other day to see the man who has charge of aquatics. He had a strong heat right under his seedling tanks to keep the water warm. I reckon we have to do that, too, if we expect much success. I buy mine now; and that's what you will come to. Your little fellows will not blossom this year, nor next year either."

Seedling Cyclamen.

Probably there is not another among the very desirable greenhouse plants easier to start from seed than Cyclamen. The greater difficulty lies in keeping the slow-growing things thriving through the long period between seed-sowing and blossoming. The fine strains of *C. giganteum* are far in advance of the older sorts, and if one wants a new sensation, the double sort may be tried. Late summer and early autumn are good times to sow. The best growers differ as to the period of time required before attaining bloom. Some assert that it may be had in less than a year. Most growers, however, speak for 14 or 15 months. Good drainage is a necessity at all times. One must beware of heating manures, and strong, hot sunshine for the Cyclamen.

Lilium Candidum from the Garden.

When even the dimes are so scarce that one cannot buy lily bulbs to force, good healthy bulbs from the garden may be potted, much to the grower's satisfaction. As *L. candidum* makes its growth in the early fall, it should be lifted at once, before this begins. It is well to hold the bulb firmly together when putting it into the pot, and to settle the earth firmly about it. When potted, it may be sunk in the soil where it was growing, and left to nature's kind offices, unless the soil in the pot should become very dry. In this case, it may need an occasional watering. Late in November the pot may be lifted and transferred to a cool room for a short time, after which it may be brought into the heat in a sunny window.

A Novice's Idea as to Potting.

A novice tells in a contemporary floral publication of potting an 8-inch plant in a 10-inch pot. About the end of the season the plant was three feet high, and was then transferred to a washtub.

The success with the plant is reported to be phenomenal. It might certainly be considered so, from the fact that there was any success at all with a plant so over-potted. Eight-inch plants, as a rule, require the small pot, while the three-foot plant might be considered as just about ready, perhaps, for the 10-inch pot. It is not a hard and fast rule, inasmuch as plants vary in their habits of growth.

Starting Frezias.

Still groaning with the summer heat, as we are, it seems foolishly early to begin to talk of potting stuff for winter bloom. Yet this week—the first in August—the Frezias go into the soil. It is by no means necessary that in all cases they be potted so early. Any time in August or September will do very well. But the Freesia takes longer to mature in bloom than most bulbs, and as it is one of the few that do not have to be put away in the dark, it is as well to pot it as early as it can be procured. We shall put about six bulbs in a 5-inch pot, using leaf mould and rich compost as main constituents of the potting soil, with about one-fifth sand, and a small teaspoonful of bone flour to each pot. This mixture we have found to succeed very well. It is absolutely necessary that the soil for Frezias be not of the sort to hold water overmuch; they like plenty of water, but will not bear a sodden soil. The leaf mould used is not the very dry, fibrous kind, filled with roots; but well-rotted, fine-grained, and somewhat moist. No water is to be given after the first good soaking, until growth starts, unless the pots dry out very unduly. A moist, cool place will therefore be best until the plants appear, when they will require plenty of air, and plenty of not too hot sunshine.

Improvement in Flowers.

As we drift along from year to year, paying little attention to what's being done in the floral world, we may be ready to believe with those of foggy tendencies, that novelties are a fraud, and progress a myth. One cause for this lies in the fact that the majority of people are not willing to give credit for a small advance. They insist that progress shall be by jumps, and while it sometimes comes in this way, it is not the general law that it should do so. It is a fact, also, that the majority of people are not familiar with such progress as is being made. They don't keep posted. Herein lies the great value of the flower show. It helps to bring up to date the ideas of those who would not otherwise know themselves to be behind the times, and keeps them from the foolishness of deriding that of which they have no knowledge. The improvement in flowers all along the line, wherever the raisers take hold of them, is found to be marvellous, whenever we can get a sort of bird's eye view.

Repotting in August.

Whether the grower intends to rest her plants or not, if outside they are pretty sure to get more or less of a rest during the droughts of late summer, as it is almost impossible to water them enough to keep them in good growing condition. During this enforced or accidental rest, many plants may be repotted to very good advantage, and set aside where it is cooler for a time. They will then be ready to grow with vigor as the cool and moist days of autumn come on.

Standard Weight of Popular Fowls.

This is something that a great many people, who cannot afford to buy The Standard of Excellence, would like to know. Taking the lightest, the pullet, first with pullet, hen, cockerel, and cock in their order, the standard weights run as follows: Black Langshans 6, 7, 8, and 10 pounds; Light Brahmas 8, 9½, 10, and 12; Barred Plymouth Rocks 6½, 7½, 8, and 9½; White and Silver Laced Wyandottes 5½, 6½, 7½, and 8½. The weights of Pekin ducks are 6, 7, and 8 pounds; of bronze turkeys, pullet 15 pounds, hen 20 pounds, cockerel 24 pounds, yearling cock 32 pounds, adult cock 35 pounds.

Roses Under Glass.

Our earliest planted houses will now need staking and tying. In my opinion, it is very unwise to neglect this operation until the plants become so thick that they lay over each other, or portions get so heavy that syringing whips them down on to the soil. When this happens, syringing for spider cannot be properly done, and varieties that are subject to black spot will soon get affected with it. There are different ways employed for staking; some use wooden sticks which are not only unsightly, but they obscure considerable light; others run a high and low wire lengthwise over the plants, the high one being about 3½ feet from the lower one. A string is then run from top to bottom at each plant for support. This is very economical, but after the strings have been wetted a few times, they sag badly, and a good solid job can't be had. The most approved style of staking is to use a wire rod to each plant, tied at the top to a wire running lengthwise. The rods are 3½ feet long. We used to use No. 6 wire for them, but find No. 9 to be just as good. All our roses are thus staked with the exception of American Beauty. On account of its tall habit and not making brush, we find it best to run wires lengthwise immediately over the plants, the first being one foot from the soil, and the balance the same distance apart until the roof is reached. The stems can then be kept

much straighter, being not so easily switched about during syringing. Tying should be done by careful and painstaking workmen; there is nothing to be gained by speed at this work. At the same time a good workman can often get over more plants in a day than a poor one. There is nothing makes a grower more impatient than to have men tying his Roses improperly, by passing a piece of string around the whole plant and bunching the whole together so closely that neither light nor air can reach or circulate freely through the plant. The varieties that make more blind wood and are dwarfier growers are the hardest to tie up, and one often feels like cutting it out, but this should not be done on any account; at least, that is my experience. During past years very many growers used to lightly top dress the bed with manure about this time, as it prevented the soil from drying out too quickly and encouraged root action; but lately the practice has been very largely discontinued. I have not used a top dressing until spring for years, only as experiment, and have come to the conclusion it is best left alone. As far as the manurial effects of a light top dressing are concerned, I have never seen any very material difference between those so treated and those not. When our plants begin to need nourishment they are given it in the shape of manure water. H. H.

WHOLESALE MARKETS.

New York.

Stock of most kinds has been considerably lighter in supply for some days past but appearances at time of going to press show evidence of an increased receipt. The market clears satisfactorily on good quality stock at fair figures. Peaches are good property and sell well with \$3 as fancy price, and \$2.75 as prevailing top figure. New York state peaches are supplementing the New Jersey shipments, and both are selling well, but present prices are not expected to prevail for long, as the crop is heavy. Californian pears are fine in quality and commanding high prices; so far the local shipments are poor in color and appearance, most of the fruit being scabby or rusted. Good clean bright Bartlett's sell readily for \$3 per barrel. Some very fine Botan plums are seen from near-by Jersey shippers, packed in quart baskets, 18 fruit to a basket, and 32 baskets to the carrier; these sell for 6c. and 8c. per quart. Good quality melons have improved in demand and price, but inferior quality is a drag. Californian nectarines injure the sale of forced or hothouse fruits from nearby shippers, but they are deficient in flavor. A few hothouse grapes of choice quality realize 75c. per pound, but the larger part of the stock coming commands only 50c. per pound. Michigan celery is a drag, and is being offered at 75c. per box of 36 heads. Tomatoes still continue to be poor, and prices consequently low. Apples—Duchess of Oldenburg, hand-picked, double-head barrel, \$2@2.25; Gravenstein, hand-picked per double-head barrel, \$1.75@2; Nyack Pippin, hand-picked, per double-head barrel, \$1.75@2.25; Orange Pippin, hand-picked, per double-head barrel, \$1.50; Bough, hand-picked, per double-head barrel, \$1.25@1.75; Astrachan, hand-picked, per double-head barrel, \$1.50@2; open heads, per barrel, \$1.50. Peaches—Southwestern, per carrier, \$2.50@2.75; Georgia and South Carolina, fancy, per carrier, \$2.25@2.50; Virginia and North Carolina, poor to choice, per carrier, \$1@2; Maryland and Delaware, per carrier, \$1@2; Maryland and Delaware, extra, per basket, \$1@1.25; prime, per basket, 80@90c.; common to fair, per basket, 60@70c.; Jersey, extra, per basket, 80c.@\$1; common to prime, per basket, 40@75c. Pears—Bartlett, Maryland and Delaware, per crate, \$1@1.25; Jersey, per barrel, \$2.50@3.50; up-river, per barrel, \$2@3; Clapp's, up-river, per barrel, \$2.25@2.75; per keg \$1.12@1.37; Bell, near by, fair to prime, per barrel, \$1.50@1.75; common kinds, per barrel, \$1.25@1.50; Kieffer, southern, per barrel, \$1.50@2.75; Le Conte, southern, poor to fancy, per barrel, \$1.50@4. Grapes—Delaware, North Carolina, fancy, per 24-pound case, \$1.75@2; Niagara, North Carolina, fancy, per 24-pound case, \$1.50@1.75; other white North Carolina, per 24-pound case, 50c.@\$1; Moore's Early, North Carolina, per 24-pound case, 75c.@\$1.25; Champion and Ives, North Carolina, per 24-pound case, 50c.@\$1. Plums—Damson, per quart, 4@5c.; Wild Goose, per quart, 4@5c.; per 10-pound basket, 20@30c.; Botan, per quart, 5@8c.; per carrier, \$1.25@1.75; per 10-pound basket, 25@35c. Apricots—New York state, per eight-pound basket, 20@25c.; per five-pound basket, 10@15c. Currants—Large, red per quart, 4@6c.; small, red, per quart, 2@4c.; bulk stock, per pound, 3@5c. Blackberries—Up-river, per quart, 5@6c.; Jersey, fancy, large, per quart, 8@10c.; poor to fair, per quart, 4@7c. Raspberries—Up-river, red, per pint 6@8c. Watermelons—Watermelons, extra, per 100, \$12@15c; small to medium, 100, \$5@10c. Muskmelons—South Jersey, Gem and (Continued on next page.)

To Secretaries of Clubs and Exhibitions.

We can furnish these gentlemen with all the printed forms and books necessary to the orderly and systematic care of the multitudinous details connected with all exhibitions. Our system once tried will always be used, and can truthfully be called the greatest labor saver ever placed before the public. We can furnish a complete outfit for a large show for \$15.00; for a small show for \$7.50. The supplies include Entry Forms, Exhibitor's Books, Class Books, Judge's Books, Entry Cards and Pastors. Send for descriptive circulars, and, above all, don't allow your next show to pass off without giving our system a trial.

Schedules for Flower Shows

And Exhibitions generally. This is a strong point with us, and we pride ourselves on the rapidity with which we can issue any size schedule, from 4 pages to 400 pages, and always deliver at the time promised.

A. T. De La Mare Ptg. & Pub. Co. Ltd., P. O. Box 1697, N. Y.



ROSE HILL NURSERIES,

New Rochelle, N. Y.

The largest Horticultural Establishment in America.
Everything to beautify your home and lawns.

SPECIALTIES.
PALMS, BAY TREES, STOVE AND GREENHOUSE PLANTS, ROSES, FERNS.

NEW YORK CITY'S LARGEST DECORATORS.

SIEBRECHT & SON, 409 FIFTH AVE., N. Y. City.

Send for Catalogues.

STANDARD FLOWER POTS

Send for our new price with list extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.

THE WHILDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
 { Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

GLASS

For Greenhouses, Grap-
eries, Conservatories,
Hothouses and Hotbeds.

GLASS

VANHORNE, GRIFFEN & CO.

Importers of French Glass.
13, 15 & 17 LAIGHT ST., AND
82, 84 & 86 VARICK ST., NEW YORK.
Mention American Gardening when you write.

J. Lind, per barrel, 75c. @ \$1.25; Maryland and Delaware, Gem and J. Lind, per carrier, 50c. @ \$1; Baltimore, Cantaloupe, per barrel, 75c. @ \$1; Baltimore, Gem and J. Lind, per barrel, 75c. @ \$1.25; Norfolk, Christina, per barrel 50 @ 75c.; Gem and Jenny Lind, per barrel, 75c. @ \$1; ordinary kinds, per barrel, 50 @ 80c. Celery—Choice large, per dozen, 85 @ 40c.; fair to prime, per dozen, 20 @ 30c.; small and poor, per dozen, 10 @ 15c. Corn—Hackensack, per 100, \$1.25 @ 1.50; other Jersey, per 100, \$1.25 @ 1.50.

Cabbages—Jersey and Long Island, per 100, \$2.50 @ 3.

Cucumbers—Jersey, per barrel, 50c. @ \$1; Jersey, per bushel box, 25 @ 40c.; pickles, Long Island, per 1,000, \$1 @ 2; pickles, Jersey, per 1,000, \$1 @ 1.50.

Egg plants—Jersey, per bushel box, 30 @ 40c.

Green peas—Western New York, per bag, 75c. @ \$1.75.

Lima beans—Jersey, Potato, per bag, \$2; Jersey, flat, per bag, \$1 @ 1.25; southern Potato, one-half barrel basket, \$1.50 @; southern, flat, one-half barrel basket, \$1 @ 1.50.

Onions—Maryland and Virginia, per one-half barrel basket, 90c. @ \$1; Jersey, white, per barrel, \$2.50 @ 3.50; Orange County, red, per bag, \$1.25 @ 1.75; Orange County, yellow, per bag, \$1.25 @ 1.75; Orange County, white, per bag, \$1.50 @ 2.50; Connecticut, red, per barrel, \$1.75 @ 2.

Peppers—Jersey, per box, 40 @ 65c.

Squash—Marrow, per barrel crate, 75c. @ \$1; Hubbard, per barrel, \$1.25 @ 1.50; yellow crook-neck, per barrel, 50c. @ \$1; white, per barrel crate, \$1 @ 1.50.

String beans—Baltimore, per bushel basket, \$1; E. I., per bag, \$1 @ 1.50.

Tomatoes—Monmouth County, Acme, per box, 40 @ 60c.; Monmouth County, ordinary, per box, 25 @ 40c.; south Jersey, Acme, per box, 40 @ 50c.; south Jersey, ordinary box, 25 @ 30c.; Baltimore, per basket, 80c.

Boston.

General stock of watermelons is selling at 12½ @ 14c., with some fancy bringing as high as 16c. Cantaloupes not quite as plenty as before, and arrivals are in better condition, therefore demand is better; selling \$1.25 @ 1.50 a barrel or barrel crate. No change in Montreal hothouse melons from last week's prices.

Green corn 20 @ 30c. a dozen; Crosby corn in very good demand.

Grapes, North Carolina, Delaware No. 1 stock selling at \$1.25 @ 1.50 for 24-pound carrier; Niagara \$1 @ 1.25; Concord \$1 @ 1.25; hothouse Hamburg grapes, 25 @ 40c. a pound. Demand a little better than last week.

Green peppers slow, at no particular price, anywhere from \$1 @ 2 a carrier.

Georgia Elberta peaches selling at \$3 early in the week; stock not very fancy; Montrose \$3 @ 4, very good; Californias about \$1.50.

Most of the blueberries arriving are not very good; anything really fancy brings 8 @ 10c., whether New Hampshire or Jersey stock.

Mushrooms worth 75c. @ \$1 a pound, but not a great many good ones are to be found.

Native celery worth \$2 a dozen bunches.

Radishes 10 @ 20c. a dozen, hard to find customers; beets continue plenty and dull at 25c. a bushel; turnips are doing little better; white flats are selling 50 @ 75c. a bushel; rutabagas selling \$1.25 a barrel; fancy stock \$1.50, demand light.

Summer squash same as last week, 2 @ 8c. each; marrow, good demand, \$2.25 a barrel.

Peas from Portland in good demand, \$3.50 a barrel; home-grown stock \$1 a bushel; string beans same as last week, some small picking stock \$1.50 a bushel; very few good stock in market; ready sale, however, for shell beans at \$1.50 a bushel. No limas on the market as yet.

Potato market is very firm; everybody still thinks there will be a good

firm demand during the next four weeks best stock quoted at \$3. Virginia yellow sweets selling \$3.25 @ 3.50; fancy stock would bring little more.

Cucumbers are a little weaker than they were last week, selling 2 @ 2½c. each for good stock.

Not much demand for egg plant.

Cauliflowers are becoming poor; therefore not wanted. Cabbage 2½ @ 3c. each by the hundred.

Illinois tomatoes in fair demand at 50 @ 60c. a crate; hothouse stock 10 @ 15c. a pound; home-grown stock \$2 @ 2.50 a bushel; very fancy stock \$3.

Parsnips, new stock, selling 75c. @ \$1 dozen bunches for a limited quantity; carrots 8 @ 5c. a bunch.

Nearby onions are weaker at about 85c. a bushel.

There is a fairly good supply of apples in this market; Astrachans selling \$2.50 @ 2.75 a barrel; bushels, if very fancy, \$1.25; some Massachusetts Williams \$1.50 a bushel; if fancy in barrels, \$1; Nyack Pippin \$2 @ 2.50 a barrel; Sweet Boughs are in good demand, \$2 @ 3.

This market is getting a few new pineapples that are very large, and meet good demand at 40 @ 60c. each.

Paraleys 50c. a bushel; mint 35c. a dozen bunches; garlic continues strong, 6 @ 10c. a bunch.

No currants on the market; blackberries 5 @ 8c. a quart.

Arrivals of pears are mostly in poor order; some Bartlett's selling \$1 @ 1.50 a crate.

Wild Goose plums are sold at almost any price a customer will offer, generally 4 @ 6c. a quart.

Philadelphia.

Business has been much quieter here during the past week; the berry crop is now well over, and peaches are coming in regularly, consequently a lull has taken place; many dealers are now away looking up the peach crop, and from pre-

TO BE PUBLISHED AUGUST 20.

The Water Garden

(PROFUSELY ILLUSTRATED.)

BY WILLIAM TRICKER.

This work will contain nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work.

On heavy enamelled paper. Elegantly bound. Large octavo. Price, \$1.50.

THIS volume, which has been prepared by the foremost aquaculturist of the country, and to whose efforts the present increasing popularity of the Water Garden is largely due, is intended to serve as a **SOUND, PRACTICAL CULTURAL HANDBOOK** for amateur and professional alike.

The work should find a place in every library and in the home of all gentlemen interested in gardening; it will prove indispensable to the private gardener, whether he is at present cultivating an aquatic garden or with a view of preparing himself to take charge of one at any moment. It is scarcely necessary to dwell on the value of the book to the commercial man; every one in trade will require it.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A full descriptive list of Nymphæas and all other water plants, as well as of all trees, shrubs, etc., adapted for marginal effects, is included.

— ORDERS RECEIVED NOW. —

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8 Duane Street, P. O. Box 1697, New York City.

ent indications, the principal crop appears to be in the Blue Mountain region of upper Maryland. Good reports are to hand from Chambersburg and Hagerstown; all reports from Delaware indicate about 25 per cent. of a crop. About 500 baskets so far have been received from Maryland, and these sold from 80c. to \$1.25.

Tomatoes are still in poor condition and very watery.

Watermelons are selling well, quality not quite up to last week.

Muskmelons are plentiful, but sell slowly at low figures; A No. 1 stock is scarce. Grapes so far are very scarce.

Apricots—New York state five-pound basket, 12@16c.

Pears—Bartlett, Jersey per five-eighths basket, 60@75c.; Le Conte, Southern, fair to good, per barrel, \$1.50@2.25.

Plums—Table varieties, per eight-pound basket, 20@85c.

Huckleberries—Pennsylvania, 6@8c. per quart; Jersey, per quart, 5@7c.

Melons—Watermelons, North Carolina, per 100, \$15@20; fair to good, \$8@10. Muskmelon, Jersey, per barrel, \$1.25@1.50.

Celery—Fair to good, per dozen, 25@40c.

Corn—Jersey, good, per 100, \$1.25@1.50; fair, 75c.@1; Pennsylvania, per 100, \$1.80@1.60.

Cabbages—Jersey, per 100, \$1.50@2.75.

Cucumbers—Jersey, per barrel, 75c.@1; per five-eighths basket, 30@50c.

Egg plants—Jersey, per barrel, \$1.80@1.80; per basket, 60@75c.

Lima beans—Maryland, per one-half barrel basket, \$1.80@2.40; Jersey, per basket, 60@75c.

Onions—Maryland, white, one-half barrel basket, 75c.@1.25; Jersey, five-eighths basket, 50@80c.

Peppers—South Jersey, per box, 60@80c.

Squash—White, per barrel, 60@75c.

Tomatoes—Jersey, fancy, per basket, 40@50c.; fair to good, 10@30c.

Turnips—Yellow, Jersey, per barrel, 75c.@1.25.

Potatoes—Remain firm as a scarcity is looked for from nearby growers; prices rule from \$2.25 to \$3 per barrel.

Chrysanthemums.

General Routine.—Watering, tying, staking, and so on, now occupy the time. Remember the old, old advice, never to let your plants get dry, and to build up the growth as it is made. Keep plants as short jointed as possible, and the growing tips free from fly. It may not look as though the fly was hurting much, but it is helping to cripple the plant just the same.

Bench Plants.—If these have been mulched with tobacco stems, fly is not in evidence, and the plants are making clean healthy growth. The main thing to watch is not to let the bottom of the bed get dry; if it does, the young points, instead of growing out freely will begin to make a short stunted growth which will often throw a blind bud. The syringing may leave the top of the bed moist enough while the bottom may be quite dry. When the bed is watered, make sure it is saturated right through.

Bonnaillon with its pale green tip gives the impression of growing too rapidly while as a matter of fact it is one of the slowest of growers. If the old leaves are of a rich dark color and all curled up, the plant is healthy enough. It is deservedly a great favorite and one of the most useful, coming good from any bud and invariably of fine form.

F. L. Atkins is the worst variety I know of for throwing suckers, and needs constant watching. If they are not cleaned out, they make a perfect network and rob the bud to a very great extent. This variety is a very fine keeper.

C. TOTTY, N. J.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

HENS AND EGGS

fruit culture and poultry keeping dovetail together perfectly, each filling a season comparatively dull in the others.

Realizing the above facts, we have arranged with the publishers of **POULTRY MONTHLY**, to offer that journal in club with **AMERICAN GARDENING**, for the coming subscription season, both journals postpaid, one year, for the **SMALL SUM OF \$1.25.**

POULTRY MONTHLY is now in its nineteenth year; it has always been recognized as the leading publication in its particular field. Sound and reliable in its teachings, and not the mouthpiece of cranks, cliques, or rings. Its correspondents are practical and successful men, in the harness to-day. The publishers of **AMERICAN GARDENING** recommend **Poultry Monthly** as being one of the very best poultry papers issued, and advise all interested to accept this Great Combination Offer.

A WONDERFUL OFFER!

American Gardening (Weekly), \$1.00 } **Both \$1.25**
Poultry Monthly, - - - 1.00 } **One Year, postpaid.**

Present subscribers who are in arrears must pay up in full to become eligible to this offer.

Address **AMERICAN GARDENING, P. O. Box 1697, New York City.**



Park and Cemetery.

An illustrated monthly for the advancement of Art out of doors. Practical articles of permanent value by competent authorities on subjects of special interest to **Commissioners, Trustees and Superintendents of Parks and Cemeteries**, and those interested in **Tree Planting and Town and Village Improvements**. Plans of Parks or Cemeteries, and their architectural and landscape features, illustrated every month. Subscription \$1.00 a year. **R. J. HAIGHT, Publisher, 334 Dearborn Street, Chicago.**



Mention *American Gardening* when you write.

"JADOO" FIBRE.

A New Potting Material
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address **THE AMERICAN JADOO CO.**

513 Fairmount Avenue, PHILADELPHIA, PENN.

Mention *American Gardening* when you write.

Catalogues

Will be issued in greater abundance this Fall than ever; every live firm issues one or more, wholesale or retail.

Are You Planning Yours?

We would be pleased to furnish you with an estimate as to the expenses of printing same.

Our facilities are unexcelled; our staff familiar with the work; our presses of the finest; our prices reasonable and our product good.

Printing of Every Description.

Cards, Billheads, Letterheads, Envelopes, Circulars, Price Lists, Pamphlets, &c., at lowest prices and best workmanship.

Trade Marks, &c., Our Specialty.

We furnish illustrations of plants, flowers or designs, which may be copyrighted for your exclusive use, to serve as trade marks, symbols, &c., for use on all forms of printed matter.

A. T. De La Mare Ptg. and Pub. Co.

LIMITED.

RHINELANDER BUILDING, (P. O. BOX 1697) NEW YORK,

Telephone, 2184 Cortlandt.

Potash.

applies them with profit to himself.

Free

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write.

All farmers know its value. The wide-awake farmer recognizes the importance of fertilizers, and ap-

Diplomas and Certificates



FOR HORTICULTURAL SOCIETIES,
FAIRS, INSTITUTES, : :
GARDENERS' CLUBS, ETC.

These should be selected well in advance of the date needed, and secretaries of above should send now for our set of samples, all of which have been especially designed by first-class engravers for the purpose. Owing to the wide demand and their expensiveness, we will mail the set of five samples, they refunded on return of samples, or placed to order. One single sample sent free on application if the writer will state the exact purpose for which it is wanted.

A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.

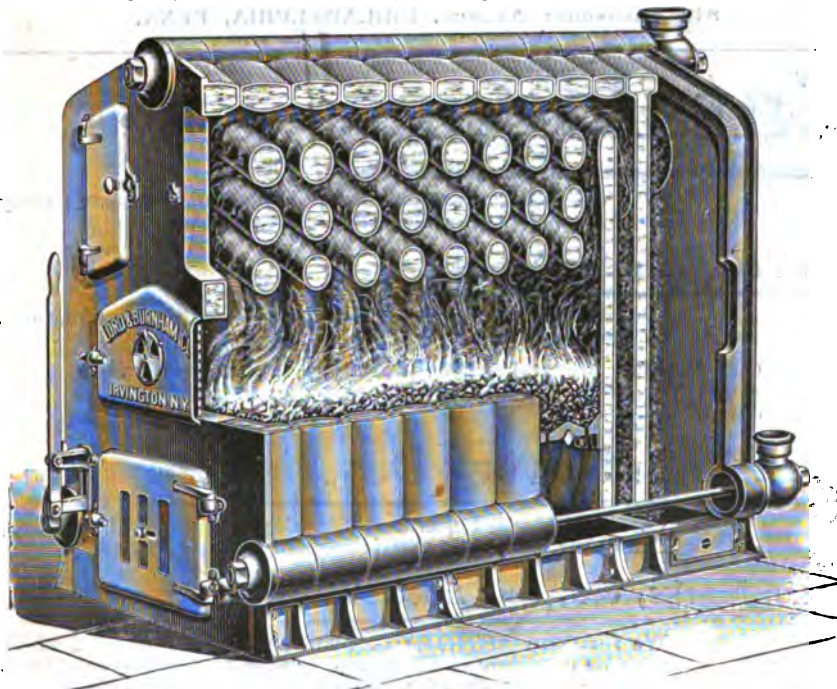
HEADQUARTERS FOR ALL PRINTED SUPPLIES.

LORD & BURNHAM CO.,

Horticultural Architects and Builders and Manufacturers of Heating and Ventilating Apparatus.

(Established 1836.)

Plans and estimates furnished on application for Heating and Ventilating Apparatus erected complete, or for material only. Highest Awards at the World's Fair.



NEW SECTIONAL HOT WATER HEATER.

Specially adapted to large ranges. Will heat up to 16,500 feet of glass. Highest economy. Moderate cost. Also heaters for smaller work. Send six cents postage to New York office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

INCUBATORS. Self-regulating. Catalogue free. G. B. SINGER, Cardington, O.
Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

CYPRESS
IS MUCH MORE DURABLE THAN PINE.

**CYPRESS
SASH BARS**
UP TO 32 FEET IN LENGTH OR LONGER.

GREENHOUSE
AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write

...THE COMPLETE...

BOOK CATALOGUE

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants
Flowers

The Fruit Grower

The Nurseryman

The Private Gardener

The Market Gardener

The Seedsman

The Farmer

The Poultry Keeper

The Student of Botany, Entomology and Ornithology

and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE PTS. AND PUB. CO. LIL.
P. O. Box 1697, New York.

AMERICAN GARDENING

Intensive Cultivation is the Keynote to Success

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 139.
COMBINED SERIES VOL. LI.

NEW YORK, AUGUST 21, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Apples.....	582	Diseases and Legislation.....	582	Lawns in Parks.....	588	Rhododendrons at Whit-		Window Gardening.....	594
Apple Crop, Canadian..	587	Early Maturity.....	588	Liliums.....	594	insville.....	581	Illustrations.	
Apple Jellies.....	584	Exhibitions, Coming....	583	Market Reports.....	592, 593	Roses Under Glass.....	591	Asparagus Rust.....	583
Asparagus Rust.....	583	Fruit Drying Imple-		Mats for Hotbeds, etc....	585	Society of Am. Florists	590	Fruit Drying at Home..	584
Bougainvillea.....	589, 594	ments.....	585	Mignonette.....	588	Societies, Reports of....	590	Rhododendrons, A Bed	
Catch Crops.....	586	Fruit Garden, The.....	582	N.Y. Botanical Gardens	589	Sweet Pea Show.....	590	of.....	581
Celery Blanching.....	583	Fruits of Experience....	585	Plants Received.....	587	Strawberries.....	582	Vegetable Garden.....	583
Chrysanthemums.....	583	Garden Development ..	586	Private Gardeners.....	590	Strawberries, Summer		Violets Injured by Saw	
Cucumbers, Pickling, as		Grape Vines.....	582	Questions Answered.....	589	Planting of..	587	Fly.....	585
a Winter Crop.....	582	Home Plot, All About the	594	Raspberry Notes.....	584	Violet Leaves, Injury to	585		



FIG. 166.—A BED OF RHODODENDRONS.

The above is a reproduction from a photograph, and shows how beautiful the Rhododendron is when massed. The view is taken on the estate of Ed. Whitin, Esq., Whitinsville, Mass., where P. B. Robb is in charge.

Pickling Cucumbers as a Winter Crop.

Forcing vegetables under glass in winter has been abundantly proved to be profitable. On account of the great competition in producing pickling cucumbers in summer, and because they are not generally grown in winter, I believe good profits are open to those who will successfully produce them under glass. The prices realized in winter will be larger than in summer, and the production in a 40-foot greenhouse will, with proper cultivation, exceed that of a quarter acre cultivated in summer. The gherkin is more productive than the English cucumber, and the exhaustion of the vines is less because the crop is gathered when the fruit is quite small.

A narrow commercial greenhouse with benches on each side and an even span roof is the proper structure for the purpose. The benches should be 10 inches in depth and 3 or 4 feet wide; here one line of plants, two feet apart is sufficient, and light wire strung across the house from the gutter beam to the ridge, and down again to the opposite gutter beam will serve as a frame for the vines. The wires 12 inches apart should be 12 inches from the glass at each side, and 18 inches in the center.

Soil.

The proper soil is a rich sandy loam from an old pasture, one part to three of well-rotted manure, and one part to twelve of crushed bones, one-quarter-inch size, all to be well mixed together. On the bottom of the benches place three inches of well-rotted manure, pounded down firmly, and on this manure make hills two feet apart and even with the top of benches, using the prepared soil and also covering the manure to about one inch with the same. The house will then be ready to receive the plants.

Seed Sowing.

For early winter use seed is to be sown early in September. The plants may be raised either in a covered frame, or in the house where they are to be grown. For starting the plants have some finely-sifted soil, sowing the seeds in 8-inch pots, first placing in the bottom of each pot a little well-rotted manure. Fill the pots one-third up with the prepared soil, sow three seeds in each pot, cover with soil, and plunge to the rim in a covered frame or in a sheltered part of the greenhouse leaving them there until the seedlings are ready for repotting, and giving no water until all the seeds are above ground.

As soon as the seedlings show the rough (true) leaves, they are ready for repotting. Each plant should now be repotted singly in a 8-inch pot in the same way as when sowing the seed, plunging each pot to the rim to remain thus for two weeks when it will be ready for planting in the permanent quarters. After repotting, the plants should be watered with a fine sprinkler once every day until established.

Planting.

In planting in the hills, I do not take the plants out of the pots, but with a trowel open the hills clear down to the bench, placing the pot on it and closing the soil in around the stem of each plant up to the seed leaf. In ten days after planting, the roots will show through the hills, and it is time to fill in the space around the hills to the top of the bench with the prepared soil, making all firm and even around each plant. Lightstakes may now be placed to each hill having them long enough to reach the wires above where they are tied loosely.

As the vines grow, all blossoms and any small fruits that may show on the vines until they reach the wires should be taken off in order to make the vines vigorous when they reach the roof, where the main crop of gherkins will be produced.

Pinching.

When the vines have reached the wires, the top of each must be pinched out, which will cause them to send out side shoots. Train three of those shoots for each vine to the wires on the roof, and as

soon as they grow half way up the wires, pinch their tops out, and induce the putting out of numerous side shoots which should be trained to the wires crosswise, and each pinched out at the fourth joint or leaf. As soon as the vines reach the middle of the roof, the tops should be pinched out and all side shoots tied to wires and pinched at the fourth leaf. This pinching the tops of the vines makes pickling cucumbers very prolific either under glass or outside. At this stage there is an abundance of vines and fruit which will continue in yield until the end of May.

Aphis, Mildew, etc.

Black aphis is one of the worst enemies of cucumbers under glass; but I have found no trouble in keeping this pest down by the use of fine tobacco dust. It first attacks the plants on the underside of the seed leaf, and if not looked for there in the beginning, will give a great deal of trouble later on. Before planting I take each plant separately, carefully examining every leaf, and with a soft brush remove all aphis in sight, then lightly dusting every leaf on the underside and the growing point with tobacco powder. I never use the tobacco powder when the vines are wet.

Mildew is very destructive, but is seldom, if ever, found in a well-ventilated greenhouse; it makes its appearance in small white spots on the leaves. Three parts of finely powdered sulphur and one part of powdered charcoal mixed together and applied with a camel's-hair brush to the spots as they appear, will eradicate this disease if the atmosphere be kept buoyant.

Red spider and thrips are very destructive if they once get possession; they thrive in a dry, hot atmosphere, so syringing the foliage when weather permits, and in fine bright weather moistening the benches and floors three or four times daily, are good preventives. A syringing once a week with a solution of common yellow soap water is also good.

No operation connected with raising cucumbers under glass in winter demands more attention than the distributing the pollen; the fertilization must be done artificially. With a small camel's-hair brush collect some pollen and introduce it into the female flower.

Temperature.

In starting gherkins early in September, the temperature should be as low as the season permits. The object in view is to have the young plants stocky and vigorous. By the time they have reached the wires on the roof, the temperature should be 60 degrees at night, 70 degrees at day, and when the vines have reached halfway up the wires, the temperature is raised to 65 degrees at night, with 75 degrees by day. Liquid manure diluted to one-half with water, and all kinds of phosphates used two ounces to the gallon of water, may be given in watering several times weekly. This treatment will add to productiveness of the vines and prolong the time of bearing.

Varieties.

As to varieties, there are several and any one of the following may be forced successfully: Cluster Gherkin (immense bearer), Prolific Pickling, Short Prickly, Boston Pickling, Green Prolific, Small Gherkin, Thorburn's Everbearing, and Early Russian. WILLIAM THOMPSON.

Reports from the peach districts, about Whitehouse and Flemington, N. J., are to the effect that the trees are laden with fruit, but it is not of a superior character. The peaches are small. There was a great demand for early fruit, and fifteen carloads were shipped from Whitehouse at an average price to the shippers of from 40 to 45 cents a basket. The heavy rains and low temperature have stopped the fruit from maturing.

This year's yield of peaches in 25 of the best fruit counties in southwest Missouri is figured at a trifle over 1,200,000 bushels, and of apples about the same, and the aggregate value in cash, it is thought, will reach \$4,285,000. In addition to this, it is believed the same territory will produce at least \$100,000 worth of grapes and wine.

The Fruit Garden.

Grape Vines should have the rank growth stopped again, after which but little further attention will be required in the way of pruning. As a general thing, too much wood is cut away with the idea that the sun is a necessity; but it will not stop the bunches from ripening if the sun does not reach them. Nothing need be said on that point to those who practice bagging. To have sweet berries, there must be a fair amount of leaf growth until the fruit is ripe, and the best way to have that is to encourage a steady growth after the first stopping, which with the corresponding root action, will keep the original, oldest (hard and leathery) leaves in good condition. Stop all growth in the early summer and you stop the root action; you may as well expect to keep an energetic man healthy by making him take three square meals a day and forbidding him to move for the rest of the time. Get roots and the rest will follow.

Mildew comes very suddenly. Now is about the last chance to apply Bordeaux for it, that is, if the fruit is not bagged; to spray them after the bunches begin to color will spoil their appearance.

Niagara with me is prone to mildew, more so than any other variety I have.

Strawberries.—Keep the soil stirred about the plants; weeds are plentiful now, and will be more difficult to kill as the days get colder. If you can't stop them all with the rake, begin on the smallest first.

Apples.—A good all-around everybody's apple is the Summer Pippin, or Nyack Pippin. It is of a tawny color, pale waxen yellow, shaded when ripe with a delicate bit of crimson and sprinkled with grayish dots. Fruit about three and a half inches in diameter. Splendid for cooking when quite small, and when ripe is not too acid for many people to eat out of hand. It won't take as a dessert apple, but it will hang so long on the tree to get the most woolly flesh of any apple I know. The tree is a vigorous grower, with a decidedly pendulous habit when aged, very distinct from the average run of apple trees.

For Table we use Jersey Sweet and Devonshire Quarrenden apples, Bartlett pears, Washington and Purple Favorite plums, with Mountain Rose peaches. Ribston Pippin apple does finely here, but is at its best in early September, whereas in England it is in fine condition in March. JAMES HOLLOWAY, N. Y.

Legislation Against Disease.

Pennsylvania has adopted a stringent law as regards diseased fruit trees. It went into force on June 18 last and declares: That it shall be unlawful for any person to keep any tree infected with the contagious diseases known as yellows, black knot, peach rosette or pear blight, or to offer for sale or shipment, or to sell or to ship any of the fruit thereof, except the fruit of the plum, cherry, and pear trees; that both tree and fruit so infected shall be subject to destruction as public nuisances. More than this, no damages shall be awarded in any court in the state for entering upon the premises and destroying such diseased trees or parts of trees, or fruit, if done according to the conditions of the law. "It shall be the duty of every person," says the act, "as soon as he becomes aware of the existence of such disease in any tree or fruit owned by him to forthwith destroy or cause said trees or fruit to be destroyed." It further gives authority to the township to carry out its provisions.

A new association has been formed in Westchester, Pa., having for its object the awakening of an interest in the cultivation of flowers, shrubbery, etc., for the adornment of home grounds. It gave recently a free exhibition of plants and flowers on the spacious grounds of Samuel Wagner, Esq., at Greene Hill. The object in view is wholly educative in character and no charge of any kind is made either for entering exhibits or admission.

More Asparagus Rust.

A Second Outbreak of the Disease.

We have been requested to insert the following information concerning the asparagus rust which is reported as very bad this year in New Jersey. It made its appearance as early as the middle of May upon volunteer plants along roadsides, or in fields which had been previously in asparagus. As this is a new and somewhat alarming enemy to the truck-growers of the state, the following items are published:

General appearance of the field.—When an asparagus field is badly infested with the rust, the general appearance is that of an unseasonable maturing of the plants. Instead of the usual healthy green color, the field has a brownish hue, as if insects had sapped the plants or frost had destroyed their vitality.

Close View of the Plants.—Rusted asparagus plants, when viewed closely, are found to have the skin of the stems, both large and small, lifted as if blistered, and in the ruptures of the epidermis dark brown spots are readily seen, as shown in the accompanying figure. These brown dots or lines are of various sizes and shapes, and remind the close ob-

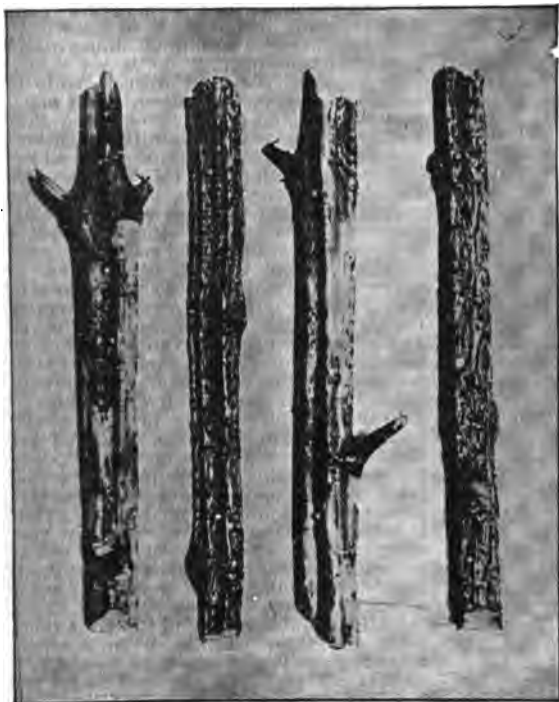


FIG. 168.—PORTIONS OF RUSTED ASPARAGUS STEMS.

server of similar spots in the broken skin of stems of grains and grasses and of the leaves of corn, also due to rusts, but not the same kind as that of the asparagus.

Nature of the Rust.—The asparagus rust is due to a fungus (*Puccinia asparagi* D.C.), that is, a minute plant consisting of microscopic threads which grow through the substance of the asparagus plant, taking up the nourishment that is needed, and finally break through the surface to bear the innumerable brown spores that give the dark color to the spots on the asparagus stems. This is the last stage in the development of the rust fungus, and as such remains over the winter. When the warm, moist weather of spring and summer comes, the spores above mentioned germinate, and a new lot of asparagus plants may become infested.

Treatment of Infested Fields.—There are two general methods of checking the rust, namely, by destroying the spores and by preventing their growing upon, and getting a foothold in, the substance of healthy asparagus plants. The rust fungi are among the most difficult to check—by protecting the plants they feed upon—by means of fungicides, Bordeaux mixture, etc., sprayed upon them during the growing season. While something may be hoped for with the spraying

pump, the chief method of eradication lies in the destruction of the many spores. This can be done in a very simple and effective manner by carefully gathering all the parts of the asparagus plants that are above ground and burning them. It would be a waste of time to stack the tops and leave them to natural decay; and to place them in manure heaps would be still worse. The only safe thing to do when a serious enemy like this is in the asparagus field is to burn the plants even to the last scrap that can be gathered up. Let this be done at once, for any delay means the breaking up of the brittle, rusty plants, and a generous sowing of the spores upon the ground. If the fire could go over the whole field and burn all the small as well as the large pieces, that would be the best of all.

This enemy may become very serious if thorough measures are not taken at once, and by all who are engaged in asparagus culture.

BYRON D. HALSTED.

The Vegetable Garden.

Blanching Celery.—To enjoy celery perfectly blanched, care must be exercised in the earthing up, so as not to allow any of the soil to get into the centre or heart of the plant, otherwise it may be spoiled. When this work has to be done by one man, it is a convenient way to first tie the stalks up together, not too tightly, or it may rot, but just close enough without pressure to prevent the entrance of any soil to the heart. In large gardens where several men are kept, the most expeditious way is to have three men do the work, one man on each side of the row or rows to dig up the soil and place it in position against the plants, while the third man straddles the row, and in each hand gathers together the stalks and holds them up till the other men put the soil in position. As the work progresses the soil is to be somewhat compacted with the hands. Three good handy men will do this work very quickly after a little practice. On soils containing many insects, or earth worms, or where celery is liable to rust badly from the iron in many soils coming in contact with the tender stalks, the best and most satisfactory way is to use boards, a foot or so in width, placed on edge on each side of the rows, about six inches apart, according to the size of plants. There is much

difference of opinion among growers as to the best method of blanching celery to best secure that peculiar nutty flavor found in well-blanching celery, many claiming the necessity of earthing up, but we find that celery can be blanched just as well and be just as tender by the use of boards as by the earthing up process; but if boards are used, a longer time should be given to blanch. This method has the advantage of clean, rustless, and wormless stalks. For summer use the self-blanching varieties only should be used.

Mustard and Cress.—A little sown weekly from now will come in well for salads.

Summer Sown Seeds should be kept clean by the frequent use of the hoe or cultivator, and as soon as large enough the plants must be thinned out. This applies to such crops as turnips, beets, carrots, etc.

W. M. EDWARDS, Conn.

The fertilizer requirements of small fruits are similar to those of orchard fruits, but being, as a rule, more rapid growers, they can utilize to advantage heavier applications of soluble fertilizing materials and do not derive the same benefit as orchard fruits from slowly decomposing manures.

Chrysanthemums.

Crown Buds are now forming, and the grower must determine which bud he is to "take", being influenced by the use to which he intends to put the flowers. For large exhibition flowers the crown bud is the best, but the flower then gets up above the foliage, notably in kinds like Indiana and therefore for general decorative work the terminal bud will throw the best flower, for though smaller, it is better furnished with foliage. For the benefit of the uninitiated, it might be well to state that the crown bud is always known by the three or four growth-shoots which appear directly under it, and these must be at once removed, or they soon render the bud useless by taking away all the strength. It is safe to take the crown bud any time now if a little heat can be given when the flowers are opening. The reason the crown bud comes deformed is very frequently that it is kept too cool. Some growers swear by the crown bud and some swear at it, results being largely a matter of individual practice.

Disbudding should be done in the morning, because then the shoots are brittle, and easily rubbed off. Hold the stem in one hand and use the thumb-nail of the other to remove the superfluous buds. Care must be used in the operation, for it is mighty easy to injure the bud and destroy the labor of months.

It is Not to be supposed that because the crown bud shows earlier, the flower will open earlier also. It makes but little difference, in fact, sometimes the terminal bud opens first, as the crown hangs for a long time.

Terminal Bud.—If the crown bud is not needed, rub it out and select the best of the shoots which appear, which will, in a few weeks produce a terminal bud. This is always safe and must be grown along very cool to allow the wood formed since the last break to ripen. Vivian-Morel, on account of the poor color of the crown bud, is always better on the terminal; and in the Chinese such has been my experience with Miss Gladys Spaulding, not for the color but for the perfect shape of the bloom, the crown bud throwing a peculiar looking bloom that might pass for an Anemone-flowered variety.

C. TERRY.

[This matter of the selection of the bud in certain varieties is not much understood by some of our would-be teachers, and we are glad to have it brought before our readers. It has happened sometimes that a variety has been condemned when the fact was the grower did not select the proper bud.—ED.]

Exhibitions.

Picton, Ont.—At the Prince Edward Agricultural Society's Grand Diamond Jubilee Exhibition to be held September 29 and 30 next, classes will be set apart for cut flowers, plants, and fruits, and suitable premiums awarded. Thomas Bog is secretary and treasurer.

Waco, Texas.—The second annual chrysanthemum show of the Waco Floral Society will be held November 10 to 12 inclusive. A neat premium list has been issued, which contains valuable pointers on the cultivation of the Autumn Queen on the Gulf Coast. Mrs. M. B. Davis is secretary.

Portchester, N. Y.—The Westchester County Gardeners' Association will hold a chrysanthemum exhibition in Fehr's Opera House, on November 5 and 6 next. A. Guerson, Rye, N. Y., is secretary.

Indianapolis.—The final premium list for the eleventh annual Chrysanthemum Show and Floral Festival, given by the State Florists' Association of Indiana, has been issued. The exhibition will be held at Tomlinson Hall, November 2 to 6 inclusive. R. A. McKeand, Garfield Park, is secretary.

Trenton, N. J.—The tenth anniversary great In-State Fair will be held Sept. 27 to Oct. 1. The premium list has liberal provision for the various products of the garden: plants, vegetables, fruit, preserves, pickles, etc. J. S. Mount is superintendent of the department for agricultural and horticultural products.

Raspberry Notes.

Bateman's Early (red) raspberry is desirable as an early market variety. It will carry well, not being as soft as most reds. Very productive, canes of slender growth, but quite hardy; erect grower and never allows the fruit to reach the ground. Can be set four feet apart each way. The largest crop of red raspberries I ever saw on a small patch was grown from this variety. The patch was heavily mulched with marsh hay and the soil was a heavy loam with a sub-soil which had to be loosened with a pick. It is not more than two-thirds as large as Cuthbert, but in most other characteristics resembles that variety.

Columbian is a good grower. It will evidently set lots of plants, as every lateral seems to have the push and vigor of growth in it. It will be no trouble to get from 20 to 25 plants from many of our hills which were set last spring. The color of the cane is all that could be desired, and looks healthy. As we set our first plants of them this season, I cannot speak yet as to the value of the fruit.

Coarath.—This variety is a blackcap of a vigorous growth and seems to promise well, judging from spring-set plants.

Doolittle.—Just as good as ever, and seems to have the same vigor of growth that it used to possess, and, by the way, it still produces some fairly nice berries.

Cuthbert.—Here is the red raspberry which will not be discarded for many years to come. Nearly all gardeners are acquainted with it and if those who have grown it with care have not reaped a fair profit from it as compared with most other varieties, their experience is an exception to the general rule. Its color is attractive. Responds well to plenty of manure and good cultivation. Brought us 2c. more per quart this season than any other late red raspberry. It is among red raspberries what the Worden is among Grapes. With a heavy straw, marsh hay, or dust mulch, the berries grow to a large size. The demand with me for plants and berries has always been all that could be desired. We make it a rule to scatter three to four forkfuls of manure over the ground around each hill in the fall or early spring when fruiting it another year.

Caroline Yellow.—My experience with this variety is that it is very productive of berries of a beautiful golden-yellow color. I do not like the flavor, but most persons seem to think it is one of the finest flavored berries grown. I have grown plants both from tips and from suckers. Would not recommend this variety for market, but for home use a dozen plants of it would be desirable.

Eureka (black cap) has given most excellent satisfaction here; the berry is all that can be desired as regards appearance; plant very productive. All the fruit growers around here who have tried it are increasing the stock of it as rapidly as possible. It ripens soon (two to three days) after Palmer, and is ahead of that variety in most respects. We have quite a quantity of it, but next spring will plant more than ever.

Golden Queen I regard as one of the best, if not the very first, of yellow raspberries for market, but, as a rule, I never found much money in growing yellow raspberries for market. They are all right for the home garden.

Gregg is about the best black raspberry for late market. When it is in it takes the place of all other blackcaps, chiefly on account of its large size, I have it on sandy and also on clayey soils, and the largest berries seem to grow on the latter. Plenty of coarse manure around the hills makes this variety grow very large fruit. On about 500 hills where we cut the fruiting canes back extremely close, pickers could be heard to say, "I never saw such wonderful berries."

Hansell (red) is now regarded more as a relic of the past, although it has a few good points.

Hopkin's (blackcap) is a berry of good quality, and I have found it quite productive; a trifle larger than Ohio, and for table use I would prefer it to that va-

riety, but Kansas and Eureka are taking the place of most varieties of the Ohio type.

Kansas (blackcap) is very desirable. Fruit is attractive, and sells well in the market. An early variety of vigorous stalky growth; canes are healthy, and grow similarly to the Gregg. Both Kansas and Eureka have many desirable qualities that will put them in first place among raspberries.

Johnson's Sweet, (blackcap).—We have been disappointed in this variety.

Nemaha (blackcap) seems to be gaining in productiveness. There is quite a difference in this variety on different soils.

Ohio (blackcap) did not give as good satisfaction here this season as it generally has. It is a thrifty grower, but to do its best it should be heavily mulched, as it is very liable to be affected by dry weather. There are other varieties which are more desirable and are fast taking its place.

Progress (blackcap) has some good qualities, but it has to give way to the more improved varieties.

Palmer (blackcap) did not do as well this season as last, on account of dry weather at time of ripening.

Smith's Prolific has some desirable qualities, but we wish to test it another year before giving a final opinion of it.

Schaffer.—Its unattractive purple color is against it for market, but it has so many other good qualities that it will remain a standard berry in many localities

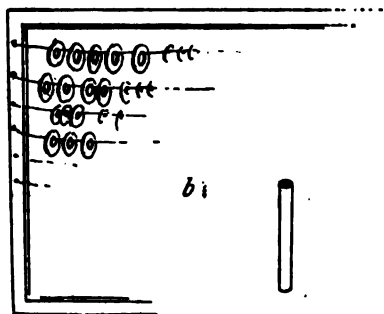
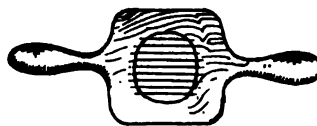


FIG. 168.—FRUIT DRYING AT HOME.
(See page 585.)

for a considerable time to come. I never saw it produce so many berries as it has this year, and all of very large size. We shall plant more of them than in the past.

Turner (red) bears well when suckers are kept down; of good flavor, but too soft to ship. Will grow where other varieties kill down from freezing in winter, as it always comes through without the canes being injured. It is now generally discarded.

Thompson's Early (red).—This was sent out at first at a high price, but has been one of the most disappointing of all red raspberries, considering the amount of praise it received.

Selections.

Judging from this summer's experience, I would make the bulk of my planting of raspberries next spring of the following varieties: For early black, Eureka and Kansas, with only a few Palmer; for late blackcaps, Gregg and only a few Nemaha; for early red, Bateman's Early; for late red, Cuthbert; for medium to late, the Schaffer (purple).

CHARLES C. NASH, Michigan.

Apple Jellies.*

Comparatively few people are aware of the great value of apples for jelly making, and this is more especially true of large raisers of apples.

The greatest factor that has brought out the jelly making qualities of apples has been the Maine State Pomological Society, which has so generally offered from year to year liberal premiums for the best collection of apple jellies made from distinct and named varieties of apples. It has aroused an interest in the subject and excited inquiries which have reached great practical value. At the State Fair last September the exhibition of apple jellies was so extensive and of such a high standard that it was of great interest to the visitors.

Few, if any, varieties of apples are unsuitable for jelly, the possible exceptions being sweet apples, yet I have been successful in obtaining a very good jelly from Tolman Sweet, and the sweet Baldwin, but as a rule they are not adapted to jelly making. The variety in color that may be produced ranges from the almost white jelly of the Yellow Transparent apple, to the deep crimson of the Red Astrachan, and the flavor from the delicate flavor of the Porter to the sharp acid of the Quince apple.

To state a definite rule by which to make apple jellies would be difficult and perhaps impossible.

It does not require the first grade of apples, the second quality of fruit being just as good, but it is very necessary that the apple has attained its full growth, is of good color, and as near ripe as possible.

A general rule is as follows: Quarter the apples, using peeling and all, as the peel is in a great measure responsible for the color of the jelly. Place the apples in a large porcelain kettle, using to every four quarts of apples, two quarts of water for fall apples, and three quarts of water to four quarts of apples for winter fruit. Place the kettle upon the stove and allow the apples to cook until they become just soft, but be careful that they do not cook until mealy, pour into a large flannel bag and allow the juice to drip through into a dish; it may be well to squeeze the pulp a very little to get the full richness of the apple, being careful not to get any of the pulp into the juice, as it spoils the clearness of the jelly. Now place the juice in the kettle, having it spread over as large a surface as possible, as it boils down much more quickly; let it boil rapidly for ten minutes, all the time skimming off whatever scum arises to the top.

While the juice is boiling the first time, have the sugar in the oven heating, allowing one pound of sugar to a quart of juice. When the juice has boiled for ten minutes, stir in the sugar rapidly and allow it to all dissolve, then strain it again to take out whatever impurities there may be in the sugar. Now allow the juice to boil the second time until it will just drop in heavy drops from the spoon; this will require, on an average, about ten minutes. Now the jelly is ready to pour into tumblers. Allow it to cool until thoroughly hard, and place a piece of wax paper over the top; be sure the covers to your tumblers fit tight, then place in a cool, dry place.

In the making of all these jellies one must necessarily depend some upon judgment, for some apples will jelly quicker than others, some will require a little more sugar, and some a little more water for boiling. It makes a great difference in the time of year when the apple is used; the nearer to the time when the apple is taken from the tree the better.

After trying over forty different varieties, the best returns came from the Porter, Astrachan, Yellow Transparent, King Tompkins, Duchess of Oldenburg, Killhamhill and Alexander for the fall apples, and the Bellflower, Ben Davis, Greening, and Baldwin for winter apples.

The Porter and Bellflower stand at the head, the Porter being replaced in the winter by the Bellflower, and that much abused apple, the Ben Davis, is one of the very best apples for jelly.

*Paper read by Alanson S. Grant, at the Maine State Pomological Society.

Mats for Protecting Hotbeds and Cold Frames.

Our attention has recently been called to a substitute for straw mats, so generally used in protecting hotbeds and cold frames. The mats in question are used by gardeners in certain parts of Switzerland and are made of ordinary canvas and excelsior. In making the mats the canvas is laid on a table and a layer of excelsior $1\frac{1}{4}$ to 2 inches thick is spread upon it. A covering of canvas is then placed on top of the excelsior, and the whole is quilted with strong thread, in blocks about 4 inches square. The edges are of course firmly secured, and the mat is then ready for use. Ordinarily, they should be made to cover two 3x6 sash, and have projecting ends of about 8 inches; that is, the mats, when finished, should be about $7\frac{1}{2}$ feet long and 6 feet wide. The projecting ends are important, as they keep the cold from the sides of the bed and offer a place for laying a scantling or board to hold the mats down. Mats made as described are said to last as long as straw and to be warmer and more easily handled. The canvas costs about 10 cents a yard, and the excelsior 2 cents a pound. At these prices, the cost of a mat covering two sash would be about 65 or 70 cents. Doubtless the protection cloth used by seedsmen would answer excellently for the mats. This cloth is prepared to withstand water, and for this reason it would last longer than ordinary canvas.

Another form of mat extensively used by Violet growers in Virginia is made of burlaps and straw. Recently while visiting the Violet growers near Gordonsville, Virginia, we had an opportunity of making some inquiries in regard to these mats. Mr. Taylor, who has about 400 sash in Violets, kindly furnished the following facts on the subject:

The mats are made of 12-ounce burlaps, 45 inches wide, costing about 6 cents a yard. The straw between the tackings of the mat is about 2 inches thick, but at the part where the tackings are made it is only about half an inch thick, as the string is pulled tight and tied in a square knot to prevent all danger of its getting loose. A woman can make about 15 mats a day, making the total cost about 35 cents each. The burlap mats are not very durable and are a constant source of expense. By the end of one season the straw has worked up to such an extent that the mat will not be warm enough for another winter. The burlap usually lasts but two seasons with the rough use it receives. With care the mats should last two seasons without making over, and the burlap might perhaps be made to go through three or even four winters with good attention.

Altogether it is believed that the excelsior mats would prove more durable and satisfactory.

Home-Made Fruit Drying Imple- ments.

For drying fruit for home use, or in a small way for market, one may use to advantage the slicer and corer shown in fig. 168. A bit of tin tube, with one end made sharp, will take out the core from an apple "with neatness and despatch." The whole apple can be sliced with one movement by the use of the frame shown at a, in which are set eight or nine old and very thin "case" knife blades, the handles of which may have disappeared. The frame can be cut from a piece of inch pine board. Slices are sawed for the knife blades, which are wedged in tight. The circles of apples can be strung very easily, being whole, and placed on a light frame, as shown at b. This can be set in the sun and easily moved indoors at night. If the slices are made a quarter of an inch thick, eight knife blades will cover an ordinary apple.

The two fruit exchanges of Baltimore, Md., have combined, so that the control of the trade in that city is now under one head.

Injury to Violet Leaves.

Our Violets this year and last were injured by a small caterpillar-like insect, which L. O. Howard, Entomologist of the Department of Agriculture, reports to be the larva of an undetermined saw-fly. In the accompanying figure is shown some leaves injured by the worms.

Usually the injuries are first noticed early in June, and in our experience the trouble is confined to plants under glass, especially those growing in the shade. The row of plants under the gutters or next to a side wall almost invariably shows the most severe injuries. When full grown the worms are greenish-brown and are seldom more than half an inch long. They are difficult to find, but during the day can usually be seen, apparently resting, low down on the leaf stalks. Seldom more than two of the worms are found at one time on the same plant. Two, however, are enough, as they will riddle a half-grown plant in a week. Hand-picking has been tried and found to be effective but slow. Roseleaf extract of tobacco, diluted at the rate of 1 part extract to 80 parts water, is effective when put on with a good spray pump, but we do not like to use this or any other sprays on our plants, as they all have a tendency to weaken the tissues and bring on spot.

The most satisfactory method of dealing with the pest is to fumigate with hydrocyanic acid gas. We fumigate



FIG. 169.—VIOLET LEAVES INJURED BY SAW-FLY.

about once a month, and find that we are not only able to keep down the saw-fly larvae, but cutworms and the black and green aphides as well. Slugs and snails are also killed by the gas, and, much to our regret, our colony of toads, which we prize highly as greenhouse adjuncts, were, through an oversight, also annihilated a few nights ago.

We find the gas treatment for Violets simple, easy, and cheap, and although we have used it for more than a year on plants of all ages, from a sand cutting to a full-blooming crown, we have never seen any injury resulting therefrom. Where Violets are still in flats, that is, where they have not been transplanted to permanent beds, dipping in rose-leaf extract might be followed while the transplanting is going on. Put a pint of the tobacco extract in a pail of water and dip the plants (25 or 80 in a bunch) in this solution. Dip the leaves only, and when set in the beds syringe lightly, in order to wash off the more or less sticky juice. B. T. GALLOWAY.

The yield of small fruits in the Hudson River valley so far has been up to the average of previous years, but the prices received have been discouraging. The two main crops now are peaches and grapes, and the quantity of both it is expected will be enormous. The peach crop looks promising, and probably will be one of the largest and finest ever gathered.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

Is there danger of a strawberry or other small fruit plant being overstimulated, or in other words, can it be fed so heavily year after year that it will be injured, as is the case with a horse or other domestic animal being overfed?

One-fourth to one-third of the limbs in the tops of an old apple orchard are dead, and the owner wonders what is best to do to put it in the best condition. My advice is that the trees which are in the best shape receive a load of well-rotted manure, to be scattered evenly over the surface of the ground as far out as the limbs extend. Prune the trees severely, and cultivate well during summer. Dig out those trees which are badly affected.

A village lot was planted to potatoes last spring, having been plowed last fall; about the same amount of ground alongside was planted the same time, it had been plowed in the spring. Both plots were given the same care. On the fall-plowed ground the potatoes are making a much better growth and are much superior to those on the spring plowed. It seems that the fall plowing proved the best for retaining the moisture.

There is a fine patch of the Wilson and Warfield strawberry grown in hills. The plan is to grow alternately in the row a hill of Wilson and one of Warfield. There is no doubt that Warfield's No. 2 will be laden with well-formed fruit.

In layering plants of Schaeffer raspberry, it is well to have the tip point almost straight down and not to layer too early. If layered at too much of an angle, it pushes out of the soil, often making but a few roots, and when layered too early, the little germ at the crown starts in to grow in the fall, these severe winter weather freezing the tender shoot back.

In improving varieties of small fruits we select out of each variety those having the highest number of good points and propagate plants from them.

After a good shower we like to start the cultivator to hold moisture, but we do not start until the soil is in a "mealy" condition or not too wet.

One gentleman near here generally has a good crop of apples and raspberries on the same ground, but he keeps the ground covered the year around with a heavy mulch of straw and marsh hay, so the soil cannot be seen at any time. The mulch is well loosened up in spring and fall to give air to the soil before putting on more.

Many growers in Michigan being disgusted with the price of small fruits this year, are plowing under a part of their plantations. This means a fair chance for those who keep at it.

With regard to asparagus, we find there is more in the richness of the ground than in the variety.

We have found by experiment that black raspberry plants should not be set too shallow, the plants which were set three to four inches deep (four inches on sandy soil is none too much), stand up straight, but on those which were set a scant three inches deep, the canes will have to be staked and tied up.

I have a small plot of poor soil on which I am trying the experiment of letting all the rag, pig, and fine weeds grow that will, and just before they go to seed, plow them under for fertilizer; thus I expect to prove the virtue of weeds as a green fertilizer for run-down soil as compared with cow peas, corn, millet, or rye.

It is profitable at this season of the year to cultivate the late cabbage early in the morning as possible while the dew is on, especially if the weather be dry.

Not a weed should be allowed to go to seed on the lawn.

We must have a good pile of soda piled up with alternate layers of poultry manure; it is one of the most satisfactory of fertilizers when allowed to rot and shoveled over a few times before next summer.

CHAS. NASH, Mich.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 13, 1904.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 7154 Cortlandt.

P. O. Box 1897.

REGISTERED CABLE ADDRESS

Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 35 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

Catch Crops. THE most important, hence the most valuable, food for plants is that produced by plants, the mould from their decomposition. The plant is constantly at work storing up food for some other plant to feed upon, and no matter what changes it may undergo, whether or not it serves first food for man or beast, in the end it becomes plant food. It is this food to a large extent that we apply to the soil in the shape of manure, and in that case, too, it must undergo decomposition or a breaking down of its components before the plant can feed upon it in its entirety.

The quantity and quality of the plants we are able to produce from a given area depends to a great extent on the quantity and richness of the food given them, whether it be naturally present in the soil or applied.

While it is true that a soil may not produce a desired crop without applications of manure, it is equally true it may not yield another crop with it, unless the

food given contains the elements that are specially desired by the crop. It is indeed possible by the application of manure to make the soil poorer, instead of richer, at least, to make it less productive for a specified crop from the farmer's standpoint.

In a general way, it may be said that no two crops take from the soil the same elements of food in the same proportions; neither do they return to it the same, each has its own work to do, and each prepares or renders available, food for some other. Take the cabbage which is a gross feeder, requiring for its perfect development more manure perhaps than any other plant grown as a general crop.

What we term manure may or may not be plant food, it depends upon what its composition is and what it is used for. We take, for instance, a piece of heavy sod underneath which is a lively loam; after plowing give the surface a heavy covering of well-rotted stable manure, and we will have the soil in the best possible condition for a crop of cabbage, from which if the season is favorable a yield of 25 tons per acre can be obtained, at the same time the cabbage will return to the soil, by plowing under the stumps and outer leaves from the heads, sufficient food for a heavy crop of cereals. But, if we continue to grow cabbage for three or four years in succession, even though we put on just as heavy a covering of stable manure as we did in the first case, we could not then get a satisfactory crop of cabbages. Why? Simply because there is not in the soil that which the cabbage takes out, and it cannot be put in except by allowing the soil to be occupied by some other crop, so it can recover tone; for so far as the cabbage is concerned, the soil is impoverished, it is still intensely rich for some other crop.

The cabbage is generally considered an exhausting crop; so it is; but it will give back as freely as it takes if so handled, and as a catch crop, where it is grown only as a fertilizer, it is one of the best that can possibly be used. For instance, where there has been a crop of early potatoes, and the ground has been cleared by the middle of August, the cabbage can be employed to the best possible advantage. The seed in such a case should be sown thinly in drills not more than two feet apart, and by the middle of November, when the ground will be completely covered, the crop should be plowed under, and rye sown thickly which will keep the fine soil from drifting by the winter's winds.

One of the best possible illustrations of this principle of rotation, and one crop improving the land for another to follow, may be found where beets are grown for sugar purposes. Experiment has shown conclusively that the beets cannot be grown to perfection on the same soil oftener than once in five years, as the reserve to form the saccharine matter which the beet makes, is not replaced in any shorter period. The chemist can tell to a point what the active principle in the beet-root is, but he cannot put it into the soil in the necessary condition, or make quickly available what is there. A previous crop, however, can do it, and, after experiments, carried on for nearly 100 years, it has been ascertained that the best "catch crop" for the sugar-

beet is wheat, and it takes at least two crops of that.

Stable manure and commercial fertilizers will excite plant growth, they will give a heavy crop of beets, as often as every second year, but the root will not contain the principle for which it is grown. Nature holds the key to that secret of availability, and we have not yet found it.

The foregoing remarks illustrate in some degree the importance of growing crops as agents in the production of other crops, that it may not be as useful in itself as it is in the preparation of the soil for something to follow. The soil should be constantly at work; the moment one crop is taken off, another should be put in.

The question then arises, what is the best "catch crop," or what crop can best be employed to furnish food for some other? Although a simple and natural question to put, it is a difficult one to answer satisfactorily in a general way; so much depends on circumstances. There is one answer, however, that will fit all conditions, and that is, grow what you can grow to the best advantage.

Where clover can be grown with any degree of certainty, that is decidedly the best crop, because it takes from the earth and air, and gives back to the earth such a wealth of available food that all other plants require; it enriches the nitrogen supply.

Where clover will not grow, then we should come as near to it as we can with some other leguminous crop. There is not a locality where if some one will grow, it should not be used.

In the garden or field, on heavy or on light soils, spinach grows readily, and it is one of the best "catch crops" that can be found; it grows quickly, covering the earth in a short space of time, and is rich in food for some other plant.

In the market garden there is always something that can be grown at a profit, here vegetables can be the "catch crop," and they will answer every purpose, only when they occupy the ground at all times, the barnyard must supply the humus and the nitrogen, and commercial fertilizers the mineral salts.

Garden Development. THERE are certain definite principles which govern the laying out, "landscaping," of any area of land, be it large or small. Though the conditions may vary and the details be as different as the places seen, yet if the fullest satisfaction is to be had from a garden, adherence must be given to these governing rules.

Perpetual succession of effect is a prime factor. No garden can be fully satisfactory to its owner if it present a good appearance at one season only, except of course, at places where one resides for a short period.

Given an area of land and a house, there are always certain prospects in looking to the house and others in looking from the house which should be maintained and emphasized. How to do this depends largely upon the skill, the soul, of the artist and his knowledge of plants, their forms, and color values. The skillful landscape gardener seizes upon the natural and salient points of the ground, also observing the weaknesses such as

those points which give limits to effect. He develops the one and subdues the other, striving to give the impression of unlimited extent so far as is possible, using for this purpose and surrounding of importance. It is not evidence of skill to hide a wooden fence by simply planting another of trees or shrubs in front of it.

Though general principles are definite, their actual adaptation will not conform to cast-iron rules. We cannot lay down on paper, in words, any minor details that will suit all conditions. The utmost that can be done is to show a few selected examples and specimens of work, and from them point a moral as occasion demands. To this end we have arranged to issue during the next few weeks a series of landscape plans, from which it is hoped our readers will be enabled to derive many valuable hints. These plans will be of various natures and will deal with problems which have been suggested by our correspondents.

Plants Received.

Heliotrope.—From Mr. A. Weising, Brooklyn, N. Y., we lately received a plant of the new Heliotrope known as *giganteum hybridum*. This differs from the ordinary forms by its assuming a tree form and flowering in a large head on the top. This character, the grower informs us, is constant whether the plant be raised from seed or from cuttings. The plant submitted was 30 inches high, and had most vigorous foliage, yet we are informed, was only of medium size. The seed was not sown till the end of April. Weigelt & Co., Erfurt, Germany, are the introducers. The novelty has much to commend it, especially for bedding purposes; its erect growth making it desirable for the mixed sub-tropical garden. The color, size of bloom, and fragrance are all that can be desired.

Gladioli and others.—From John Lewis Childs, Floral Park, we have received a large and varied assortment of choice annuals and perennials, chief among these are some superb Zinnias, which, in range of color, brilliancy, and form would be hard to beat.

Star Phlox was also noticeably fine; another pleasing, and at the same time old, favorite was a bunch of *Daphne cneorum*, a specialty with this firm.

Rudbeckia "Golden Glow" is a variety of the wild *R. laciniata*. Its fine double yellow flowers proved to be good shippers and displayed fine keeping qualities; it is a superb border plant.

In a batch of Lilliums were *L. Wallichi*, *L. Henryi*, and varieties of *speciosum*.

The collection also included a large number of named Gladioli, of which the following were selected: of the *gaudavensis* type, *Corsair*, a beautiful dark; *Mascurville*, a very peculiarly marked red with yellow throat. *Snow White* is what its name indicates. *Glory of Brightwood* was almost a scarlet, fine large flowers and a yellow tip. The collection of Gladioli at Floral Park is famous for what is now known as the Childs type; these hybrids are distinguished for their great size, erect habit, and wide range of colors. Among these we mention specially: *Torchlight*, a most brilliant scarlet; *Ruby*, well described by its name; *Mrs. La Mance* is a grand light pink; *Daisy Leland* is a bold, large red; and *Falconer's Favorite* is a dark red with great character, the color is almost maroon and is enlivened by white median vein to each petal.

What It Costs to Win.

Mr. W. J. Eldred, who was awarded the majority of the first prizes at the Springfield, Mass., Sweet Pea Show, gives more time to his pets than many have any idea. He begins his season's work in the winter long before the snow is gone, by reading all that can be found on Sweet Peas. Then in March he begins working the soil and gets his seed in as early as possible. From the time the seeds are

planted until the vines take to the brush, some time is spent every day searching for cutworms and other insects that might injure their growth. From now on he spends an hour and a half in the garden before he goes to work in the morning, about half an hour at noon and from 6 o'clock until dark, every day when the weather will permit. The money outlay this year was about \$50 for seed, manure, etc. Mr. Eldred has experimented several years with crosses and it will not be long before we shall hear from his labors. Mrs. Eldred grows Begonias and has the largest collection in her district.

The Canadian Apple Crop.

As the reports given us by different parties agree in the main, we publish them with greater confidence as affording a pretty accurate idea of the yield. In the majority of the orchards west of Toronto as far as St. Catharines, the prospects favor a good crop of Greenings and Northern Spies, the fruit having a clean and fine appearance; but red fruit, such as Baldwins, are a comparative failure. West of St. Catharines a moderately good crop of Greenings is promised and a fair yield of Spies with a good sprinkling of Russets. There is the same paucity of red apples in these sections as noticed between St. Catharines and Hamilton, and in sections north and northwest of Toronto. East of Toronto, as far as Brockville, there will be a fair crop of green fruit, and in some orchards a good sprinkling of red fruit is observable. —*Montreal Trade Bulletin*.

Prosperity Coming.

The crops this year are not larger than they have been for some years. The four largest crops of corn ever raised in the United States yielded \$300,000,000 less than the four smallest crops. Not only is this anomaly true of corn, but also of potatoes and to some extent, of wheat.

The foreign demand for wheat is excellent. European countries will not give the yield that was expected, and the deficiency will be filled by American wheat, which now is 20 cents higher this year than last.

The price of potatoes is double what it was last year. Corn has advanced three cents over last year, and cattle 50 cents per 100. Wool is a third higher and sheep has advanced a fourth in value. There has been little change in the price of oats or dairy products.

The increases in price will result in putting money into the hands of farmers. This will be used to pay creditors, who will liquidate indebtedness. Thus prosperity will illuminate the whole country within a short time.—Assistant Secretary of Agriculture J. H. Brigham in an interview.

Chain Gangs in the Parks.

It is unfortunate that the Park Commissioners of Brooklyn have not the money necessary to complete the work planned for beautifying the parks of that city, which are already among the most beautiful in the world.

Likewise it is deplorable that, under a mistaken conception of the law, the Commissioners of Charities and Correction are unable to find any work to occupy the minds and muscles of the inmates of the Kings County jail.

But neither condition justifies the employment of striped convicts under armed guards on park work. The reported agreement of the Park Commissioners and the Commissioners of Charities and Correction to that end is one which should be quickly nullified. Chain gangs are neither a pleasant nor a civilizing adjunct to a park. The public employment of convicts, in all the appanages of penitentiary service, is invariably depraving. It is an indication of a low state of public refinement and an affront to the better sentiment of the community.—*New York Journal*.

—We say by all means employ the convicts; and how better than on public works?—Ed.

Still More About Summer Planting of Strawberries.

To the Editor of American Gardening

I have read with a great deal of interest, and not a little amusement, the several articles by Mr. Hale and Mr. Dwyer, on the summer planting of potted strawberry plants, and also that by Mr. R. M. Kellogg, all of which have appeared in the *American Gardening* of late. These articles were written by men who stand high as representatives of the strawberry interest in the country; yet there seems to be a strange disagreement between them relative to the value of summer planting, which may be hard for some to understand, and to decide which advice is better to take. Those who have had years of experience in summer planting of strawberries with all the conditions which are likely to exist with them, and a fair understanding of humanity can read these articles without any perplexity or difficulty, but the amateur and credulous need something more tangible upon which to hang their reliance than this maze of contradictions.

It seems to me that Mr. Hale has shown up rather the darker side of summer planting, while Mr. Dwyer may have given the extreme brighter; yet, by the light of my experience, I can see that he has not shown the impossible; nevertheless, it may be said that his statements were misleading, inasmuch as he has not made it clear that not one in 10,000 of his customers could expect to get those great results—all conditions must be combined favorably, and far the most dependent upon the person or persons entrusted with the care of these plants. I like Mr. Kellogg's talk; he presented correctly the real truth till he got in his "pedigree" talk, then I felt like saying, "Rats." Well, we will have to forgive Mr. Kellogg for we all know by this time, or at least, should know, that he is a little cranky on that, just as you will have to forgive me, as I am just as cranky against such absurdities which have no foundation either in facts or theory, and which do much harm by teaching error and leading astray the credulous. The fact, that Mr. Hale is probably the greatest seller of layer plants for spring setting, and as far as I know, does not sell any potted plants for summer planting, and Mr. Dwyer a great seller of potted plants, and Mr. Kellogg of "pedigrees", of which he has seemed to have made a corner, may be only a coincidence and had nothing to do whatever in dictating their writings, but it is well for all those readers who are seeking after the real truth to give this matter careful consideration.

I have grown many thousands of potted plants for my own setting and for sale, and the fact that each year I have been the greatest customer myself for these plants shows clearly that I have the opinion that they can be made profitable even in this far North.

E. W. WOOSTER, Me.

To the Editor of American Gardening.

—Allow the writer to say that his experience with fall planting of strawberries the past season will throw some light on the question of spring or fall planting now at issue in your columns. Last summer the white grub destroyed a number of my plants of my spring setting, which were replaced by fall-set plants. My spring plants had made the usual number of plants from runners, which usually are much too many for best results; the more fertile the soil the more unprofitable extra plants. The novice likes to see them "spread themselves," and cover the "face of the earth." Indeed, it is a trial to the beginner, and to the older grower to decapitate the youthful plants. Hence, as a rule, the average strawberry grower allows his spring-set plants to make too large an increase for best results; such was the writer's case. But his well-selected fall-set plants did not and do not make the aforesaid runners and plants, but develop fair-sized, single crowns with no extra plants standing in the light. And how they did spread themselves this spring, with large berries on vigorous stems spread out like the spokes in a wheel—well

loaded with fine fruit. Fall-set plants, well grown, well cultivated, in good soil, with favorable season, will make a glad-some return to the amateur, but will not yield the ample returns required by the market gardener.—G. N. CARRUTHERS.

To the Editor of American Gardening.

—Mr. Kellogg says (page 583) that it is a mistake for commercial growers to set strawberries in the fall. It is, if done too late. Summer setting is far better done just as early as suitable plants can be had. The soil he describes is just the right place to secure a profitable crop, even if potted plants have to be purchased. Building up a reputation by only growing strictly first-class fruit, will secure a permanent hold on the market, and the way to do that is by planting the vines as near "nature's way," as may be possible, which is in summer. A plant matured for fruiting cannot be in its best condition to make plant growth (even if dormant), its tendency is to make seed. Failing in this (by the removal of blossom buds), it resorts to the process of reproduction, by sending out runners, thereby exhausting much of its vitality, even if runners are kept off. Such plants will not, cannot produce the finest fruit. The large overgrown fibrous-rooted plants used generally in spring setting, are about as poor to plant, as a fruiting peach or apple tree, and "pedigree" soon runs out of such, unless great care is taken to select those showing strong resistance to such treatment. Isolated plants will show a large growth of foliage, because of plenty of room and a large supply of nutriment, but such are not profitable from a commercial point of view. When two or more plants occupy the same space, the nutriment must be divided, to the detriment of each; therefore, plants must be crowded as close as is consistent with quantity of fruit. Much is dependent on the variety, evidently; a large stocky plant requires more space than a slender wily one. I find that such fruit as Mr. Kellogg describes, "immense berries, rich in flavor and sound to the core," is best grown on plants set in July and August, and urged to make the utmost possible growth, and every plant, expected to fruit, set in by itself, whether it takes 7,500 or 20,000 to the acre. As Mr. Dwyer says (page 589), the possibilities of the strawberry under favorable conditions are away beyond the expectations of the average grower.—HENRY SNYDER, Md.

To the Editor of American Gardening.

—We always like to read a good discussion on any topic of interest to the horticulturist. Thanks to Messrs. Hale, Dwyer, and Kellogg for the strawberry discussion.

I have tried both methods, but have a preference for spring planting of strawberry plants. There are some things to be gained by the plant grower in setting a few each of the new varieties in the fall and protecting well during the winter, but for the fruit grower, I have never seen it pay quite as well as spring planting.—C. C. NASH, Mich.

Lawns in Parks.

To the Editor of American Gardening.

If a gardener can be found who can maintain a lawn in early spring, such as one would wish to see in a garden vista, where an unlimited number of people walk upon it at all times, I should like to make his acquaintance.

I have visited parks, and have had some experience in park work; and my observation and experience is, that even when strolling for pleasure, the shortest, open, feasible way will be followed by the pedestrian. He does not stop to moralize, "That it would be a sad commentary upon the intelligence of the American citizen," if in walking over a beautiful lawn the same way many times he will tramp out the grass and make an ugly footpath, but keeps straight on his way.

I do not regard this as any reflection upon his intelligence or citizenship. It is simply an instinct, common with all, and the intelligent park maker will recognize this as a fact, and provide foot-paths in

place of lawns, where any considerable number of the public desire to reach the same destination, and require the pedestrian to keep upon the footpaths.

If respectable lawns are maintained in parks, "where an unlimited number of people are permitted to walk upon them at all times without injury," it is certainly where the conditions are such that there is only a limited desire on the part of the public to use them for that purpose; for no one will claim that grass will grow if continually walked upon. There is never a long-enforced general rule or law, without a good reason; and the general rule as to lawns so long in force to "Keep off the grass," is not an exception.

I do not wish to be misunderstood, however, for I agree that the principal areas of parks should be open for the public to walk upon, without restraint; but there should be an occasional vista where garden art may be produced for their entertainment, and here a well-kept lawn, unmarred by footpaths, is a necessity.

VOLNEY ROGERS, Youngstown, O.

More About Early Maturity.

To the Editor of American Gardening.

There are several methods which may be used to secure the early ripening of fruit or seeds, but in nearly every case the size of the plant or its natural vigor is affected by the treatment.

When plants are brought to our more Northern climate from the South, they must become accustomed to it before they can be successfully cultivated, but during acclimatization the plant becomes changed; it is smaller and comes to maturity earlier. Thus a change in climate hastens maturity by reducing the natural size of the plant. However, we find that the increased earliness in the maturity of dwarf trees is not due simply to the reason that they are reduced in size, but more likely to the same reason that causes the tree to be a dwarf; for when the free passage of the sap from the foliage to the roots is prevented, it is found that the result is an increased tendency for young trees to produce and nourish blossom buds.

It is well known now that the condition of the seed has much influence on the plant. If very green seeds are planted, we may expect, first, a smaller percentage to germinate; second, from those that do germinate, a weak and feeble plant; and third, an increased earliness in maturity of the plant. Nothing shows this better than a study of the tomato; many experiments have shown the same results. And this suggests the probable origin of our early varieties of tomatoes. Notice, if you will, the peculiar shriveled foliage, the dwarf plant, and the inclination to blight and decay of the fruit to a greater or less degree in all our early varieties of tomatoes.

This indicates that these varieties have resulted from the use of green seeds. The conclusion from this is that although the choice of seeds may induce earliness, yet the seed must be in such a condition as to reduce the natural vigor of the plant.

A comparison between early and late varieties of potatoes shows that all early varieties are of feeble growth, and again we have the suggestion that early maturing varieties are obtained at the expense of the natural vigor of the plant.

The nature of plant food, the condition of the soil, special treatment of the seeds, or conditions of germination, all these may hasten the maturity of the plant, but the plant will generally be changed in either size, form, or vigor.

If early maturity is desired, something must be done to draw the growth forces in that particular direction, and this means less growth force in some other direction which results in smaller or more feeble plants. The point I wish to bring out is that the early maturity of plants, either as individuals or as races, is generally brought about by reducing the natural size or vigor of the plant.

L. W. ENGLISH, Vermont.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

Mignonette.

Having been asked many times in a season how I grow the fine Mignonette, which I send to New York market, I furnish the following information on the subject:

I first clean all the old soil from the benches, and remove whatever accumulations of dirt there may be under the benches, which I then wash down thoroughly, so that all the cracks therein are open and clear to allow of good drainage. When the benches are well dried, I give them a good coating of whitewash, and sometimes two, if I find it necessary on older benches. When well dried they are ready for soil. My cleaning for Mignonette is generally done when we have time, or get a good cool day before planting time; and I work on the same plan as regards filling all my houses. At the best, it is no snap—cleaning and filling houses.

In preparing soil for Mignonette, I put about two inches of fresh cow manure on the bottom of the benches; then three inches of good stiff soil, well mixed with cow or stable manure or both, as it makes very little difference which is used. After firming the soil somewhat, and smoothing it, I mark it off in spaces one foot apart each way in three rows, across the side benches, and four rows on the center benches, as a greater number of rows is too unhandy to work when the plants are large. I then make small holes on the cross marks, and fill them with some light soil on which to sow my seed, as our soil forms a crust after the first watering and sometimes will not permit the seedlings to push through. I sow seed with the point of my knife, by pressing it in the soil about half an inch, the seed being on the blade. I find the work can be done thus quicker and more evenly, than in any other way. After the seed is sown, I keep the soil on the wet side until the plants are all well up, which should be in five or six days. The greatest trouble I experience is in keeping the small plants from damping off, until they get their second pair of leaves well developed. After that there will be very little trouble from damping. I sow the seed about the last week in July.

The worst enemy of Mignonette is the cabbage worm, which is introduced by the common yellow butterfly, which deposits its eggs on the small plants; in a few days the eggs hatch, and it is surprising how fast the little pests grow. But as we have no use for them, we mix a teaspoonful of Paris green with two gallons of water, and sprinkle the plants once a week, thus keeping the worms in check until the flower spikes begin to show. The plants are then gone over and the worms picked every few days, as I consider it too dangerous to use Paris green on anything that is to be sent to market soon after the insecticide has been applied.

As the plants grow, I keep them tied up to string or wire, held in place by any of the modern devices, or the methods best adapted to the position of the plants. The tying must be watched with all eyes, so as to have good, straight stems and heads.

Then the disbudding must be well looked after; all side shoots must be taken to within four inches of the soil, so as to throw all the growth possible to the leading flower spikes.

I commence to cut from the 1st to the 15th of October, and obtain a continuous crop until the first of June, by giving plenty of feed, mulching with stable manure and diluted sheep and cow manure, also guano water. I am not much afraid to over-feed Mignonette; the trouble with me is generally the other way—to find time to give it enough. It is a very hungry plant.

In selecting my stock, I pick out the best-looking plants in foliage, strength of stem, size of individual flower, length, circumference, and compactness of spike, and carry the first and leading spikes through the season. These sometimes attain three and a half feet in height; by this means I keep on getting a better strain of Mignonette every year.

The N. Y. Botanical Gardens.

In the matter of the New York Botanical Gardens and the strenuous efforts that have been made by interested individuals to serve their own ends, the following report of the Park Commissioners is of public importance:

"This department, realizing the importance of the subject, appointed a committee of experts to examine and report upon the general scheme for laying out the gardens, as prepared by the Board of Managers and Scientific Directors of the Botanical Society. To the report of this committee of experts the Commissioners have given close attention and careful consideration before taking final action in the matter. The result has been a material modification of the original plan, in accordance with the views of the experts, and the adoption by this board of most of the recommendations and suggestions contained in their report. A visit was made to Bronx Park, the several locations were examined, and the Commissioners listened to the arguments of the experts presented by Mr. Olmsted, and of those of the society, presented by several of its directors. We were unanimously of the opinion that the proposed locations of the conservatory and powerhouse were objectionable on account of the beautiful landscape features of that region of the park.

"In dealing with a problem of this sort the Commissioners are charged with one serious duty, which must at all times be paramount to every consideration—to preserve against every attempt at interference with the natural scenery of the park. The primary purpose of a rural park within the reach of a great city is to maintain that rest and refreshment of mind and body which come from the tranquillizing influence of natural scenery. All other additions to the attractions of the people's place should be subordinate to the controlling purpose in design and maintenance of such pleasure grounds. Anything which interferes with the restful quality of the scenery, in so far as it destroys the highest value of the park. The most careful scrutiny is demanded of any proposition which calls for the erection of buildings on park spaces the purpose of which is not absolutely material to the general scheme of park maintenance or is a necessary part of a special improvement, like the Botanical Garden. For this reason the Commissioners decided to modify the plan proposed by the Botanical Society, in so far as it provided for the erection of a directors' house, first gardener's house, and second gardener's house, and changed the proposed location of the conservatory and powerhouse.

"The Commissioners, in changing the location of the conservatory to the south side of the Southern Boulevard, have followed the recommendations of the committee of experts. No change in the location of the museum has been made from the original plan prepared by the Board of Managers of the Botanical Society. The site selected is believed to be the best that could have been chosen. No valuable trees are sacrificed, and it gives to the museum much more attractive surroundings without marring in the least the landscape features of the park.

"When the board decided to avail itself of the advice of experts it did not surrender the right of final judgment. We believe that the experts were wrong in their desire to place the buildings close together. If the garden, when completed, should become as popular as it is expected to be, the grounds immediately around Bedford Park station would be so congested as to make travel difficult.

"The commissioners thoroughly appreciate the work and purpose of the Fine Arts Federation of New York, and for that reason all the more regret that its council should have passed resolutions condemning the action of this board, which are not in accordance with the facts in the case."

Fruit trees are slow-growing plants, and therefore do not need quick acting fertilizers as a general rule.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*. We cannot undertake to reply by mail.

Scale on Nectarines.

(To F. C. D.)—The insects on the twigs of nectarine are those of the San José scale, as presumed by our correspondent. The fruit is also speckled with the same insect, and the cracking and roughness is due to the enfeebled condition of the tree. The history of this destructive pest and remedies for its suppression and control were given in American Gardening for May 1 last.

Fertilizer Crop.

(To W.)—Crimson clover may be sown now and would probably be best for the purpose.

A Useless Plum.

I have several plum trees loaded down with good-sized beautiful fruit this year for the first, which I purchased of a nurseryman a few years ago, as being very choice, the fruit being light cherry-red, exceedingly juicy and tender, delicious, sweetness, etc., and especially fine for canning. I find them to be prolific in bearing beautiful fruit, without a particle of taste, and I want to know what to do with them. Having no flavor, they cannot be suitable for canning, and they are not fit to eat or to preserve, as I have tried the latter, and they are as tasteless as when uncooked.

Shall I cut them down, and throw away, or cut down and graft choicer varieties, or try to make vinegar out of them, or what?—J. H. C.

—Why don't you send specimens of the fruits? Then we may be able to answer one part of your query. Of course, graft if you want to, but don't say we told you to do so until we know what variety you have.

Treatment of Bougainvillea.

Will you kindly give me some information as to the proper treatment of a Bougainvillea in order to have it blossom—both summer and winter treatment. Last year it was taken out of the pot and planted outside, and repotted in September. It began to show a few flowers in November, when the gas escaping from a broken main in the street and coming in the cellar, penetrated the conservatory, injured it, all the flower buds falling off and many of the leaves. This year it has been left in the pot in the conservatory, and has not had a single flower. It appears to be resting. Winter temperature of conservatory, 60 degrees at night, 70 degrees and upwards during the day. It is now trained against a brick wall, and must be ten feet high and branching. Would it have been best to have pruned it in the spring and set in ground outside?—OLD SUBSCRIBER, Newton, N. J.

—Probably your plant is *B. splendens* and is thus naturally a little more shy in blooming in early stages than is *B. glabra*. Undoubtedly, the gas killed the blooms last season, but it is more than likely the starving and ripening process may cause it to flower next spring. When the growth begins again, feed a little with liquid manure water, now the roots are contracted. The temperature is right; such pruning that is required to keep the plant in bounds is all that is needed.

Epidendrums.

I have an *Epidendrum verrucosum* on a little pine block; the bulbs cover the block entirely; in fact, they have no leaves. Would it be best to separate the mass and would it do to put a part on a larger block, and ought the block to be pine, cork, or rough bark? Would it grow in crib or basket in moss, such as plants come packed in? When shall I rest it and what temperature does it require in winter, and what are its requirements as to sun or shade?—H. M. F., Ill.

—Teakwood, red cedar, pine, and cork blocks or tree fern stems are all good, and but little can be said in favor of

either. The old bulbs give strength and help to secure the base of the plant, also at the same time to store up moisture. Do not remove them; new blocks would hardly be necessary. When the clump of bulbs more than cover the space they are on do not divide them, but remove to a larger block. Keep it at a temperature of 68 to 65 degrees in winter and moderately moist. Give nearly full exposure to sun, and rest in the summer.

Laelia Anceps.

In the fall of 1895 you sent me for premium with American Gardening, one plant of *Laelia anceps* on a cork block. It grew that winter one flower stalk, with two flowers, then it threw out new roots quite rapidly and quite healthy looking. I dipped it in water every night according to instruction; then in the spring I hung it on the limb of an apple tree, and it made one or two new bulbs, but last fall I left it with a neighbor, and how she treated it last winter I do not know, but she said it got scale or some kind of insect on it, and she used to wet cotton and put around it. This spring when I came home its roots were all dried up. I did not know what to do for it, but I hung it out under a peach tree as soon as the weather was warm. It shows some slight sign of growth. Would it be best to put it on a new block? What use are the old bulbs after flowering when they grow old and brownish looking, must they always be left on?—H. M. F.

—Make the plant secure on the block it now has and continue your original course of treatment. There is no need to remove the old bulbs.

Hardy Plants for Winter.

Will you give me the names of a few good annuals that will flower and make a good show under glass the coming winter from seed sown now or later?—J. J.

—You cannot rely on strictly annual plants. A list of select hardy plants for winter forcing would include the following: *Mignonette*, *Alyssum*, *Pansies*, *Antirrhinum* in variety, including *magus alba*, *Campanula media*. From stock plants lifted from the border and potted now or soon, and taken into the house at the first approach of winter and then not kept very hot; *Heuchera sanguinea*, one of the grandest of plants for cutting from its brilliant scarlet spokes being very acceptable. All the above are better from old stock or rooted cutting plants.

Palms Injured.

The correspondent who sent specimens of Palm leaves with a request for examination, is informed that there is no parasite present, and that the injury is in all probability due to burning, as suggested.

Plants Named.

(To A. H.)—*Apios Apios*.

Sweet Potatoes.

(To Subscriber, N. Y.)—As to whether the vines should be prevented from rooting at the joints or not is a debated question. In your locality we would prefer not to allow them to do so.

Violets for Immediate Setting.

(To G. C.)—We do not know where you can get plants (of the varieties named) suitable for early flowering. There is a scarcity of good stock at present.

Be of Good Courage.—Sit down and look the facts in the face, and do not let them scare you. Something is wrong with you. More than likely, and you would have good reason for fear did you not know that Warner's Safe Cure is obtainable at the drug store on the corner. You also know that this remedy is so powerful as to have robbed even the once dreaded Bright's disease of its terrors. Warner's Safe Cure allays inflammation of the kidneys so that the blood passes freely through. Effete matter is no longer dammed up in the body. The pallor gives place to healthy color and the heart beat is once more regular.

W. & D's.**Celebrated Sure Crop.****MUSHROOM SPAWN. 8 lbs.
FOR \$1.00.**Lillium, Harebell, Roman Hyacinths, Freesias,
Paper White Narcissus, Callas,
Etc., Etc.

Special PRICES on application.

WEEBER & DON,

Seed Merchants and Growers,

114 Chambers St., N. Y. CITY.

Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and
dealers in Cut Flowers
50 West 30th St., NEW YORK CITY.Solicit Shipments of Cut Flowers on Com-
mission. Best market prices guaranteed.
Mention American Gardening when you write**TENANT WANTED.**One mile out of town, 12 acres, build-
ings first-class. Place for gardening
and plant propagation. Trade started.
Propagator will make money. Fruit
will pay rent. Possession immediate.
No children wanted. Write quick.
Come and see.**Howard Miller, Lewisburgh, Union Co. Pa.**
Mention American Gardening when you write**Situations Wanted.**Advertisements will be inserted under this head-
ing at ONE CENT PER WORD each insertion, payable
in advance. The address to be counted as part of
the advertisement. No advertisement inserted for
less than fifteen cents per insertion.**WANTED** position as gardener, English, married,
age 41, life experience in the culture of stove
and greenhouse plants, forcing grapes, mush-
rooms, etc., and the routine of flower and kitchen
garden; excellent references. Apply Florist and
Gardener, Post Office, Bridgeport, Conn.**WANTED**—A position as head gardener or gen-
eral superintendent on a large country estate,
by a Scotchman, who has had 17 years' expe-
rience in this country; 15 years in last situation; abili-
ties and references cannot be questioned. Only
those requiring the services of a first-class man need
apply. Address Practical, care of American Gar-
dening.**FOR SALE.**Advertisements not to exceed eighty words will
be inserted under this heading at TWO CENTS PER
WORD each insertion, payable in advance.
The address will be charged as part of the advt.,
and each initial, or a number, counts as one word.
No cuts or display type allowed.**HULSEBOSCH BROS.,** bulbs and plants, Engle-
wood, N. J.**GLASS** at wholesale, rock bottom prices. Also
paint for greenhouses. The Reed Glass & Paint
Co., 456 W. Broadway, New York**STRAWBERRIES.**—Layer plants for late fall set-
ting. Eureka Raspberry plants for spring set-
ting. Charles Nash, Three Rivers, Mich.**L. C. BOBBINK,** Rutherford, N. J.—Dutch Bulbs,
Clematis, Magnolias, Rhododendrons, Azaleas,
etc. Branch of the Horticultural Company, Bos-
koop, Holland.**Business Cards.****O. D. Zimmerman,** Buffalo, N. Y. Horticulturist
Landscape Gardener. Plans and estimates furnished**LAND DEVELOPMENT,** consultations, plans,
superintendence, plants, labor, etc., supplied for
work as wanted. 500 original designs for residences,
gardens, parks, etc., ready for inspection. Com-
munications solicited from those who require the
value of land or residence developed with practical
economy. Jos. Forsyth Johnson, P. O. Box 1897,
New York CityWhen ordering goods subscribers will
confer a favor on the publishers by stating
they saw the advertisement in **AMERI-
CAN GARDENING.** We admit only re-
sponsible business houses in our adver-
tising columns. Avoid delay and disappoint-
ment by giving name and address legibly.**PRIVATE GARDENERS.****Appointments and Doings.**Gardeners and others knowing of recent
appointments and movings are requested to
forward particulars of the same for publica-
tion in this column. No charge is made.**W. Dowset** is now in charge of Mr. F.
C. Havemeyer's establishment at Roslyn,
L. I.**Peter MacDonald,** who for several years
had charge of the famous collection of
Phalenopsis belonging to Mr. G. Amsinck
at Summit, N. J., and more recently was
in charge of the floral department at Sie-
gel-Cooper Co.'s great store, starts in
business this week as a wholesale com-
mission florist at 50 West Thirtieth
street, New York City. Mr. MacDonald's
long connection in the gardening com-
munity has made him many friends, and
doubtless they will now rally around him
in a business way. He has taken into
partnership a very active man who has
had considerable experience in the cut
flower trade. The firm name will be
MacDonald & McManus.**J. Burns,** in addition to having charge
of Dr. Marcy's estate on the Orange
Mountains, has been appointed to the
supervision of the neighboring estate
belonging to Mr. Douglass Robinson.**Society of American Florists.**As we go to press, the Convention at
Providence, R. I., opens under very
favorable auspices. The weather is all
that can be desired, and the large atten-
dance, while essentially a trade gather-
ing, has a good sprinkling of gardeners,
and representative men from various
States are to be seen in the throng.Trade exhibits are numerous and of
good quality. Plants of various kinds
are staged by Siebrecht & Son, New
Rochelle, N. Y.; F. R. Pierson, Tarry-
town, N. Y.; Pitcher & Manda, Short Hills,
N. J., and Charles D. Ball, Holmesburg,
Pa. H. A. Dreer, Philadelphia, Pa.,
makes a great exhibition of Water Lilies
in a tank. The Swan Point Cemetery
(Mr. McCarthy, superintendent), makes
a superb exhibit of coniferous plants.
In the exhibition hall, R. Craig, Phila-
delphia, Pa., makes a marvelous exhibit
of highly-colored Crotons, and the high-
est possible encomiums may be passed
upon the display of Zonal Pelargoniums
from the Cottage Gardens, Queens, L. I.,
there are between thirty and forty vari-
eties in this group. W. A. Manda makes
an exhibit of fancy-leaved Caladiums.
The F. R. Pierson Co. has the only ex-
hibit of Dutch bulbs.Novelties in plants are but few, and
those of but mediocre quality. Nothing
sensational.Greenhouse heating and building is
represented by Hitchings & Co., New
York; A. T. Sterns, Boston; Plenty &
Co., Jersey City; E. A. Ormsby, Melrose,
Mass.; The Herenden Co., Geneva, N. Y.;
The Lockland Lumber Co., Lockland,
Ohio; E. Hippard, Youngstown, Ohio;
Smith & Thayer Co., Boston; John A.
Scollay, Brooklyn, N. Y.Among the prominent gardeners no-
ticed are: S. Henshaw, New York; W. R.
Smith, Washington, D. C.; A. MacLellan,
Newport; A. Herrington, Madison, N. J.;
J. Logan, Purchase, N. Y.; J. F. Sibson,
Germantown, Pa.; Carl Blomberg, North
Easton, Mass.; E. A. Roy Converse,
Malden, Mass.; P. J. Donoghue, Lenox,
Mass.; J. Lovelace, Lenox, Mass.; Max
Krauss, Glen Island, N. Y., and G. Thom-
son, Lenox, Mass.**Carl Blomberg** makes a grand exhibit
of Water Lilies, his best being zanzibar-
ensis, eastoniensis, Robinsoniana. Lay-
deker's varieties, and odorata caroliniana.**A. MacLellan** exhibits a beautiful plant
of Lomaria blechnoides.**Chicago, Ill.**The commissioners of Lincoln Park
have advertised and offer \$150 for plans
for the laying out of a 20-acre park at
Chicago avenue, from lands made from
accretions from the lake.The new palm houses at Washington
Park are now glazed, the glass being
ribbed inside, and the outer surface
ground. Mr. Kants believes there is
now no fear of burning, nor need of
whitewashing, and yet abundance of
light will be afforded. The plant house,
covering a space of 125x140 feet, is also
fast nearing completion. All will be
heated with steam, and ventilated with
the Evans ventilator.**Madison, N. J.**The regular monthly meeting of the
Morris County Gardeners' and Florists'
Society was held in Masonic Hall Wed-
nesday, August 11, when thirteen new mem-
bers were elected and two more pro-
posed, two recent popular acquisitions to
this society being H. A. Bunyard and J. E.
Lager. A draft copy of the schedule for
the fall show was read, and the president
announced that it would be ready for dis-
tribution in a few days. The essayist of
the evening was Mr. Charles H. Totty,
who read a short practical paper on the
Chrysanthemum.**Springfield, Mass. Sweet Pea Show.**The annual Sweet Pea Exhibition of
the Hampden County Horticultural So-
ciety which had been postponed from the
date originally fixed on account of the
unusual rainfall, was held August 11 and
12. The fine weather for a few days just
previous brought out the flowers, in
many instances in abundance and of fine
quality. The majority of exhibitors are
amateurs, and several entered for the
Eckford Challenge Cup, which was
awarded C. M. Hartzell of Holyoke. Mr.
Hartzell also got the set of 21 books
offered by W. Atlee Burpee & Co. Rev.
Mr. Hutchins was unable to enter a
single variety, his entire crop having been
destroyed by the "blight."The best local grower of Sweet Peas
to-day is W. J. Eldred of West Spring-
field. His flowers are superb; his 50 of
Aurora were the wonder of all beholders.
The flowers were of wonderful size, great
substance, long and stiff stems. Mr. El-
dred took twelve first prizes, three
seconds, two thirds and a diploma. He
also has several seedlings that promise
well, beside the one to which the society
granted a diploma.**Mrs. H. A. Jones** of Worcester made a
fine exhibit in several classes, her entry in
class 1 would have taken first had the
varieties been named, as demanded by
the rules of the society; the failing of
some exhibitors to comply with this ac-
counts for the judges' rulings in several
cases. Mrs. Jones' Royal Rose in class
10 was a fine lot, also the vase of double
flowering blossoms; her entry for largest
blossoms was also Royal Rose.**E. A. Weeks** of Worcester was a large
exhibitor, entering in many classes, and
taking his share of the prizes. Addison
H. Smith of West Springfield made sev-
eral fine exhibits, his Cupids being
awarded the Burpee prize. F. A. Blake,
of Rochdale sent his gardener with several
entries of finely-grown flowers; his Red
Riding Hood was well grown, and so
were his 50 sprays each of twelve vari-
eties. Mr. Blake also exhibited 30 vases
with foliage which were very effective. E. C.
Fenn of Ware was obliged to withdraw a
number of his entries on account of a
heavy rain that passed over his grounds
the day before. Yet he took several first
prizes, Katherine Tracy being one of his
best efforts.**Mr. L. D. Robinson** has been drowned
out several times, therefore he could not
make his customary display. He took
first for 12 varieties, 50 sprays each;—
they included Firefly, Venus, Mrs. Eckford,
Blanche Burpee, Blushing Bride, Extra
Early Blanche Ferry, Lottie Eckford, Mrs.
Sankey, Apple Blossom, Emily Eckford.**Mr. George Smith,** Manchester, Vt.,
had several vases of Sweet Peas and
other flowers. R. H. Houston and Mrs.
Day Chadwick of Holyoke, Mrs. Dexter
Snow of Chicopee, Mrs. H. S. Hyde of
West Springfield, Mr. Shephard and H.
Wilson Smith of Mittineague were also
exhibitors of Sweet Peas.

The Botanic Gardens of Smith College, Northampton (L. J. Canning, gardener), made a most excellent showing of hardy flowers and exotics filling over 250 vases.

Mr. Alex. Parks of Northampton made a good showing of tuberous-rooted Begonias and Sweet Peas; Mr. Schlatter & Son a table of well-grown tuberous Begonias in pots, also Palms and Ferns, clean and healthy.

The following was the result of the competition for named varieties; we give only the names of the winning sorts:

Best white, Blanche Burpee first and second; Emily Henderson, third.

Best light pink, Katharine Tracy, first and third; Lovely, second. Lovely shown in a bunch is surely the handsomest sweet pea in the way of pinks; Katharine Tracy is fine, but its drawback lies in having only two flowers to a stem.

Best mauve, Celestial, first; Golden Gate, second; Dorothy Tennant, third.

Best red, Firefly, first; Cardinal, second and third.

Best variegated, Aurora, first; Senator, second; Purple Bronze Stripe, third. Coronet did not show up so well as Aurora; its stem is short, and Aurora bunches better.

Best new variety, not catalogued before 1897, Royal Rose, California, and Queen Victoria. In the order named. Royal Rose was in elegant shape.

Best ten stems with largest blossoms, Royal Rose, a mixed lot, and Senator.

Roses Under Glass.

With the advent of August we most generally get very warm days and cool nights, and the days, too, become more perceptibly shorter, thus compelling us to reverse our methods of growing from Spring and early Summer to those of early Fall. Instead of syringing or watering the houses now early in the morning to keep them as cool as possible, and induce a more congenial growing atmosphere, we find it almost 9 A. M. before the sun begins to warm the houses up consistent with watering, or, in other words, we should not water until the day disperses the cool night atmosphere. From now on one daily watering and syringing, if the weather be fine, will be sufficient, unless we have an extremely hot spell, with a drying air, when a light syringing and damping down in the afternoon will be most beneficial. Of course, where houses have cement walks they should be wetted down more frequently than those with walks of ashes or such like material.

Speaking of cement walks for rose houses, I have been asked lately by young beginners if such walks were the most desirable. As these parties were going into the business to make money, and had but a very limited capital on hand, my advice to them was to invest their money in a good reliable ventilating apparatus rather than cement walks. While cement walks are very clean (when kept so), and pleasing to the eye, I, myself, prefer those composed of ashes, as they help keep a more uniform moisture in the houses. Especially is this the case when hard firing has to be done in Winter. One of the most necessary things in a rose house is a good ventilating machine; but how many devices do we see used to take its place, which are not only a nuisance, but in the course of a year the extra labor needed to work them adds up to more than the first cost of a good apparatus.

Don't overlook stirring or rubbing over with the hand the surface of the beds. Some soils are more liable to turn green and cake than others, and if this happens it takes quite a long time before the soil gets into proper condition again.

Last spring, in one of my notes, I mentioned the great benefits derived by syringing from different directions once in a while, such as from the narrow center walk which we see in a good many houses. This is one of the little items that should not be lost sight of now, as spraying will have to be greatly curtailed as the season advances, leaving a possible opening for red spider; so when we do syringe now, do it thoroughly by reaching every part of the plants. Cleanliness should be ob-

served at all times in our houses, by keeping all dead leaves and other rubbish that may accumulate, cleaned up; not only on the top of the tables, but underneath as well. Without this a pure sweet air, in which a rose delights to thrive, cannot be obtained.

It is no unusual occurrence for us to get some very cool nights toward the end of this month, sometimes more so than in the first half of September, the thermometer hanging around the 50° mark. On no account during these periods should the ventilators be closed, or the evil resulting will be greatly augmented. Instead, reduce the air to within 3 or 4 inches and run heat around one pipe. This will keep condensation out, and give a good circulation, which is very desirable. It does not seem long since I was harping on the same string, and, it is very true, our boilers do not get a very long rest. If any have neglected going over, cleaning and getting their heating apparatus into order, they should do the work at once. It often happens while building and repairing benches, that some of the coils of pipes get out of their original level, consequently the proper and easy circulation of either steam or hot water is seriously interfered with. H. H.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.

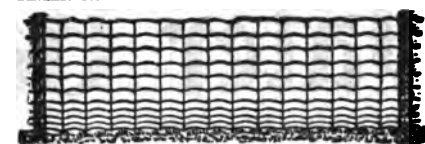
We the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligation made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.

WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

INCUBATORS. Self-regulating Catalogue free G. S. SINGER, Cardington, O.
Mention American Gardening when you write.



BREAKS ALL RECORDS.

Last year we told of a Michigan agent who could walk over 85 adjoining farms, all using Page Fence. This year's sales have increased the number to 51, with only one exception. These farmers have known the Page for many years—would they keep on buying if not satisfied it was the best and cheapest? Write us for proof.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write.

HENS AND EGGS

fruit culture and poultry keeping dovetail comparatively dull in the others.

Realizing the above facts, we have arranged with the publishers of **POULTRY MONTHLY**, to offer that journal in club with **AMERICAN GARDENING**, for the coming subscription season, both journals postpaid, one year, for the **SMALL SUM OF \$1.25.**

POULTRY MONTHLY Is now in its nineteenth year; it has always been recognized as the leading publication in its particular field. Sound and reliable in its teachings, and not the mouthpiece of cranks, cliques, or rings. Its correspondents are practical and successful men, in the harness to-day. The publishers of **AMERICAN GARDENING** recommend **Poultry Monthly** as being one of the very best poultry papers issued, and advise all interested to accept this Great Combination Offer.

A WONDERFUL OFFER!

American Gardening (Weekly), \$1.00 } Both \$1.25
Poultry Monthly, = = 1.00 } One Year, postpaid.

Present subscribers who are in arrears must pay up in full to become eligible to this offer.

Address **AMERICAN GARDENING**, P. O. Box 1697, New York City.

...THE COMPLETE...

BOOK CATALOGUE.

We have just issued the most Select and Complete Catalogue of Books on Horticultural and Allied Subjects, ever published. The catalogues of the various book publishers of this country as well as of Europe, have been carefully gone through, and such works taken therefrom as were considered suitable for our patrons.

This catalogue contains 96 pages, and embraces

...BOOKS for

The Lover of Plants and Flowers

The Fruit Grower

The Nurseryman

The Private Gardener

The Market Gardener

The Seedsman

The Farmer

The Poultry Keeper

The Student of Botany, Entomology and Ornithology

and the Student of Nature in general, in fact

BOOKS FOR EVERYBODY

interested in the science and practice of rural economy.

A select clubbing list of periodicals, home and foreign, is also furnished, through which a considerable saving may be effected in their purchase.

This handy catalogue will be sent on application, accompanied by a two-cent stamp. Address

A. T. DE LA MARE PTG. AND PUB. CO. Ltd.

P. O. Box 1697, New York.

2 1/2

cents per square foot for a good corrugated **STEEL ROOFING**, for farmers' houses and barns. Circulars explain all about it. **THE BEELIN IRON BRIDGE CO.**, EAST BERLIN, Connecticut.

Mention American Gardening when you write.

DWYER'S SUMMER and AUTUMN LIST

Of Pot Grown and Layer **STRAWBERRY** Plants, **CELERY**, **VEGETABLE** Plants, **FRUIT** Trees and **ALL NURSERY STOCK** will be mailed free to all who apply for it.



T. J. DWYER, Cornwall, N.Y.
Box 175.

Mention American Gardening when you write.

Our publishers will supply any book wanted. Send your orders.

WHOLESALE MARKETS.

New York.

The cut flower business is in a most depressed condition and shipments are hardly clearing express charges. Asters are a glut and sell for \$1.25 to \$2.50 per 100 bunches. Gladioli are greatly in excess of requirements, consequently many go unsold; prices range from \$2 to \$5 per 1,000.

Fortunately, there is a better tone in the fruit and vegetable markets and stock is clearing up well. Buyers are not spending much time beating about, but buy straight away unless extreme fancy prices are asked; there is then, however, quite a kick.

Hothouse grapes remain as quoted last week.

Hothouse nectarines are swamped by the competition of Californian stock.

Messrs. Archdeacon & Co. are handling some fine hothouse figs and are realizing fairly well upon them. They come packed in small cups containing six fruits each, and sell at figures varying from 8c. to 5c. each, and are usually sold at dozen rates.

Southern peaches are nearly over. Shipments from Maryland and Delaware are large, the Jersey supply is increasing, and up-state peaches may be expected in quantities next week. Prices at present time are erratic, owing to a like condition of supply and quality.

Pears are in heavy supply, high quality Bartletts are moving in favor of the seller, and \$4 has been reached.

Fancy melons have improved in price, but quality is not of the best. The top notch figures reached for Jersey Gems and Jenny Linds is \$1.50 to \$1.75, Hackensacks \$2 to \$2.50 per barrel.

The potato market still remains steady with prices ruling from \$1.87 to \$2.25

per barrel; \$1.10 may be taken as the average top figure.

Apples—Alexander, hand-picked, per d.-h. barrel, \$2@2.50; Duchess of Oldenburg, hand-picked, d.-h. barrel, \$2@2.50; Gravenstein, hand-picked, per d.-h. barrel, \$2@2.50; Nyack Pippin, hand-picked, per d.-h. barrel, \$1.50@2; twenty ounce Pippin, hand-picked, d.-h. barrel, \$1.75@2; Codling, hand-picked, per d.-h. barrel, \$1.75@2; Orange Pippin, hand-picked, per d.-h. barrel, \$1.25@1.50; Astrachan, hand-picked, per d.-h. barrel, \$2@2.50; open heads, large fruit, hand-picked, barrel \$1.25; open heads, small and drops, 75c.@\$1.

Peaches—Missouri, fancy, per carrier, \$2.25; Maryland and Delaware, per carrier, \$1@1.75; Maryland and Delaware, extra yellow, per basket, \$1; Maryland and Delaware, extra red, per basket, \$1; Maryland and Delaware, prime, per basket, 70@80c.; Maryland and Delaware, common to fair, per basket, 40@60c.; Jersey, extra, per basket, 80@90c.; Jersey, prime, per basket, 60@70c.; Jersey, common to fair, per basket, 40@50c.; Jersey, culls, per basket, 25@30c.

Pears—Bartlett, Jersey, large, clean per barrel, \$2.75@3.25; Bartlett, Jersey, poor to fair per barrel, \$1.50@2.50; Bartlett, upriver, per barrel, \$1.50@2.50; Clapp's, upriver, per barrel, \$2@2.50; Clapp's, upriver, per keg, \$1@1.12; Bell, nearby, fair to prime, per barrel, \$1.50@1.75; other kinds, per barrel, \$1.25@1.75; common cooking, per barrel, \$1@1.50.

Grapes—Delaware, North Carolina, fancy, per 24-pound case, \$2@2.50; Delaware, North Carolina, common, per 24-pound case, 75c.@\$1.25; Niagara, North Carolina, fancy, per 24-pound case, \$1.50; Niagara, North Carolina, common, per 24-pound case, 75c.@\$1; Moore's Early, North Carolina, per 24-pound case, 75c.@\$1.25.

Plums—Damson, per quart, 4@5; Wild Goose, per quart, 4@5c.; Wild Goose, per

10-pound basket, 20@30c.; Botan, per quart, 5@8c.; Green, state, per 10-pound basket, 18@20c.

Blackberries—Fancy, large, per quart 7@8c.; small and ordinary, per quart, 4@6c.

Huckleberries—Shawangunk Mountains, per quart, 6@7c.; Pennsylvania, large, dry, per quart, 7c.; Pennsylvania, ordinary, per quart, 5@6c.; Jersey, per quart, 4@6c.

Watermelons—Watermelons, usual qualities, per car, \$75@1.75; watermelons, prime, per 100, \$12@14; watermelons, small to medium, per 100, \$6@10.

Muskmelons—Hackensack, Nutmeg, per barrel, \$2@2.50; Monmouth County, Nutmeg, per barrel, \$1; Monmouth Co., Jenny Lind, per barrel, \$1.25@1.75; south Jersey, Gem and J. Lind, fancy, per barrel, \$1.50; south Jersey, Gem and J. Lind, ordinary, 75c.@\$1.25; Maryland and Delaware, Gem and J. Lind, per carrier, 40@75c.; Baltimore, Cantaloupe, per barrel, 75c.@\$1; Baltimore, Gem and J. Lind, per basket, 35@40c.; Norfolk, Christina, per barrel, 75c.@\$1; Norfolk, Gem and Jenny Lind, per barrel, 60@75c.; Norfolk, ordinary kinds, per barrel, 50@75c.

Celery—Choice, large, per dozen, 35@40c.; fair to prime, per dozen, 20@30c.; small and poor, per dozen, 10@15c. Corn—Hackensack, per 100, \$1.50@2; other Jersey, per 100, \$1.25@1.75.

Cabbage—Jersey and Long Island, per 100, \$2@2.50.

Cucumbers—Jersey, per barrel, 50c.@\$1.25; per bushel box, 25@40c.; Long Island, per 100, 60@75c.; pickles, state, per 1,000, \$2@3; pickles, Long Island, per 1,000, \$1@2.25; pickles, Jersey, per 1,000, \$1@1.75.

Egg plants—Monmouth Co., Jersey, per barrel, \$1@1.25; south Jersey, per barrel, 90c.@\$1; per one-half barrel package, 50@65c.

Green peas—Western New York, per bag, 50c.@\$1.25.

NOW READY.

The Water Garden

(PROFUSELY ILLUSTRATED.)

BY WILLIAM TRICKER.

This work will contain nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work.

On heavy enamelled paper. Elegantly bound. Large octavo. Price, \$1.50.

THIS volume, which has been prepared by the foremost aquaculturist of the country, and to whose efforts the present increasing popularity of the Water Garden is largely due, is intended to serve as a **SOUND, PRACTICAL CULTURAL HANDBOOK** for amateur and professional alike.

The work should find a place in every library and in the home of all gentlemen interested in gardening; it will prove indispensable to the private gardener, whether he is at present cultivating an aquatic garden or with a view of preparing himself to take charge of one at any moment. It is scarcely necessary to dwell on the value of the book to the commercial man; every one in trade will require it.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A full descriptive list of Nymphæas and all other water plants, as well as of all trees, shrubs, etc., adapted for marginal effects, is included.

— ORDERS RECEIVED NOW. —

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8 Duane Street, P. O. Box 1697, New York City.

Lima beans—Jersey, Potato, per bag, \$2@2.50; flat, per bag, 75c.@\$1.25; southern, flat, one-half barrel basket, \$1@1.50.

Onions—Jersey, white, per barrel, \$2.50@3.50; other kinds, per barrel, \$1.50@1.75; Orange County, red, per bag, \$1@1.75; yellow, per bag, \$1.25@1.50; white, per bag, \$1.50@2.75; Long Island, yellow, per barrel, \$1.25@1.75; state and Pennsylvania, yellow per barrel, \$1.50@1.75; eastern, white, per barrel, \$3@3.50; eastern red, per barrel, \$2; Peppers—Jersey, per barrel, 75c.@\$1.

Squash—Marrow, per barrel, crate, 75c.@\$1; Hubbard, per barrel, \$1.25@1.50; yellow crook-neck, per barrel, 50c.@\$1; white, per barrel crate, \$1@1.50. String beans—Long Island, per bag, 75c.; western New York, wax per bag, 60c.@\$1.

Tomatoes—Monmouth County, Acme, per box, 40@75c.; Monmouth Co., ordinary, per box, 25@40c.

Turnips—Russia, per barrel, 50@75c.

Boston.

Watermelons still continue at a range of price from 12c. to 16c.; takes something fancy to bring 16c.; cantaloupes arrive in very poor condition, selling much lower than last week, 75c.@\$1.50 a crate; barrels same; Montreal melons selling slowly at lower prices.

No change in green corn; green peppers doing no better, \$1 a carrier; mushrooms, no change.

Elberta peaches selling \$2.50@3; stock very much better. This price is for six basket carrier. California stock, \$1@1.50.

Blueberries, very poor, selling 5@10c. a quart.

Celery, \$1.25@1.50; stock, extra fine; radishes same as last week, 10@20c. a dozen bunches. Beets, turnips, white flats and rutabagas are all dull.

No improvement in the summer squash market, but marrows are in good demand at \$2.25 a barrel.

Portland peas arriving in excellent condition, selling \$3@4 a barrel; string beans show no change; shell beans little lower, \$1.25.

Potato market is about \$2.50, quite firm; sweets worth \$2.25@2.50; some very fancy, \$2.75.

Cucumbers, \$1.50@2 a bushel; egg plant dull as usual.

Cauliflowers, very poor; demand for good ones fair; cabbage doing little better about 4@5c. each.

Illinois tomatoes, dull; about all gone for the season; hothouse stock, 5@10c. a pound; bushels, native home-grown, \$1@1.50.

New stock of parsnips selling 75c.@\$1 dozen bunches; carrots 3@5c. a bunch.

Onions doing no better from last week, selling 85c. a bushel.

Astrachan apples about out of the market; Gravensteins worth \$2.50@3 a barrel; Williams, \$3@4 a barrel; Pippins, \$2@2.50; Sweet Boughs all done; Orange Sweets selling \$2.25 a barrel. Some marks sell lower when quality is not so good.

Pineapples still continue coming in a limited way, selling at 40@50c. with good demand.

Parsley, dull at \$1.25 a bushel; mint, 35c. a dozen bunches.

Blackberries arriving in poor condition, selling 5@8c. a quart.

Clapp's Favorite pears selling \$1@1.50 a bushel, homegrown; Bartletts selling about the same as last week, \$1@1.50 a crate.

Little Gem melons, 50@75c. a basket; Jenny Linds about the same variety as Little Gems and selling at the same price.

Fair demand for grapes; eight basket carriers of Delawares selling \$1@1.75; Niagaras \$1@1.25; Concord, 12 basket carriers, \$1.50@1.75; five-pound baskets, 12@13c. each.

Philadelphia.

The market has been very good during the past week. Shipments as a general thing have not been quite so heavy, but the market has cleaned up well on nearly every day; in fact, it was like old times

ARMSTRONG & McKELVY
Pittsburgh.
REYNOLDS-BAVIAN
Pittsburgh.
DAVID-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANONCE }
ROCKSTEIN } Cincinnati.
ATLANTIC }
BRADLEY }
BROOKLYN } New York.
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MISSOURI }
RED SEAL } St. Louis.
SOUTHERN }
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY }
Cleveland.
SALEM }
Salem, Mass.
CORNELL }
Buffalo.
KENTUCKY }
Louisville.

PRACTICAL painters everywhere use and recommend Pure White Lead (see list of brands which are genuine) and Pure Linseed Oil because they make not only the cheapest but by far the best paint. In fact you cannot afford to use anything else.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

to find the commission houses closing up by 1 to 2 P. M.

So far very few peaches are arriving; those coming in are from Maryland and are only fair to good, realizing from 80c. to \$1.50 per basket; no heavy shipments are looked for for ten days or two weeks. Dealers who have returned from the peach district of upper Maryland and upper New Jersey, report heavy crops in both these localities, but on account of the scarcity in Delaware, the market will be short for a week or so yet.

Tomatoes still continue to arrive in poor condition, owing to continued rains, and although many canneries are ready for work, they won't buy while the fruit is so watery.

Apples—Astrachan, hand-picked, per barrel, \$1@1.50; Jersey, hand-picked, per barrel, 75c.@\$1; Jersey, windfall, per barrel, 40@60c.; Maryland, per bushel box, 60@70c.

Pears—Bartlett, Jersey, per barrel, \$1.25@1.50; southern, per barrel, \$1.50@1.75.

Grapes—There have been several shipments from Maryland this past week,

mostly in 10-pound baskets which have sold at from 25@40c.

Plums—Table varieties per 8-pound baskets, 25@40c.

Blackberries—Are now about over; there were several lots of cultivated Jersey berries in from Jersey this past week, which sold from \$1.50@2 per crate.

Celery—Fair to good, per dozen, 35@50c.

Egg plant—Jersey, choice, per five-eighths basket, 75c.@\$1.25.

Lima beans—Jersey, per basket, 50@75c.; Maryland, per one-half barrel basket, \$1.50@2.50.

Onions—Maryland, white, one-half barrel basket, 80c.@\$1.25; Jersey, per barrel, \$2.50@3, per five-eighths basket, 50@75c.

Peppers—Jersey, per basket, 60@80c.

Squash—White, per barrel, 50@80c.; marrow, per barrel, 50@70c.

Tomatoes—Jersey, choice, 50@75c. per five-eighths basket; fair to good, 20@40c.; green, per basket, 5@10c.

Potatoes—Per five-eighths basket, 40@60c. per barrel, \$2.50@3.25 with the market firm.

Catalogues

Will be issued in greater abundance this Fall than ever; every live firm issues one or more, wholesale or retail.

Are You Planning Yours?

We would be pleased to furnish you with an estimate as to the expenses of printing same.

Our facilities are unexcelled; our staff familiar with the work; our presses of the finest; our prices reasonable and our product good.

Printing of Every Description.

Cards, Billheads, Letterheads, Envelopes, Circulars, Price Lists, Pamphlets, &c., at lowest prices and best workmanship.

Trade Marks, &c., Our Specialty.

We furnish illustrations of plants, flowers or designs, which may be copyrighted for your exclusive use, to serve as trade marks, symbols, &c., for use on all forms of printed matter.

A. T. De La Mare Ptg. and Pub. Co.
LIMITED.

RHINELANDER BUILDING, (P. O. BOX 1007) NEW YORK.
Telephone, 3184 Cortlandt.

AGENTS WANTED.

Read this partial description of the best book of the kind for women which has ever been published, then write us for terms and territory.

HOUSE PLANTS

AND
HOW TO SUCCEED WITH THEM.

BY
LIZZIE PAGE HILLHOUSE.

Scores of books have been written on flowers and their cultivation, but it has been reserved to Mrs. Hillhouse to cover a field of highest interest to women hitherto untouched, and to provide a reference book and complete guide for all her sisters who, loving plants, would ever be surrounded by them did they but know where to turn for such advice as to their preservation and instruction in their culture as would be open to them to follow, easily understood, yet thoroughly practical.

"I have bought book after book," the author says, "in a vain search for that knowledge which would enlighten me as to how to prolong the lives of my precious pets, when noting with alarm their distressed appearance, only to find them all a delusion and a snare, so technical or ambiguous as to befar beyond my reach or apprehension. Therefore, for the benefit of fellow sufferers, I have determined to put down what little I have found out from bitter experience, knowing it will be practical and true, as far as it goes."

"HOUSE PLANTS" has been written by a woman for the countless thousands of women who have no conservatory or hothouse, and are compelled to grow their plants in the home, and it gives freely of the knowledge which the author has been gathering through many years of observation.

Recognizing the fact that no book adequately covering the subject has ever been published, Mrs. Hillhouse has undertaken to fill the deficiency, and most ably and effectively has she accomplished the task. The result is a book of information and instruction, written in simple language, which will be prized and consulted by every woman so fortunate as to become its possessor. Of all books of reference issued for domesticated women, "House Plants" will take its position second only to the much prized and everhandy family cook book.

The amateur will be both surprised and delighted with the great range of plants which this book tells us it is possible to successfully raise in the house. Chapters are devoted to Bulbs, Cacti, Ferns, Flowering Plants, Foliage Plants, Lilies, Palms, Shrubs, Vines, Creepers and Basket Plants, and one on plants unclassified. A separate chapter on the propagation of plants is extremely interesting, as it is here so many fall.

Again quoting from the author, "In writing this little book, I have endeavored to keep strictly within the lines of my personal experience, and to select for description and suggestion as to treatment only those plants which I knew could be grown successfully in our living rooms or houses. This, undoubtedly, may be done if my instructions are followed."

"How little most people—bright people, too—know of the marvelous and amazing creations of the plant world. Those silent monitors, the flowers, are not dumb, but speak to us through the delicacy of their accents, their intricate shapes, complex habits, and the glorious penciling of their heavenly colors, that no human artist can command."

HOUSE PLANTS, 12mo., 220 pages, cloth, profusely illustrated, and with complete and ready reference index to all plants mentioned. Price \$1.00. A. T. De La Mare Ptg. and Pub. Co., 2 to 8 Duane St., New York, publishers.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL
AMATEUR.

Lilliums *Harrisi* and *Longiflorum*.

Virtually the same, some claim, while others insist that *Harrisi* is a marked improvement upon the other. Either can be bought for ten cents and upward, according to size, and it is a little better to get strong bulbs, paying a slight advance over the lowest rates. It may be mere chance that the writer's experience has seemed to show *longiflorum* to be a trifle better for the window garden. It is well to procure the bulbs early, and to pot them carefully in a good compost, deep in the pot, so that the tops may be well covered, and yet leave room for filling in with rich earth for the benefit of the stem roots, to be made some time after growth starts. It is much better to use a fairly moist soil, and bury the pots in moist earth, so that there may be no need for saturation with water during the rooting period. But if the pots are heavily watered at first, they should be allowed to drain for a day before being buried. Excessive moisture causes rot; too little moisture hinders the free formation of roots, so necessary to strong flowering. It is the happy medium that brings success with Lilies; the medium in soil, in water, and also in heat. Sunshine, during the cool months, they will take in all available quantity.

Keeping Plants in Show Condition.

Show condition means, of course, at the best or near it. Few, indeed, are the plants that can be kept in such condition all the year, and there are times with almost any plant, except, perhaps, those of the true decorative sort—when it is better out of sight. Midsummer and midwinter are the two most difficult portions of the year. Heat and drought frustrate our efforts after beauty during the summer; chills and over-watering and lack of air perform the same ill office in winter. Good attention and good conditions are both very necessary factors for keeping plants in good "condition."

Color in *Dracenas*.

Perhaps no plant holds its color better than the *Dracena*, when we have had patience to wait for its final attainment. But conditions make a difference in the coloring of the plants, even after they have attained sufficient age to be well colored. A plant of *Dracena terminalis rosea* which has been throwing pure rose colored leaves for many months, is now, under the stimulus of stronger sunlight and a little bone meal, giving leaves of increased size, which in coloring are almost pure green.

Bush *Allamandas*.

Two natural forms of these, viz., *A. Williamsii* and *A. nerifolia* have been already mentioned in these columns. Those who have a little more room may get more magnificent bloom by growing some of the climbing sorts in bush form. *A. Hendersonii*, with great yellow velvet flowers, showing bells three inches in diameter, does very well in bush form, though perhaps *A. grandiflora* is better. *Allamandas* will stand a great deal of sunshine, even under glass. They are heavy feeders, taking rich soil, plenty of root room, and rather frequent shifting. Toward autumn, water is to be withheld gradually, and during the last months of the year the plants may stand still, resting in a temperature of about 60 degrees. Very early in the following year they are to be cut back to good ripe wood and repotted. They make very satisfactory plants for those who are satisfied with summer bloom.

New Rose Coronet.

For the present, at least, nothing in the Rose line has the attracting power of the hybrid tea. This seems to apply, both to the commercial grower and the amateur. The new American hybrid tea, known as Coronet, starts with several good points in its favor, aside from its own merits. Other things being equal, American sorts should have the inside

track, and the originators of this have hitherto put out a number of good and satisfactory things. The Rose is a cross between Paul Neyron and Bon Silene. It has been called the sweetest, and decidedly the largest and freshest hybrid tea in cultivation. It is claimed to be also a strong, healthy grower, fine for the open ground, entirely hardy, beginning to bloom when but a few inches high, and continuously, and having great fragrance also. One fervid woman writer affirms that to her mind Coronet has reached the zenith of perfection, in pink hybrid tea Roses. When the same fervid writer adds that the "full, deep, and wonderfully double" flowers, when entirely open do not look unlike Paeonies, we are at a loss to know whether or not she has added to the merit of the Rose as instanced in the foregoing description.

Seedling *Freesias*.

Some one says that *Freesia* seeds should be sown as soon as they are ripe, when in about a year's time they will be ready to pot for winter bloom. We have not yet found *Freesia* seed willing to germinate as soon as ripe. It is a very easy matter to grow and ripen one's own seed, hybridizing, if desirable. But in every instance that has as yet come to our knowledge, the seed refused to grow until it had been dry for two or three months. The *Freesia* seed bought last spring germinated quickly and freely, but the bulbs, grown outside, during the summer, have not as yet attained blooming size. Others, however, may have had better success.

The New *Bougainvillea*.

Given a new plant, a woman ignorant, an introducer's description, and real often misplaced, what is the value of? Now "x," to our mind, is the unknown quantity representing results, and in a good many cases its value seems to be 0. Here is this dazling beautiful *Bougainvillea glabra Sanderiana*, which the introducer tells us is laden with bloom even in thumb-pots and produces its flowers in amazing profusion in the smallest pots, and under all conditions. We know an instance where the conditions are that a plant was bought in March, and has grown with reasonable thrift ever since. But the long wreathing sprays show only green, with no signs of the promised bloom. The question is now, whether by resting the plant slightly toward fall it can be thrown into bloom for early winter, or whether it is better to pinch the growths and thus get a broader foundation for another year. In any case, the introducer's dazling description fails utterly to tally with the behavior of the plant. What shall we think? What shall we do?

[This *Bougainvillea* will do all that the introducer has claimed for it; success or failure here, as in so many other instances, depends on the cultivator. *Bougainvilleas* can be made to flower by restricting the root space—in other words, ripen it and starve it.—Ed.]

Potting up *Carnations*.

One of the best *Carnation* growers of the country suggest to window gardeners that they keep pinching the *Carnations* wanted for winter bloom, as the growths elongate, until early autumn. They are then to be transferred to the pots just before, instead of after, the crop of buds is set. If pushed thereafter in a sunny window, they will soon bud, and continue in bloom throughout the winter.

MYRA V. NORRIS.

Manhattan (Kansas) Horticultural Society held its July meeting at the home of Mr. William Baxter. After hearing the reports of standing committees, Mrs. R. H. Kimball read an interesting paper on "Kansas Gardening," which was followed by a lively discussion. Mr. Baxter's grounds were in very good condition, well filled with fruit and ornamental trees, shrubs and flowers, also small fruits. He has a wind-mill and tank and has irrigated his strawberries the past season, and they have yielded wonderfully well.

We Believe every reader of AMERICAN GARDENING feels proud of his paper and the practical, uplifting work it is engaged in; it is raising the standard of Gardening, and maintains the dignity of all engaged in the profession.

We Believe the cause of good Gardening to be eminently a missionary one; from which it follows that the circulation of AMERICAN GARDENING can most readily be enlarged through the efforts of its subscribers. Our circulation, therefore, is an index of our subscribers' interest in the paper.

We Believe our readers are anxious to see AMERICAN GARDENING reach the highest possible development in its work of horticultural education. The legitimate aim of a class paper is to increase its influence through an extension of its circulation.

American Gardening is the most successful of all, and has the largest circulation of any weekly Journal devoted to Gardening and Fruit Culture, but has scope and the disposition to add to its list tens of thousands of patrons. "Come with us and we will do you good," is a living truth in our case; all our new friends are loud in their praise of the value of the paper to them. The cause of "AMERICAN GARDENING" is the cause of American Horticulture.

We Believe that our friends are the ones on whom to call to push circulation. Understanding thoroughly the value of the paper to every one interested in gardening, they can best express its spirit and comprehensiveness and succeed in making subscribers.

With a View to obtaining the assistance of our friends in the propaganda for new subscriptions, and in order that they may have something tangible whereby to remember their successful efforts, we have compiled the following list of

SUMMER

PREMIUMS

SUMMER

To which we invite your attention in the hope that each and every reader of the paper will endeavor to send us **AT LEAST** one new subscriber before the close of the season.

American Gardening for 1896. Containing 832 pages of text and illustrations, with complete index. The most full, complete, and desirable volume on Gardening, Fruit Growing, and kindred subjects ever issued. Few works on horticulture can compare with this in value to the student or the practical man. *Handsomely bound in cloth, with leather back and edges.*

This most desirable volume will be forwarded, express paid, to any address, for only seven new subscriptions at \$1.00 each.

American Carnation Culture. By L. L. LAMBORN. A work on the Classification, History, Propagation, Varieties, Care, Culture, etc., of the Divine Flower. Nothing has been left unsaid from which any practical benefit could be obtained. Illustrated. Third edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Beautifying Country Homes. By J. WEIDEMANN. A handbook of landscape gardening. This is the most elegant and useful work on the subject ever issued in this country. It is beautifully illustrated with numerous fine wood engravings, and with 17 full-page and 7 double-page colored lithographs of places already improved. It contains general directions for lawns, roads and drives, walks, hedges, trees and shrubs, gardens, ornamental grounds, hints on burial lots, etc., etc. The beautifully colored plans of improved places are accompanied by descriptions giving the names and positions of the various trees and shrubs employed in planting, thus providing a complete planting map. Cloth, 4to. Reduced from \$15.00 to \$10.00.

Given for 20 new subscriptions at \$1.00 each.

Bulb Culture (Henderson's). By PETER HENDERSON. Contains special cultural directions for over 200 varieties of Bulbs. Compiled with great care, and its information is accurate, reliable and up to the latest. 25 cents.

Given for 1 new subscription at \$1.00 each.

Bulbs and Tuberous-Rooted Plants. (Their History, Description, Methods of Propagation and Complete Directions for their Successful Culture in the Garden, Dwelling and Greenhouse). By C. L. ALLEN. The author of this book has for many years made bulb growing a specialty, and is a recognized authority on their cultivation and management. He has taken the initiative to make bulb growing a special industry in this country, and writes from his own long and extensive experience. The subject is treated in a very exhaustive manner. Handsomely illustrated, cloth, 12mo. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

Canning and Preserving Fruits and Vegetables, and Preparing Fruit Pastes and Syrups. By ERMERTINE YOUNG. This work gives a full account of the best methods by which the surplus fruits may well be saved for home use and for the large market demand, and a handsome profit accrues

to the home workers. A practical chapter on evaporation of fruits is embodied in the book. Paper, 20 cents.

Given for 1 new subscription at \$1.00 each

Chrysanthemums and Their Culture. By EDWIN MOLYNEUX. Sixth Edition. By far the best practical work yet written on this subject. 50 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemum Culture for America. By JAMES MORTON. This is the only 'Mum book published for American use, and is an excellent and thorough work; especially adapted to the culture of Chrysanthemums in America. The field is fully covered. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Elliot's Practical Handbook of Landscape Gardening. By F. B. ELLIOTT. Designed for city and suburban residences and country schoolhouses, containing designs for lots and grounds, from a lot 30x100 feet, to a 40 acre plat. Cloth, 8vo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Ferns and Fern Culture. By J. BIRKENHEAD, F. R. H. S. How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, Wardian cases, dwelling houses, etc. A thorough and complete work by a renowned specialist. 128 pp., thoroughly illustrated, 16mo., cloth. 75 cents.

Given for 2 new subscriptions at \$1.00 each.

Fruit Culture, and The Laying Out and Management of a Country Home. By W. C. STRONG, ex-president of the Massachusetts Horticultural Society, and vice-president of the American Pomological Society. Illustrated. New revised edition, with many new additions, making it the latest and freshest book on the subject. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Fruit and Fruit Trees of America, or the culture, Propagation and Management in the Garden and Orchard of Fruit Trees generally. By A. J. DOWNING. Second revision and correction, with large additions. By CHARLES DOWNING. This work has no equal in the country, and deserves a place in the library of every pomologist. It gives descriptions of all the finest varieties of fruit, native and foreign, cultivated in America, and contains the names and synonyms of over 10,000 varieties. Over 1100 pp., with several hundred outline engravings, including supplements. 8vo., cloth. \$5.00.

Given for 12 new subscriptions at \$1.00 each.

Grape Culturist. By A. S. FULMER. New and revised edition, 1894. One of the best works on the culture of hardy grapes, with full directions for all departments of propagation, culture, etc. Illus., cloth, 12mo., \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Potash.

to stock means a "scrubby" animal.

Free

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write.

"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid. BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address **THE AMERICAN JADOO CO.**

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

Diplomas and Certificates



HORTICULTURAL SOCIETIES,
FOR FAIRS, INSTITUTES,
GARDENERS' CLUBS, ETC.

These should be selected well in advance of the time needed, and secretaries of above should send now for samples, all of which have been especially designed by first-class engravers for the purpose. Owing to the wide demand for these and their expensiveness, we will mail the set of five, postpaid, for \$1.00; money refunded on return of samples, or placed to credit of order, as directed. One single sample sent free on application if the writer will explain the exact purpose for which it is wanted.

A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.

HEADQUARTERS FOR ALL PRINTED SUPPLIES.

LORD & BURNHAM CO.,

Horticultural Architects and Builders Steam and Hot Water Heating Engineers.

(Established 1856.)

Plans and estimates furnished on application for Greenhouses, Conservatories, and all kinds of Horticultural Buildings, erected complete with our patent iron construction; or for material only, ready for erection.



Largest Builders of Greenhouse Structures. Plans and construction embrace latest improvements. Six highest awards at the World's Fair.

Send four cents postage to New York office for latest catalogue.

NEW YORK OFFICE:
100 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Too little Potash in the fertilizer used produces a "scrubby" crop, just as a lack of sufficient grain fed

10 Rare Flower Roots 10 Cents. 1 *Flor de Indes*, 1 *Acacia*, 1 *Iris*, 1 *Giant Snowdrop*, 1 *Freesia*, 1 *Wind Flower*, 1 *Allium* (Flowering Onion), 1 *Chionodoxa*, 1 *Oxalis*, 1 *Spanish Iris*. This superb collection and the A. B. C. little book of bulbs and rare flower-roots mailed to any address for 10c. stamps or silver. **AMERICAN BULB CO., Short Hills, N. J.**
Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

WE offer the following two collections of newly imported established Orchids, subject to being unsold when ordered.



3 *Cattleya Triana*,
1 " *Mendelii*,
1 " *Labiate*,
2 " *Gigas*,
1 " *Chocoensis*,
1 *Peristaria elata*
(Dove Orchid),
1 *Angulosa* (Cradle of Venus Orchid),
1 *Oncidium Kramerii*
(Butterfly Orchid),
1 *Oncidium Varicosum*.

The Collection for \$10.

1 *Cattleya Triana*,
1 " *Chocoensis*,
1 " *Gigas*,
1 *Peristaria elata*
(Dove Orchid),
1 *Angulosa* (Cradle of Venus Orchid),
1 *Oncidium Kramerii*
(Butterfly Orchid).

The Collection for \$5.

The above plants are in fine condition and cash must accompany order.

For other grades and choice varieties apply to

LAGER & BURRELL, ORCHID GROWERS and IMPORTERS.
SUMMIT, N. J.

Mention American Gardening when you write.

PRICE LIST FOR

Exhibition Stationery

1000 Entry Forms	\$2.75
Two Exhibitor's Books	2.00
Two Glass Books	2.50
Six Judge's Books	3.00
500 Entry Cards	3.50
500 Pastors (assorted)	1.00

Total \$14.75

Secretaries of Horticultural, Agricultural, or any other form of competitive show, are invited to write us for full particulars.

It is freely conceded that the system we have adopted saves time, temper, trouble, worry and expense.

The clerical work of every exhibition, large or small, should be run on business lines, and you will find this system the best, the easiest, least expensive, and most satisfactory. Address correspondence

A. T. DE LA MARE PTC. & PUB. CO. Ltd.
P. O. Box 1697, New York.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 140.
COMBINED SERIES VOL. LI.

NEW YORK, AUGUST 28, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Asters, Disease of China.....	602	Home Plot, The.....	607	Notes In.....	604	Readers Notes.....	603	Vegetable Garden.....	598
Canning Industry.....	598	Hydrangeas, Blue.....	603	Onions.....	598	Ros.s, a Year's Progress	600	Window Garden, The... 607	
Chrysanthemums.....	601	Insects, Injurious, IX.....	601	Peach Crop, Estimated.....	602	in.....	600	Wire Worms.....	603
Crops in Washington.....	603	Market Reports: New		Plan for Small Lot.....	599	Roses in Jad o.....	601		
English Varieties.....	602	York.....	608	Potato, Myatt's Ashleaf.....	603	Societies, Meetings of..	606		
Florists and Others.....	602	Boston.....	609	Potatoes.....	598	Solanums, The.....	607	Illustrations.	
Fruit and Vegetable		Melons.....	598	Poultry Notes.....	607	Sweet Peas, Selected	606	Fruit Bark Beetle, and	
Growers Organise.....	598	Mushrooms.....	598	Private Gardeners.....	606	Lists of.....	606	its Work.....	601
Fruit Bark Beetle, the..	601	Newport and the S.A.F.	603	Providence Convention,		Tomatoes, Tests on	600	Livistona chinensis at	
Fuchsia Mme. Bruant .	607	Newport Gardens.		The.....	601 605	Forcing.....	600	Newport.....	597
								Plan for a Small Lot....	599



FIG. 176.—SPECIMEN LIVISTONA AT NEWPORT, R. I. (See page 604.)

Fruit and Vegetable Growers Organize.

The fruit and vegetable raisers of the gulf coast have perfected an organization to assist them in marketing the products of their toil. They complain that in the past they have had considerable trouble in getting the products to market. They desire to ship to Northern and Eastern markets, but have found it unprofitable for a number of reasons: (1) good and bad products were packed together, and the good suffered; (2) shipments were so long in transit that the products perished; (3) freight rates were so high that the business would not bring a revenue, and (4) individual shipments could not have sufficient influence to bring about a reduction or fast service.

In May last, through the instrumentality of Captain B. F. Johnson of Arcadia, a meeting was held and the Gulf Coast Horticultural Association was organized. There had been a number of local organizations, but these were without strength to achieve the results desired, and Captain Johnson conceived the idea of organizing a monster association to include in its membership all the growers of the gulf coast. This organization was formed at a meeting at Alvin, Tex., May 29. Those eligible to membership are persons engaged in growing fruits and vegetables, not in any wise connected with commission or transportation companies.

The object of the association, as stated by the constitution, is "to consider all matters relating to the growing of fruits and vegetables, and the proper and best methods of cultivating, fertilizing, handling, and shipping to market." The organization was formed and a large number joined. The recent meeting was the second held, and there were a number of the local organizations which have been in existence represented, and joined the larger body. It is now the intention of the organization to confer with the railroads and secure by the combined influence of the entire population of growers a cheaper rate on their products; to secure a faster shipment to market, and in packing and loading the products to have a committee of two men present at each place to see that only good products are picked and that the packing and loading is properly done. There are, of course, selfish men who will, if not watched, put in the boxes decaying fruit or vegetables, and this is to the detriment of other products in the same car. It brings about a decaying condition in the car, and the presence of bad fruit or vegetables in the car at the terminus causes a low appraisement of the shipment, and there are instances where the shippers have not realized enough to pay the freight, and it has resulted in the shippers of good fruit paying for the shipment of another grower's bad product.

By organization this is to be prevented. By organization the products of all growers will be ready and sent to the same market by the same train, thus securing a special train of from six to twelve cars, being allowed a fast schedule and a cheap train rate. The inspectors will see that only good products go in the cars, and prevent a loss in this way.

The meeting held at League City, Tex., on August 7, was called to order by Captain Johnson, the president, the following officers being present: C. E. Hall, Webster, vice-president; W. E. Davis, Alvin, secretary, W. H. Stoughton, Webster, treasurer.

Routine business was disposed of, and a number admitted to membership. Secretary Davis then addressed the meeting. He had just returned from a trip to Kansas City and Chicago, where he accompanied a shipment of products, going via the Gulf, Colorado and Santa Fé Railway. He had learned much by the trip he had made, and he wanted to say that the growers must become acquainted with facts before they would be successful. In the first place, the shipment was not properly packed. The gulf coast produce is as good as can be had anywhere, but it is not properly packed. The ship-

ment was not a success because of the packing and because of the long time in transit, and the rate was too high to allow of a proper margin of profit even if it had reached its destination in first-class order.

R. T. Wheeler of Hitchcock made an earnest plea to the farmers to keep up an organization and secure for themselves those rights which other lines of business obtain by that method. Every industry and every interest has its organization except the farmer and the fruit grower of the coast country, and the prospects for a combination in that direction were good. He urged them to combine, and by the weight of organized influence secure those concessions from the transportation companies which are necessary to a profitable business.

P. H. Goodwin of the general freight department of the Gulf, Colorado and Santa Fé, was next introduced. Mr. Goodwin said he had no speech to make. He was simply present to show the interest of the Santa Fé Railroad in the farmers of the coast country, and if there are abuses, to learn what they are, so they can be corrected. He said good transportation is not the only necessity to make the business successful. Goods of the same character as those produced on the coast of Texas are brought from California, being in transit six or seven days, and are yet in good condition. He then said he would answer any question asked.

Mr. Stringfellow of Galveston—We must get better rates or go out of the business. Why is it the fruit industry is forced to 100 per cent. higher rates than the vegetable industry. One of the great industries of this country is that of the pear. If we are not able to market the crop it will be the worst blow this country has ever received.

Mr. Goodwin, in reply—I did not consider that I had come here for a discussion of rates. There are a thousand elements entering into the making of rates which cannot be explained here. It would require too much time. As I understand it, the growers want better transportation, not lower rates.

Mr. Goodwin continued, saying the rates from Louisiana to the same markets reached by Texas growers are higher than the Texas rates, and the growers of that state must find the business profitable, as they continue in it.

Mr. Stringfellow—Please explain why it is that the potato which sells for \$3 per barrel should have a 35-cent rate and the pear which has been selling at \$1 per barrel should be charged a rate of 85 cents. This was not answered.

Mr. Wheeler—Can you give any promise in the future of a cheaper rate and better transportation?

Mr. Goodwin—Better rates, no; better transportation, yes.

Mr. Stringfellow—Your road ought to do something for the growers. When I started my pear orchard here it was not getting anything out of this country, and now it is getting thousands of dollars annually.

Mr. Goodwin—The railroads cannot live without the support of the farming communities. We want your support if we can deserve it. We are neither of us here for our health. Unless we can get together in harmony, we can do no business together. If you cannot do business at the present rate it will be reduced to a point where you can do business, and we can furnish you transportation and each have a margin of profit.

Mr. Aubrey Maguire, travelling freight agent of the Missouri, Kansas and Texas Railway, who was then called on, urged the farmers to raise as much as they could. He said the companies can handle all that is to go to market, and the more there is the better the rate.

The grape crop in the Lake Keuka region will be one of the largest ever harvested. The Delaware is about two weeks behind other years, as is also the Catawba and Concord varieties. The Catawba grapes will be the largest ever harvested, providing the frosts do not come too early. It is generally believed that the price of grapes will be somewhat higher than of recent years.

The Vegetable Garden.

Mushrooms.—Anyone desiring these for October, should now make preparations, by collecting fresh horse droppings and fixing on a suitable place in which to make the beds. Wherever the beds are made, whether in cellars or outbuildings, under greenhouse benches, or in properly constructed mushroom houses, the following considerations should be remembered:

Mushrooms will not grow unless the building is clean and sweet. It must be free from any draughts, and an even temperature of 55 to 60 degrees maintained. The place should not be infested with vermin, or they will burrow the beds, and as mushroom beds should always be made compact, nothing should be allowed to disturb them after spawning is done.

Wood-lice are very annoying in the vicinity of beds; the best way to destroy them that I have ever tried is by the use of a little sugar just colored with Paris green thoroughly mixed, and left in saucers near their habitations.

In the preparation of the manure, care is to be taken to use only fresh manure from healthy horses that are fed grain and hay only, any other cannot be depended upon for the successful growing of mushrooms. The manure should be protected from sun and rain, turned over frequently to sweeten and prevent fire fang; when half decayed, of a nice brown color, and neither dry nor wet, it is then in fine condition to make into beds. For further directions see former numbers of this paper.

Potatoes.—As soon as ripe, they should be dug and kept in an airy dry dark cellar, and looked over once a week to see if any are rotting. Potatoes will, after the unusual wet season we have experienced, rot badly. In many places the potato blight was prevalent, when such was the case, the tubers should not be kept for seed for another year, as the spores will be retained on the tubers all winter. Whenever potatoes rot badly, after having been dry, it is a good plan to sprinkle them with air slacked lime.

Melons.—This year the melons will be very watery and tasteless; if the ripest are picked daily, and placed on a dry shelf in the greenhouse, or wherever plenty of sun and air will reach them, for two days, before being taken to the house, they will be found to give better satisfaction than if used directly from the vines.

Onions will now be ripening; as soon as tops begin to die down, it is time to pull them up. This is rather wet weather to thoroughly dry them, and if rain continues, they should be taken under shelter, preferably where plenty of both sun and air can reach them, an unused greenhouse bench is admirable for the purpose. They must be well dried before storing them, otherwise they will not keep.

W. M. EDWARDS, Conn.

The Canning Industry.

The Year Book gives the statement that the total value of canned fruits and vegetables in the United States in 1890 was nearly \$30,000,000, and adds: "The capital employed in this industry was only \$701,388 less than was employed in the creamery business, while the value of the products exceeded the combined value of all the windmills, clocks, watches, fire arms, mirrors, mats and matting, linen fabrics, and enameled goods manufactured in the United States that year."

The fruit prospects of Missouri for the year 1897 has been thus far a grand, good one and the fruit yet to ripen promises an abundant yield as well as profitable returns. Especially is this true of the apple crop for packing, writes L. A. Goodman, secretary of the Horticultural Society. Reports from nearly every county of the state give the crop ranging from 50 per cent. to 100 per cent., making an average of about 75 per cent. for the state. The grape crop will be so abundant that we cannot expect anything but low prices.

Beautifying a Limited Area.

In the plan presented in fig. 171 is shown how a very small area of ground may be effectively developed along natural lines.

The fixed points which had to be considered were: the house was already constructed, the clothes-reel was placed, and the grape arbor planted. The house is on a bank some few feet above the roadway, hence the two entrances are not connected; if such communication be desired, steps should be made on the

south of the piazza. The lot adjoining the house on the south is reserved for future building, and so was not available in developing the land; it is for the present to be used as a vegetable garden in the rear, the front is put to grass and affords a pleasing prospect from the windows of the house; the detail can, of course, be altered to suit circumstances. The nine bushes shown here are intended to be *Rhododendrons*, which can be easily moved, no matter what their size when the new building goes up.

It is well in spaces of small area not to put a collection of different species, as can be done on a larger place. The same impression cannot be made by a host of miscellaneous shrubs as can be by using a sufficient quantity of one suitable thing. Some degree of grandeur will thus be had instead of the spottiness often seen.

The chief difficulty presented in this lot

is the placing of the shade trees which are an artistic adjunct to any house. Here they must be put on the extreme lines of the ground, eight *Limes* being suggested as shown (1). The smaller trees (2) are *Pinus larico* to give an evergreen effect, this species is selected as most suitable to the place, because its habit is not spreading but narrow. The terminus of the view on the south side is made by a *Silver Cut-leaf Birch*; this, being of a white color, will add distance to the view, a feature much to be desired. (3)

The general planting of the ground is to be done by hardy plants so that once done it is done for ever, and beyond a little annual care and attention nothing is needed.

The back border could be very effective if made of *Rosa rugosa* (red and white varieties) mixed with *Sweetbrier*. A few rough growing herbaceous plants, such as *Sunflowers*, could be interspersed to give color in late summer and fall. The bushes marked 4 could be *Deutzia crenata*, tall growing plants, very valuable to block out the rear of the building; they will grow almost anywhere.

The three beds on the south side and close to the house are in a warm situation; they can well be devoted to *China Roses*, which will afford flower throughout the entire summer and can easily be given a slight protection in winter.

On the other side of the walk are four

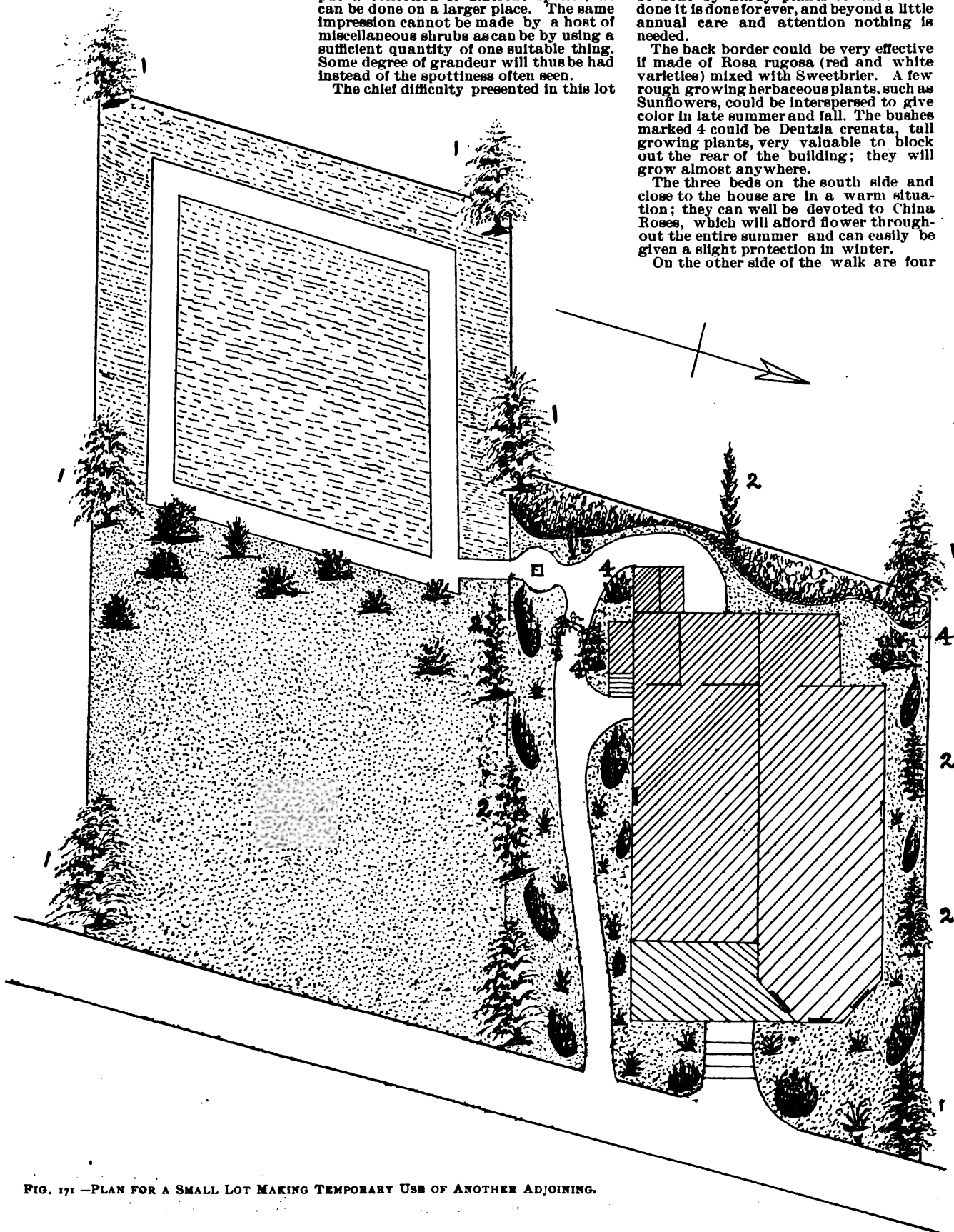


FIG. 171.—PLAN FOR A SMALL LOT MAKING TEMPORARY USE OF ANOTHER ADJOINING.

beds; that at the back can be put to hybrid perpetual Roses, as when out of flower the bushes would not here be obstructive; the two middle beds here are one each for Lilies and Perennial Phlox; the bed to the front should be put to evergreens to give a continuous effect; creeping or dwarf Juniper could be used. Somewhat similar treatment should be afforded to each of the two beds in the front of the house; these should have a certain tone and distinctness, such as could be obtained by planting Golden Creeping Juniper, two feet apart, in a carpet of *Daphne cneorum* over all the bed. This effect would be very striking and original.

On the north side the three beds shown could be allotted to Ferns, and two specimen Ferns could be utilised on the grass. The six specimens on the front plot of grass could be *Yucca filamentosa*, evergreen, and very striking when in flower, moreover, they give no trouble in cultivation. The seven specimen plants on the long view must be all one thing, *Eulalia gracillima* suggesting itself as pre-eminently suitable. The space at command is not large enough for a mixed planting.

For spring effect all the beds should be edged with *Crocus*, one color to each bed; *Scilla siberica*, however, to be planted on the evergreen beds, it is so very graceful. Snowdrops, too, should be lavishly planted in every bed.

Variety Tests on Forcing Tomatoes.

For the purpose of this test, I selected eight varieties, in order, if possible, to arrive at some conclusion as to which was the best variety for indoor forcing, and planted eight plants of each, growing them to one stem in the same manner as is adopted in the greenhouse for winter forcing.

The seed was sown March 1; March 15 the plants were removed into 2-inch pots; April 1 they were ready for another shift, when they were given 4-inch pots; and April 21 they were put into 6-inch pots; and the final shift was on May 18. This time they were put into fruiting quarters which consisted of wooden boxes 12 inches wide and 10 inches deep, placing them at the foot of a south wall.

The following list shows the results as to weight, etc., from first of picking to Aug. 15. The weather proved unfavorable, being cold and wet, had it been different the set of fruit would undoubtedly have been better.

The conclusion arrived at after the test is this: that this coming winter I shall grow Sutton's Best of All as the main crop; some Conference, and a few plants of the yellow variety, Prince of Wales.

NAME	FIRST PICKING	NO OF FRUITS	WEIGHT
Earliest of All.....	June 28	174	84 lbs.
Conference.....	July 1	158	80 "
Best of All.....	July 5	162	88 "
Prince of Wales.....	July 1	188	26 "
Peachblow.....	July 12	178	36 "
Tender and True.....	July 12	166	35 "
Lorillard.....	July 12	91	18 "
Aristocrat.....	July 8	110	25 "

Earliest of All is a weak grower, very subject to mildew and the fruit, though of good flavor, is very uneven and corrugated; very early.

Conference resembles Best of All, but the plant grows taller and is longer jointed.

Best of All I have found to be all that its name implies; it is a 1 in color, form, and flavor; very productive.

Prince of Wales is a small round yellow tomato of excellent flavor and a good cropper.

Peach blow.—Heavy cropper and of good flavor; but soft and would be almost useless for shipping.

Tender and True is a soft fruit, of good flavor, but so subject to mildew that I cannot recommend it.

All the foregoing varieties are from England.

Lorillard, though claimed by many growers to be one of the best, is too tall and long-jointed for me. It does not pay, and I will not grow it again.

Aristocrat is very productive, but for winter forcing the foliage is too heavy, necessitating the cutting away of much of it to insure the setting of the fruit; it is also very subject to spot or fungus.

WM. ANDERSON.

A Year's Progress in Rose Growing.

Since the last essay on the rose by Mr. Isaac Kennedy of Philadelphia, which was read at Pittsburgh, Pa., new and valuable additions have been made to the rose family, both for indoor forcing and hardy garden varieties.

In the hybrid teas we are getting a new class or race of practically ever-blooming roses, a great boon to all lovers of the Queen of Flowers.

We have also added to the list of hybrid perpetuals which I shall refer to later.

In 1895 a new variety of the hardy hybrid tea was disseminated by Messrs. Pernet-Ducher of France, named the Souvenir du President Carnot. It is a seedling from Lady Mary Fitz William, and that is all we know about it so far as parentage is concerned. Last Fall it was exhibited at several exhibitions and received many certificates of merit, silver medals, etc. It created a great sensation when sent out as being a grand forcing rose, a good grower and superb flower. It produces a long bud, large and full, color rosy flesh, shaded white at edges of petals. It certainly is a valuable addition to our hardy, ever-blooming varieties, and may prove an excellent variety for forcing, by further trial, although some are in doubt.

We have also Maman Cochet, one of the best and hardest in its class. Color carmine, mingled with salmon-yellow, large and full, superb. A grand garden rose.

Another valuable variety is Madame Abele Chatenay, sent out by Pernet-Ducher, which blooms constantly, bud fine, opening spirally; flowers full; color carmine-rose, shaded with salmon.

In addition to the above-named varieties, we have Caroline Testout, which has practically displaced La France. Kaiserin Augusta Victoria, an excellent variety for forcing, or as a garden rose; a beautiful primrose color; raised by Peter Lambert of Germany.

Now, Mr. President, I come to the most pleasant part of this subject, a year's progress in roses.

Real progress! By that I mean new and improved varieties of American origin, of which Mr. John Cook of Baltimore, Md., has added one to the above list, Mrs. Robert Garrett, which has received flattering notice in Baltimore notes in the American Florist. It is a most lovely flower; soft pink color, flowers large, foliage fine. It is said to be a grand forcing rose, and bids fair to lead all the pink varieties. From its parentage, Sombriul and Caroline Testout, it should be an acquisition to the hardy teas. Mr. Cook is the originator of Souvenir de Wootton, Marion Dingee, and other good roses.

Extract from Baltimore letter in American Florist, page 808, issue of March 27, 1897, says:

"The exhibit of Mr. John Cook was a departure from the rest, as it was a vase of roses, but such roses! They towered above the carnations on strong stems clothed with heavy foliage, and were as large as American Beauties, but of a beautiful clear pink, almost light enough to be called a shell pink. The name is Mrs. Robert Garrett, and it will get a first-class certificate, the chairman of the committee saying that it is conceded to be the finest rose ever raised in this country. It is a cross between Sombriul and Mme. C. Testout, and forms a valuable addition to the class of larger roses, which is represented almost entirely by American Beauty, and which will probably supplant the small flowered ones, as has happened in the chrysanthemum, and is happening in the carnation."

There is also a new white hybrid tea, Lillian Nordica, a seedling from that grand rose Margaret Dickson by Madame Hoste. In color it is pure white, long buds, large flower of good substance, on long stiff stems, forces well, has dark rich foliage, and is very fragrant. At the

Boston Rose Show last June, it received the society's silver medal, and in June, 1896, a first-class certificate of merit. It is considered a valuable addition to the hardy, ever-blooming varieties of American origin.

The above-named varieties I consider improvements on existing varieties, and in the line of progression, but, we must not be content to rest here, we must strive to add to the above list. The improvements to be effected in the above list are:

To obtain new reds, maroons, and creams, possessing vigor, freedom of blood, and hardiness. Then this race of roses will be universally admired as garden roses, growing in ordinary soils.

We have a large and unlimited field in which to experiment and improve. The art of hybridization is simple; so easy and responsive, we should all make an effort to improve and continue in the good work, for there is no limit to the improvements in the several classes or families of roses.

In the hybrid perpetual class, a new rose has been sent out last spring by the well-known firm of Messrs. Peter Henderson & Co., New York. It is named the Jubilee. It was awarded the Massachusetts Horticultural Society's gold medal in 1895, the highest award in the gift of the society, and I am informed the first gold medal ever awarded a rose of American origin in this country. It was awarded a first-class certificate in 1893. It is from Prince Camille de Rohan by Louis van Houtte, and is one of the most vigorous growers on its own roots.

It had been exhibited three years in succession at the Massachusetts Horticultural Society when the committee decided to inspect it growing in the ground, which they did. The following is a copy of their award:

"Dear Sir:—Since the visit of the committee on flowers of the Massachusetts Horticultural Society to Wood's Holl, and inspection of your seedling rose Jubilee, they have discussed the merits of the variety, and are unanimous in pronouncing it the finest American-raised rose that is known to them, and the equal of any European rose of its class. Its magnificent color, united with a beautiful form, large size, and grand foliage and vigorous habit, they believe make it of great value and worthy of the highest award given by the society.

"We therefore award you the society's gold medal.

"(Signed) A. H. Fewkes, chairman."

Mr. F. Schuyler Matthews, the artist, and leading expert on colors in this country, says: "I have never seen a rose of such intense and dark color. The rose contains the darkest color combined with pure color of which nature is capable."

In hybrid perpetual roses, Mrs. R. G. Sharman Crawford is the best of all the light-colored varieties. Clio is a grand flower, also Helen Keller. Mavourneen, one of Messrs. Alex. Dickson & Sons' productions of 1895, is valuable as a climber or a cut-back; color a delicate silvery flesh-white, shaded rose at base of petals which are of excellent shape and substance. Marchioness of Devonshire is a grand rose of a beautiful satin-pink color. There is also in commerce in this country, a hybrid tea, Clara Watson, raised by Mr. Prince in England in 1894. Described as a salmon-tinted pink, and a good rose.

Of the hybrid polyanthas, Marie Faive is by far the best of all, blooming freely through the season, and is valuable for florists' work, producing good clusters of good-sized pure white flowers.

I am pleased to note improvements by hybridizing in the Wichuriana class. The credit is due to Mr. Manda of New Jersey, who has raised some valuable additions to this class.

It is gratifying to note progress in the past year, and if we would continue to advance in the future, we must interest ourselves in the raising of roses suitable for our climate in the garden, as well as varieties for the florist in the rose house. It is sometimes said our life is too short to wait to raise roses, but it proves long enough to wait to see others raise them.

*Paper by M. H. Walsh, Woods Holl, Mass., before the Society of American Florists.

Destructive Insects and Methods for Controlling Them.—IX.

PROF. W. G. JOHNSON.

The Fruit Bark Beetle.

This insect is a newcomer in the United States, having been known in this country less than 25 years. In Germany it has been known to seriously injure fruit trees for over fifty years. It was first discovered on American soil in 1877 in an orchard near Elmira, New York, and has gradually spread, especially to the south and central west. It was observed in large numbers in orchards in South Carolina in 1885-86. Two years later it was found in Indiana and is now well established throughout the central Mississippi valley.

My attention has been called to it several times this season in Maryland, and the Editor of this journal has referred a query from a subscriber regarding the same pest. I have observed it lately in several orchards and some nurseries. It rarely ever does serious injury in nurseries and attacks only trees whose vitality has been reduced by being broken by plowing or injured in some other way. It does not confine its attacks to fruit trees, but is found working on shade and ornamental trees as well; usually the Maple, Elm, and Mountain Ash.

The beetle will attack perfectly healthy trees, but has a decided preference for weak and sickly ones. A tree infested with this insect can be easily detected by a little careful observation. The trunk and larger branches are usually peppered full of little round holes about the size of a pin-head, see fig. 172. In many instances the gummy exudation from these punctures is very conspicuous, standing out in bead-like masses or running down the branches and trunk. I have seen many trees, especially cherry, in this condition, the present season.

The little beetle responsible for this mischief is about one-tenth of an inch in length and one-third as wide. It is nearly black in color, somewhat cylindrical in general form, and under a glass of moderate power, shows a clothing of yellowish hairs on the head and wing covers. The head is vertical and the jaws are short and stout. The beetle is shown in our figure very much enlarged (after Forbes).

The adult beetle, after making a hole in the tree, deposits her eggs in little grooves made in the inner bark. The young that hatch from these eggs feed upon the inner bark and sapwood, making long channels running in all directions from the central groove, as shown in lower right corner. These young worms frequently become so numerous as to completely girdle the branch or trunk, as the case may be. The young have no feet, and are white, with small brown heads of the general shape shown in the illustration. They transform in these channels, and in due time the adults eat their way out, thus making more openings similar to the ones made by the female when depositing her eggs. There are probably two broods each year. One brood deposits its eggs in September and the insect passes the winter as larvæ or worms under the bark. These transform in the spring, and begin to emerge as adults as early as the middle of March. I have also found full-grown larvæ the last of July.

Remedies.

The fact that the fall brood passes the winter in the larval state, the first remedy that suggests itself is the cutting down and destruction by burning of all infected trees during the winter. I would recommend this procedure only in extreme cases or where the trees are of no special value. An attempt of extermination would mean the absolute destruction of every tree showing the least attack.

Experimentation with various sprays and washes for controlling this pest has not been carried forward very rapidly. Trees sprayed with a strong solution of Bordeaux mixture and Paris green combined, at about double the strength which is generally used, have given very promising results. The first

application should be made about April 1 and the second two weeks later. In order to be most effectual, the spraying should be done before any of the characteristic marks of the insect are found upon the trees, as it will be much easier to prevent the attack than to destroy the beetles after they have once entered the tree.

Chrysanthemums.

Mulching at this season.—A good mulch of cow manure on pots and benches will be found very beneficial. It is surprising how soon the manure brings the roots up to the surface where they get more benefit from the feeding with manure water.

Nitrate of soda.—If some of the plants are looking pale and sickly a dose or two of this—just a little—say about an ounce in a four-gallon can of water will soon bring back the color.

Buds.—Take these now as they appear; the plants should be looked over every day to catch the bud in its earliest stage. We believe in the crown bud, as we think

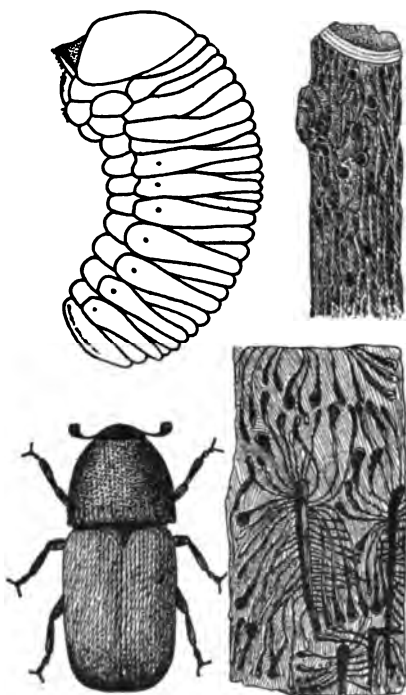


FIG. 172.—THE FRUIT BARK BEETLE AND ITS WORK.

much of the trouble from weak neck is the result of taking the terminal. The plants have an extra growth to ripen, and when they are not kept cool enough to allow it to do so, the stem is weak, the flower flops over, and the grower finds, in the language of the politician, that "it is a condition and not a theory that confronts him."

Exhibition schedules that bar out flowers having artificial support are on the right track. It seems ridiculous to me to see a bloom held up by a wire or piece of cane. I like a flower to hold its head up, no matter in what company it may be, then the admirer realizes to the full why the Chrysanthemum is called the Queen of the fall. In real life a queen that cannot hold her head erect does not amount to much.

Plants in the open ground, which it is proposed to house, should be cut around with a spade a few days before lifting. The transfer will not then give quite such a check to them. They cannot be taken up too carefully as the object should be to retain the foliage.

Sprays.—For this work plants should not be disbudded, but just left to develop all the flowers they will. They will be small blooms certainly, but are a pleasing change from the big ones. Single varieties and all the smaller flowered types are good for this work.

C. TOTTY, N. J.

Roses in Jadoo.

My experience in growing Roses in Jadoo is an accidental one. I came across a leaflet of Jadoo in the autumn of last year, and, having to stock a new conservatory, I thought I would try it on various plants, bulbs, seeds, and cuttings, so I had one large sack as a sample. I liked the handling of it, and as the plants both in the grounds and the conservatory seemed to pick up a healthy look quickly, I sent for several other sacks, with the result that I do not care to use anything else now, and everyone who has seen my conservatory and has one of his own, complains that his plants are not nearly so healthy, and goes away with a firm determination to try Jadoo.

My experience of Rose growing in it came about through a nurseryman sending me some pot Roses, along with a large consignment of other Roses for outside planting. As these pot Roses had buds upon them, I put them into the conservatory to see if they would open. They were *Perle des Jardins*, *Homer*, *The Bride*, and *Sunset*. There was also two climbers for planting outside and taking the stems through the wall to train in the conservatory. As the buds on the above four plants did not open—because the check given them in their carriage had been too great—and the foliage dying down, I thought I would report them in Jadoo. This I did, cutting them down at the same time. It was not long before the shoot buds began to form and send forth beautiful dark-colored foliage, with stems strong and healthy, having lovely flowers. The growth between leaf and leaf was from three to four and even five inches in length, but as I have only now had the curiosity to measure, some may even have been more.

Homer was a most graceful plant; it sent out a shoot from the stem near the soil which I allowed to grow from curiosity, and it grew over three feet in height, ending with a clump of eight blooms. This plant I had in my sitting room for months, but I fancy the electric light forced it too much.

As the blooms went off I cut back again and had a second crop of Roses, and when these were done I cut them back again the third time, and have now new shoots six and seven inches long with flower buds forming. My success would have been greater had not the *Marchal Niel* climber developed mildew, and all the other Rose trees caught it, and it became one perpetual fight to keep it down. I have now turned all the four Roses outside in the border and cut back the climbers.—*Amateur Gardening* (England).

The nurserymen of Danville, N. Y., have united to make war upon the woodchuck. The ten cents bounty heretofore offered for dead woodchucks, while furnishing an active pursuit for a few vagabond hunters, has utterly failed in the grand desideratum sought to be accomplished—the extermination of the pest. Hereafter poisoning will be the tactics.

The Anniston (Ala.) Homestead and Fruit Growers' Association is a corporation with a capital of \$150,000, and controls 8,500 acres of land from which trees have been cut for charcoal. It purposes to operate fruit orchards for non-residents.

The great McNair fruit farm, which consists of 2,036 acres, is located at St. Elmo, near Thayer, Mo. The start was made in June, 1893. One hundred and fifty men were put to work clearing the ground and preparing it for fruit-tree planting. By January 1, 1894, 36,400 trees had been set out. Six hundred and eighty acres will be planted in peaches this fall. On his premises he already has 20,400 Elberta peach trees three years old. There are 20,000 apple and 3,000 peach trees already planted on the farm. By far the most interesting sight on this great fruit farm is a herd of fourteen buffalo. There is only one other herd on the continent. Most of the fruit grown on the farm is marketed in the East and England.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1904.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt. P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issues. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 35 cents per square line, in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

The Florists and the Others. THE Thirteenth Annual Convention of the Society of American Florists passed into history, Friday, August 20, after a three days' session, and the fourth given up entirely to pleasure.

It is easy to review the proceedings in their entirety. In the first place then, it is in order to say that attendance was fully equal to that of any previous convention. And the zeal and activity manifested by the delegates proved that the society is very much alive. It was evident all the way through that the business proper of the society was being jealously guarded by young members, and the election for president further proved that youth was in the ascendant, the president-elect W. F. Gude being under thirty years of age. This result very plainly demonstrated good fellowship does not suffice to carry an election; indeed, this very fact, combined with the

desire to have one of themselves, won the day for the Washington florist.

To the readers of American Gardening this will be satisfactory news, for in past years they have stood aloof from the Society of American Florists, owing to the fact that the so-called social element was reputed to predominate, and the meetings generally balanced up in favor of pleasure rather than profit.

The change of name to include "Ornamental Horticulturists" is of great importance to our readers, for it at once brings a large number of them into direct communion with the organization. Hitherto under the name of Society of American Florists, a class distinction was raised which made it appear simply as a gathering of traders and growers of bulbs, plants, and flowers, together with the necessary attendant florists' supplies and implements. The all-around horticulturist was left severely alone. Now, however, under the change of name there is a chance of greater things.

Although the title itself is the reverse of elegant, still it is ample for the purpose of opening the doors for admission to others than traders pure and simple, giving the professional and private gardener, his employer, and better still, the interested amateur, an opportunity to enter.

Now that there is really a substantial national society properly organized with machinery of operation in full swing, the gardener is given a chance to take his position, and we hope that all concerned will take advantage of the invitation and present a united front.

At the same time it may be well at this juncture to remind the powers that be that if their intentions be in accord with the new title, there should be some representation of "ornamental horticulturists" on the next executive committee. Doubtless certain well-intentioned present members allowed their enthusiasm to run away with their judgment when they made disparaging remarks concerning the raising of certain garden crops. If those men know anything at all, they know well that a gardener to be worthy of the name must be able to grow cabbages and to produce them in perfection, both in season and out of season.

English Varieties. SOME few months ago an interesting correspondence appeared in our columns regarding English potatoes in America when Mr. H. Pugh of Manitou, Man., had a good word for Myatt's Ashleaf with him. We entered into the arguments and pointed out that the general experience of skilled cultivators was not in favor of the foreign-raised varieties. The conditions of the present year have been remarkably unlike those of ordinary years and if English potatoes will ever do well in America they should have done so this year.

And such indeed has been the case; samples of tubers, chiefly Myatt's Ashleaf, have been submitted by readers and have come through the tests with fairly satisfactory results, but generally the potato had not its true clean flavor.

Mr. Pugh has lately sent samples from his patch, which we were glad to find were of very excellent quality, far superior to any of the same variety grown in the states so far as our experience goes.

The communication appears in another column.

It is a very noteworthy fact that the tomato does not seem to follow the climatic peculiarities of the potato, several English-raised varieties having out-classed some of the native standards as is set forth elsewhere in this issue. This is not the first time that we have had occasion to remark upon this same fact, and our own conclusions that Best of All is really the leader as a forcing tomato are based on careful observations for some time past.

Disease of China Asters.

We have recently been in almost daily receipt of specimens of China Asters which the senders say have been growing along vigorously, when all of a sudden a collapse takes place. Last year the same trouble was reported to us at this same season, but from all appearances the disease is more widely spread now.

A fungus is the cause and it works in rather a curious way. Usually the plant is attacked near the base of the stem or in the upper portion of the roots; here the fungus gains entrance and soon reaches the vessels which supply the plant with water. These vessels are soon clogged up with the parasite, and as a result the leaves wilt and the plant gradually succumbs.

A similar fungus attacks cotton, water-melons, cabbages, and other plants, causing them to wilt and die, in much the same way as the Asters.

So far as we are aware there is no known remedy for the disease.

The very wet weather that has prevailed has been very favorable to the development of the fungus, and so to a large degree, the untoward season must be held responsible for the present outbreak.

Prof. Galloway of the United States Department of Agriculture, last year wrote in our columns as follows:

"We think it would be advisable to keep the base of the stalks exposed. It is possible that after the diseased plants have been removed and destroyed, the ground cultivated, and the bases of the stems cleared to the top of the roots, that a thorough coating of this portion of the plants with Bordeaux mixture (50 gallon formula) might prevent them from becoming infected. This remedy, however, has not been tried and is simply offered as a suggestion to those who desire to experiment. To any grower who desires to make an experiment, we would suggest that he leave one block of Asters untreated and treat the others in accordance with the suggestions made."

Have any readers profited by the suggestion?

Peach Crop Estimate.

The following is taken from a circular letter issued by W. N. Britton & Co. of Rochester, N. Y.:

"From correspondence with over 100 dealers, who have personally investigated the growing crop, we make the following estimate: Connecticut 300,000 against a comparative failure last year; New York, 2,000,000, against a failure last year; New Jersey, 3,000,000, against 1,200,000 last year; Pennsylvania, 500,000 against a comparative failure last year; Delaware, 500,000, against 3,000,000 last year; Maryland, 500,000, against 4,000,000 last year; Georgia, 200,000, against 1,500,000 last year; Michigan, 200,000, against 2,000,000 last year; Ohio, 400,000, against 200,000 last year; Arkansas, 3,000,000, against 1,000,000 last year. The above is based on one-half bushel baskets, and shows a total of 10,600,000 against 13,900,000 last year.

Some of western New York growers complain that these figures are low, especially for their own crops.

The Georgia State Horticultural Society is urging the appointment of a state entomologist.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Crops in Washington.—In looking over your valuable paper, in which I take much pleasure, I find a statement that the Washington peach crop was never better. Let me say that there is no crop. Peaches are almost a total failure this year, and the trees are dying yet from damage done by the frost of November, 1896, and thousands of acres of our orchards are ruined, so many of the trees are half dead and half alive that as long as our present orchards stand they will be made up of cripples, chiefly apples and cherries. But few people realize the damage done. The apple and prune crops are moderate.—GEO. HARDS.

Myatt's Ashleaf Potatoes.—I send you herewith six Myatt's Ashleaf just taken up, and if they arrive in good condition I shall be very pleased if you will kindly give them a trial on your table, when I think you will be assured that they possess all the good qualities that I claimed for them. This year the tubers are small in size, but I have counted as many as 25 from one set. I shall be glad to mail to any of my co-subscribers, at regular seed potato price, next month, a limited quantity. Of course the tubers will be sent whole. I also send a photograph of my potato patch and I think you will agree with all who have seen it that it is a grand showing. We grow Carman Nos. 1 and 3 and Pearce's Extra Early which was in full bloom July 27; the other varieties are not sufficiently shown. I am sorry that I did not have a basket of tubers in the photo to show their grand size.—H. PUGH, Manitou, Man.

(See page 602.—Ed.)

Tomatoes Wanted.—Will some one please inform me where I can procure Nicholson Hybrid and Eclipse tomatoes. I have tried several of the leading seed stores and cannot get them. I believe they are highly recommended for forcing under glass.—J. C. (See report of tests on page 600.)

Blue Hydrangeas.—Can any readers of American Gardening inform me through the columns of that paper how to obtain blue or purple Hydrangeas. I have heard of iron filings being used, but in what quantity.—DAGO.

—We confess we do not see the advisability of tampering with the color of the flowers. It is said that iron produces the blue color, but we have no knowledge of the subject. Iron is present in all soils, but we have noticed that plants on soils specially ferruginous have had blue flowers. Can some readers enlighten our correspondent?

Wireworms on Carnations.—What remedy shall I use to destroy wireworms working on roots of Carnations growing outside? The worm is small, dark, about one-half inch long, when disturbed moves quickly, sometimes throws itself in a circle. I have lost several plants, and upon examination find these worms working on the roots. I trust this description will be sufficiently lucid for some one to recognize, and so advise me as to a course of procedure.—F. S. CLARK, Cal.

When the people of Jamaica, L. I., ordered the lowering of sidewalks, extensive preparations for saving the trees were entered into. The Large Tree Company of Brooklyn made a proposition to the board offering to lower the trees at a price ranging from \$5 to \$18, according to the diameter of the tree. The work of lowering the trees will soon be begun.

The Massachusetts Fruit Growers' Association will have its fall meeting and field day in Amherst, on September 7. Special rates for transportation over all routes will be arranged.

Newport and the S. A. F. Convention.

The Society of American Florists, in the course of its annual pilgrimages, has met with warm and hospitable receptions everywhere, but the welcome has been most cordial and effective where the private gardener was to be met in force. Boston, in 1890, gave the Society a reception never to be forgotten, but Newport, in 1897, has outdone every previous effort by any club or city, and the gardeners and craft of that old town have crowned themselves with glory forever as hosts whose hospitality was unbounded, and whose every intent to please and entertain was carried out without hitch or flaw.

When it became known that the S. A. F. was to meet in Providence, R. I., in August of this year, it was agreed that the fourth or outing day of the Society would be placed in the charge of the gardeners of Newport, and to meet the case a society was formed and named the Florists' and Gardeners' Club and Associates; the leaders in the good work at once placed their shoulders to the wheel and finally, after the struggle and anxiety always attendant upon an effort of this kind, every preparation was completed and all that remained was to pray for a glorious day of sunshine, which, too, was granted.

The committee from the Newport Club, having the reception in charge were: A. K. McMahon, chairman; J. J. Butler, secretary; John Allan, treasurer; Robert Christie, Alderman B. F. Tanner, John Gibson, Richard Gardner, Hermann Lipse, A. MacLellan, Robert Hunnicks, Dr. Bradley, G. B. Reynolds, James Hovey, A. M. Chase, James McLeish, Andrew Melkie, Carl Jurgens, and A. Brandt, and all the members of the club were expected to assist in making the stay of the visitors pleasant. At the tent the ladies of the party were met by a reception committee.

Down the charming Bay of Narragansett came the dandy excursion steamer, Day Star, loaded with visitors, the Providence Florists' Club escorting and caring for the members of the S. A. F. until the pier at Newport was reached. The steamer unloaded 640 people on the dock, including a live band (the Hedley-Levsey) of 24 performers. At this point we were greeted by the committee of the local club; drags, stages, wagonettes, barges, coaches, and private turnouts to the number of 58 met the delegates, and soon in perfect order and good fellowship, under the direction of A. K. McMahon and George P. Lawton, all the conveyances were filled, and the ten or twelve mile drive, the first item on the program, was inaugurated. The route lay through the avenues and streets most renowned for their horticultural interest, and soon as Pelham street was reached the signs of the art which has made Newport famous and many notable illustrations of which were furnished in a recent issue of American Gardening, became conspicuous. The route was on past Spring street, Touro Park, and the Old Stone Mill, along Bellevue, Narragansett and Ochre Point avenues, the entrance to the Cornellus Vanderbilt estate, thence by way of Victoria and Lawrence avenues to Senator Wetmore's estate, driving through the grounds. The route then lay along the Ocean drive to "Indian Well," Mrs. J. R. Rusk's place, where the group was photographed by Mr. Frank H. Child. The principal places passed on the drive were those of:

Gordon Bennett (gr. Luke Fagan); E. J. Berwin (gr. Bruce Burtenton); Mrs. William F. Welds (gr. Philip Casey); Stuyvesant Fish (gr. William F. Burton); James Stillman (gr. John Gibson); R. T. Wilson (gr. J. F. Dailey); W. R. Travers (gr. William Allan); Robert Goelet (gr. Patrick Carr); Ogden Goelet (gr. J. R. Johnson); H. McKay Twombly (gr. Alex. Fraser); C. Vanderbilt (gr. R. Laurie); John R. Drexel (gr. J. F. Allen); Senator Wetmore (gr. R. Christie); John W. Ellis (gr. Alex. MacLellan); I. Townsend Burden (gr. Andrew S. Nicholl); George S. Scott (gr. William F. Smith); Perry Belmont (gr. Charles Hurn); Theodore Havemeyer (gr. Patrick McCarthy);

Henry Payne Whitney (gr. Michael Murphy); W. S. Wells (gr. Andrew S. Melkie); Charles N. Fay, Esq. (gr. Soren Morgan-son); Mrs. Burke-Roach (gr. James McLeish, Jr.); Mrs. H. M. Brooks (gr. James Hill); Mrs. William Astor (gr. James Boyd); William Waldorf Astor (gr. Hugh Williamson); Frederick Vanderbilt (gr. Robert Hunnicks); Commodore Gerry (gr. Harry Hogan); Mrs. John O'Brien (gr. Patrick Devine); Henry Clews (gr. James Murray); R. M. Cushing (gr. James Buchanan); Theodore M. Davis (gr. Hermann Lipse); Ross R. Winans (gr. Arthur Potter); Professor Agassiz (gr. Thomas Martland); G. M. Hutton (gr. John Donovan); Josiah Q. Low (gr. Daniel E. Sullivan); A. A. Low (gr. G. Mahon); J. W. Auchincloss (gr. Thomas Molden); William F. Burden (gr. William S. Nicholl); Morton Park (supt. Eugene Hughes); J. J. Wy-song (gr. James Kyle.)

The entire Ocean drive was taken in, and the party then drove to the beach, where caterer D. B. Allen had a large tent, 150x90 feet, erected on the lot next to his pavilion, arranged to seat 735 people at the one time. Here a regular Rhode Island clambake with all the concomitants was served at 3 o'clock. The tent was tastefully decorated with American flags, plants and cut flowers, which, with the grass for a carpet, and the snowy white tent and tablecloths, made a very pretty picture.

On alighting the party was pleasantly surprised to find a committee of ladies awaiting their coming. These were: Miss Amelia J. Tanner, chairman; Mrs. A. K. McMahon, Mrs. J. J. Butler, Mrs. Gardiner B. Reynolds, Miss Reynolds, Mrs. James Hovey, Mrs. Alexander MacLellan, Mrs. Thomas Gibson, Mrs. Robert Hunnicks, Mrs. Hermann Lipse, Mrs. John Allan, Mrs. James McLeish, Miss McLeish, Miss Jurgens, Miss Jessie Buchanan, Miss Margie Tanner, Miss Hodgson, Miss Bluck, and Miss Craig.

After the guests had been seated, and before making an onslaught on the tempting viands, the president of the local club, Mr. A. K. McMahon, made a short speech of welcome and direction, in which, amongst other good things, he said:

He was glad to have the S. A. F. visit Newport and the capital of Rhode Island. To provide for this reception they had organized the Florists' and Gardeners' Club and Associates. We have given you the ride through most beautiful places, but to see Newport properly, it would be necessary to spend a week here. He hoped the assemblage would enjoy every moment of time during their stay. President McMahon assured his hearers that the afternoon speeches would be short and few in number, and at the close of these the presentation of prizes won in the shooting and bowling contests would be made. He wished all a pleasant time and that the reception would promote pleasant recollections of Newport and the visitors be glad to come again. The guests then went at the dinner with a hearty good will, after which speeches were in order.

The Mayor of Newport, Hon. Patrick Boyle, was received with great enthusiasm. The Mayor said he could scarcely find words to give expression to his pleasure and delight at this meeting. Newport was the garden of America. It was very opportune for the S. A. F. to meet here and he would have liked to have welcomed the S. A. F. at the gates of the city. He assured his hearers that the people of Newport appreciated the visit of the S. A. F. to that city. Newport people were celebrated for their modesty, consequently he would not take up any more of the time.

Judge Hoitt was called upon to answer the Mayor's welcome. The Judge was in good oratorical humor and made a very taking speech. He said he was called upon to perform a duty pleasant yet severe. Pleasant as receiving the freedom of the city from the Mayor, and severe because he was called upon to make this effort so soon after dinner. He would accept on behalf of the Society the invitation to stay a week given by the Mayor; he was equal to any emergency, when the emergency was one of this nature. Florists liked to be surrounded by

water when they did not have to take it themselves. The trip had proven most enjoyable, nothing could have been better arranged or more thoroughly carried out. The florists were ready to come again, whenever invited, as per the Mayor. In closing, Judge Hoyt thanked each and all who had contributed so largely to the entertainment of the day.

Here President McMahon interposed a word to say that his Society had been heartily supported in their efforts to provide for their guests through the liberality of the citizens of Newport.

The Hon. John P. Sanborn, editor of the Newport Mercury, was then called upon and made a very witty speech. The city of Newport was always glad to have strangers come amongst them. Come again and stay as long as you can and imbibe the breezes from old ocean. Come often and stay long. If the Society would hold its next meeting in Newport, he would guarantee to raise all the funds necessary, and would provide accommodation and entertainment equal to that which any city had ever furnished. In closing he repeated his invitation to come again and stay longer the next time. (The newspaper of which Mr. Sanborn is the present editor, the Newport Mercury, is one of the oldest in the United States, having been established in 1758.)

Many other delightful speeches followed in quick succession. President Graham was handed a gold watch as a token of the esteem in which he was held by his fellow members of the S. A. F., and to his good lady was presented a gold brooch of antique design set with a diamond.

After the speeches and presentations had been concluded, President McMahon closed the great event of the day by wishing all a Godspeed and pleasant journey home. "You are now at liberty to do as you please and go where you please." Three cheers greeted him, and the diners dispersed in the various directions to which their fancies guided them. It was to be regretted that so little time remained in which to visit more of the prominent gardens, the Cliff Walk, and other notable places, but when our convention is held in Newport we intend to take these all in.

At 7:30 P. M. the Providence visitors left, followed by the cheers of several hundred others of the delegates who had gathered to see them off, and "Auld Lang Syne" floated in beautiful harmony across the waters of the quiet bay. At 10:30 the Pilgrim hove in sight and the Southern and Western people made a break for their state rooms.

Then all was quiet in Newport.

The credit of this most successful reception and delightful day must be accorded largely to the untiring efforts of the following gentlemen: Robert Christie, R. Hunnlick, Hermann Lipse, A. MacLellan, J. A. Hovey of Weaver & Son, John Allan, President A. K. McMahon, and Alderman B. F. Tanner and his sister Miss A. Tanner of Newport. Amongst others rendering able assistance were Carl Jurgens, Gibson Bros., Andrew Melkie, Richard Gardner, James McLeish, Robert Laurie, and Charles Stark.

Notes in Newport Gardens.

Gardeners and other members of the craft, who with the convention paid a visit to Newport for the first time, were impressed by the beauty of the panoramic view as they were taken along the famous drive. The varied styles of architecture presented an unusual sight and all with expressions of wonder declared they had never before seen Hydrangeas so large or so blue—and truly, they were in remarkably fine condition. The marvelous grass on the lawns, which is a specialty of Newport, came in for liberal notice, as did the hedges and windbreaks of *Rosa rugosa*; the sight that these presented was to a great number of the visitors a revelation. Another novel feature to many was the innumerable and well-kept hedges of Californian and other Privet while here and there exclamations of surprise were to be heard when a postern gate or other prominence was passed, and it was noticed that superbly colored English Ivy was used as the covering.

A favored few were after the ride treated to an inside view of several estab-

lishments. In the grounds of G. P. Wetmore they saw how large *Livistonia chilensis* grows, the specimen on the lawn being fully 30 feet high and more than that number of years old. This is illustrated on page 597 of this issue. Some fine Cannas were also noted, these included one new one, now in commerce, which originated here, viz., Robert Christie. Some remarkably fine cut-leaf Beech trees were admired, also a grand tree of *Pinus nobilis*.

The famous sunken garden of J. Van Alen, lately figured, was a matter of interest to all in the use of fibrous Begonias. It is questionable whether Begonia Vernon and Erfordia have ever been seen in such perfection. Mr. Griffin, the gardener, has by selection secured a lighter colored variety, and used it in alternate beds to great advantage.

In the greenhouses of Ogden Goelet were seen some fine tuberous Begonias, choice exotic and other plants, while on the lawns the visitors were held spellbound by marvels of carpet bedding, and a Philadelphia visitor was heard to exclaim: "We can't touch these places!"

Robert Laurie at the Cornelius Vanderbilt residence had many fine things to show, but proudest of all was he of his Chrysanthemums, which from all appearances are to be heard of at the fall exhibition.

The Exhibition.

The trade exhibits were numerically fully equal to those of other conventions; and their nature equally varied, and for quality certainly on a par with any previous event. While it is further safe to say that the representation of plants used generally in the trade, far and away eclipsed the exhibits at previous gatherings, the various firms who deal largely in such stock evidently did their utmost to make a good showing.

The strongest part of the exhibition was undoubtedly with the plants, and the touch of color given to the whole by the wonderful exhibit of highly colored crotons from Robert Craig, Philadelphia, imparted a finish and tone which at once lifted this section into the highest order of merit.

Next to plants, in order of merit, came florists' supplies, which were of superior excellence and very extensively staged. These were closely followed by the displays of hot water and ventilating appliances, with greenhouse constructions. The number of firms represented in this department was very large.

Horticultural requisites, pottery, and sundries ranked next in order, and completed the list.

Absolutely new inventions, or novelties in plants, were scarce and of but average quality; evidently there is a dearth of plant novelties or else the growers are shy in bringing them out.

At the entrance stood a pyramidal group composed of 150 plants of *Adiantum Farleyense*, which deservedly came in for a great amount of attention, but the lion's share of credit and admiration went to Water Lilies. It is very possible that such a representation of these ever popular flowers was never gotten together at any previous convention or exhibition in this country! Commercially, they were represented by the firm of Henry A. Dreer, who had a tank, standing on the floor, in which a daily supply of new plants in flower or newly cut blooms maintained a constant freshness. This unique and beautiful contribution to the show was supplemented by another of a similar nature from Oakes Ames, Esq., of North Easton, Mass. (Carl Blomberg, gardener), which was set up in tubs and made a grand showing.

Coniferous plants were well represented by three exhibitors, each group being very creditable. A special feature attached to one of these was a number of *Azalea mollis* and *Rhododendrons*, which it was stated were raised from seed sown in January, 1894. This exhibit demonstrates that we, in this country, have reached a stage when we shall soon be independent of foreign nurseries in the raising of this class of stock. The size of these plants, and their vigor of growth in so short a space of time, were very remarkable. Commercially,

the convention may have accomplished much by being the means of giving publicity to this achievement. The credit for this educational display belongs to the Swan Point Cemetery Association, of which Timothy McCarthy is superintendent.

A few novelties were scattered around the hall, among these being a plant of *Lomaria-Blechnum*, from A. MacLellan, Newport; this was a handsome specimen, and many guesses were ventured by visitors as to what it was, and some, without close observation, gave as their conclusion that it was *Cycas circinalis*.

W. A. Manda made an exhibit of fancy-leaved *Caladiums*, several of which were very highly colored, and one or two were commendable from the size of leaf and brilliancy of marking; for the main part they were under numbers instead of names.

J. C. Vaughan had on view a plant of the new *Canna Yellow Crozy*; it is of dwarf habit and the bloom nearly approaches a pure yellow, but at the time of our inspection, no flower spike was visible.

THE TRADE DISPLAY.

Section A—Plants.

JUDGES—Samuel Henshaw, New York, John Dingwall, Albany, N. Y.; and Alex. MacLellan, Newport, R. I.

F. R. PIERSON Co., Tarrytown, N. Y., was well represented by a table covering 300 square feet, including a fine lot of Palms, etc. *Pandanus Veitchii* was also noticeably good. In novelties there were *Heliconia illustris rubicaulis rosea*, and *Abutilon Savitci*.—Honorable mention.

From the same exhibitor came an exhibit of *Nephrolepis exaltata Bostoniensis*.—Certificate of Merit.

SIEBRECHT & SON, New Rochelle, N. Y., filled 240 square feet with the following arranged in groups: Ferns, *Dracenas*, Palms and *Araucarias*. Among Palms *Phoenixophorum grandifolium* and *Phoenix rupicola*, were in grand condition. In addition to these was a fine lot of *Nephrolepis cordata compacta*, and having special regard to the last, the judges made their award.—Certificate of Merit.

PITCHER & MANDA, Short Hills, N. J., made a display covering 100 square feet, mainly of Palms; among other plants in this group was a new *Begonia Rex*, named Providence, which, as a larger plant, will, no doubt, prove of great value. The color and habit are good, and it shows evidence of Pres. Carnot parentage.—Honorable mention.

ROBERT CRAIG, Philadelphia, Pa., put up in all 115 square feet; one-third of this space was taken up with superbly colored *Crotons* (some of which had been grown entirely in Jadoo); in all there were about forty varieties of which the most showy were: *albo lineata*, *Hackeri*, *Charmers*, *Czar Alexander*, *Thompsoni*, and *Reedii*. The balance of the exhibit consisted of Palms, etc.—Certificate of Merit for the *Crotons*. Palms and decorative plants.—Highly commended.

THE COTTAGE GARDENS, Queens, L. I., staged between forty and fifty varieties of Zonal *Pelargoniums*. Taking into consideration the season, the judges thought favorably of these.—Certificate of Merit.

L. H. FOSTER, Dorchester, Mass., staged a group of *Nephrolepis exaltata Bostoniensis*.—Highly commended.

H. F. LITTLEFIELD, Worcester, Mass., covered 48 square feet of space with Palms, Ferns, etc.—Highly commended.

CHARLES D. BALL, Holmesburg, Pa., arranged a superb lot of Palms, etc., covering a space of 112 square feet.—Highly commended.

DANIEL B. LONG exhibited *Smilax* plants from Risley flats.—Highly commended.

LEMUEL BALL, Wismoming, Pa., staged a group of decorative plants which covered 35 square feet, including Palms, etc.—Highly commended.

J. HRACOCK, Wyncote, Pa., had 97½ square feet of clean well grown Palms, etc.—Highly commended.

H. A. DREER, Inc., Riverton, N. J., covered a space of 175 square feet with a general assortment of commercial plants.—Certificate of Merit.

W. A. MANDA, South Orange, N. J.,

covered 75 square feet of space with decorative plants, Orchids, bulbs, etc.—Honorable mention.

W. A. BOCK, North Cambridge, Mass., had a general assortment of plants.

CARL HAGENBURGER, Mentor, Ohio, sent a new *Coleus* named Klondike.

STORRS & HARRISON Co., Painesville, Ohio, staged to me grown H. P. Rose plants of exceptionally fine growth.—Highly commended.

C. H. JOOSTEN, New York City.—American grown Roses on own roots.—Highly commended.

Section B.—Cut Blooms.

JUDGES—John White, Pittsfield, Mass., S. Pentecost, Cleveland, O., J. A. Shellem, Philadelphia, Pa.

The H. A. DREER, Inc., had new French and Italian Cannas in twenty-five varieties, the best being *Souv. d'Antoine* Croy, red, edged yellow; *Avante Garde*, yellow, spotted with red; *Ami Jules Chretien*, cerise-red, and *Vice-President Luizet*, bright crimson. Fringed *Petunias* were also shown in pretty variety here.—Honorable mention.

Section C.—Boilers and Heating Apparatus

JUDGES—Fred Burki, Allegheny, Pa.; F. R. Mathieson, Waltham, Mass.; H. A. Hart, Cleveland, Ohio.

HITCHINGS & Co., New York, had No. 57 hot water boiler. Owing to the great surface of water exposed to heat the judges awarded Certificate of Merit.

HERNDEEN MANUFACTURING Co., Geneva, N. Y., steam boiler.—Honorable mention.

JOSEPH PLENTY Co., Jersey City, N. J. The Howatt sectional boiler.—Highly commended.

SMITH & THAYER, Boston, Mass. The Winchester hot water heater.—Highly commended.

JOHN A. SCOLLAY, Brooklyn, Exhibited his invincible hot water boiler, which was highly recommended for its great heating surface and other points of merit.

HEWS & Co., North Cambridge, Mass.—An exhibition of flower pots.—Honorable mention.

Competition for the S. A. F. Special Medals.

JUDGES—Edwin Lonsdale, Philadelphia; M. H. Norton, Boston, Mass., and Wm. R. Smith, Washington, D. C.

AQUATIC PLANTS.—Display of cut blooms to be kept in good condition throughout the exhibition.

The first honors, the Society's silver medal, went to the collection from Oakes Ames, North Easton (Carl Blomberg, gardener), filling seven large tubs. This was a superb exhibit from a private col-

lection, the flowers remaining fresh and expanded, enabling their distinctive merits to be seen and appreciated to the full. *Nelumbiums* filled one tub. Tender *Nymphaeas* were well represented, notable among them was a most beautiful form of *N. stellata* named *Eastoniensis*, whilst hardy varieties were represented with as complete a collection as we have ever seen on public exhibition. The newest and most noteworthy to mention among these being *N. Marilacea Robinsoniana* with flowers of a brilliant indescribable shade of copper-red. *Sagittarias*, *Pontederias*, *Limnanthemums*, and other aquatics were included in this most instructive exhibit.

Bronze medal to Henry A. Dreer, River-ton, N. J., who was well represented in this section. His *Lotuses* were especially fine; conspicuous were: *album grandiflorum*, pure snow-white; *Kermeslanum*, very large, deep rose-pink; and the exquisite *albatristata* with petals feathered like in a tulip. *Nymphaea O'Mariana* quite dwarfed into pygmies, by comparison, all other *Nymphaeas* in this large collection. It is a flower of immense size and brilliant color, altogether the most remarkable of recent additions to the tender *Nymphaeas*. *N. pulcherrima* and *N. Devoniensis* were also well represented in the tender section; in hardy forms, *sulphurea*, *Robinsoniana*, *Ilacina* and the pygmaea forms were well shown. The awards were given as above on the first day and without regard to the specification of the schedule.

HARDY CONIFERS IN POTS.—Three groups were in competition. The premier award went to the Swan Cemetery Co., Providence, R. I., for a meritorious collection, silver medal. Sam J. Lewis, Olneyville, R. I., second, bronze medal.

CALADIUMS.—Twelve fancy foliaged varieties in pots, one plant of each.

W. A. Manda, South Orange, N. J., was awarded a bronze medal.

DISCRETIONARY AWARDS which were to be given for "any display of plants, showing advancement in culture or of special value to the trade," went as follows:

The Swan Point Cemetery Co., Timothy McCarthy, superintendent, a silver medal for a group of American-grown seedling *Rhododendrons* and *Azaleas*.

Pitcher & Manda, Short Hills, N. J., for a pyramidal stand of *Adiantum Farleyense* 7x7 feet, containing 100 4-inch pots and 50 5-inch, a Certificate of Merit; but the display deserved better recognition.

Alexander MacLellan, Newport, sent three grand specimen plants one each of *Adiantum pentadactylon*, each six feet or more in diameter, and nearly as high; *Anthurium Veitchii*, carrying eight immense leaves; and a superb plant of *Lomaria gibba blechnoides*, proving this last a grand addition to decorative Ferns.—Silver medal.

The Fruit Garden.

Plan now what you intend to do in the way of planting among the fruits. Look over your back notes for any spring or early summer thoughts on transplanting or moving, for they do not always remain fresh in the mind. When the time for action comes around, quite a gain can be made by moving early in the autumn if the winters are not severe in your locality. It is not necessary to wait until the foliage is down, in fact, by moving early, the trees will endeavor to sustain the foliage by making new roots, which once started will continue until stopped by hard frost.

Trees moved should be heavily mulched, which if of a strawy nature, should be removed before it is covered with snow, otherwise mice are inclined to nest under it and make trouble.

In newly planted places the fruit trees are often planted closer than the regulation distance, and as they grow and each season rolls by, the thought of moving is gone over until it is doubtful if the work can be satisfactorily done. In the first place the moving of large fruit trees is not generally a success; secondly, I think it a mistake to plant other than at the permanent distance. Do that first and then if you are in a hurry for fruit or cramped for ready land on which to plant, use the space between the permanent trees, but always with the determination that the additions shall in no way interfere with the development of the permanent trees, but shall be restricted and eventually cut out. In this way, good results can be obtained. Keep the cultivator or rake moving among the new plantations. J. HOLLOWAY, N. Y.

Plants Named.

[Specimens of plants for identification must be ample; mere scraps will not do, and no notice can be taken of such.]

(To E. Jaeger).—*Cornus sericea*.

(To Ed. Parker).—A. *Chimaphila maculata*; b, *C. umbellata*. The other specimens were not sufficient for identification. As cultivated plants a and b are very pretty.

(To W. R. Meredith, Canada).—The leaf sent is from Schwendler's maple. The tree would answer for a private drive or roadway, but we think it too round headed for ordinary street planting.

(To L. B.).—*Lagerstromia indica*.

(To Mrs. Dunlop).—*Curcuma australasica*.

(To J. E. Chapman).—*Abelia rupestris*.

NOW READY.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$1.50.

This work contains nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work. On heavy enamelled paper. Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8 Duane Street, P. O. Box 1697, New York City.

PRIVATE GARDENERS.

The staff of AMERICAN GARDENING begs to express to the fraternity of Providence and Newport sincere and hearty thanks for the many tokens of good-will and the assistance accorded it in the work of securing the most full and complete report of a convention which has ever yet been given in the columns of this paper.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

Mr. J. Dexter, lately of the Ogden Mills Establishment, Staatsburg, N. Y., has been engaged with Hon. W. C. Whitney, to take charge of his 6,000-acre estate October Mountain, Lenox, Mass., where Mr. Dexter will have a large scope for the exercise of his abilities. The area is still being added to, and extensive game preserves are being made.

Robert Wright as gardener to Mrs. Agnew, Palisades, N. J.

J. Baurhoffer as gardener to Mr. Poole, Harrison, N. Y.

Oceanic, N. J.

The regular meeting of the Monmouth County Horticultural Society was held at Oceanic, on Friday, the 20th inst. Owing to the fact of this being the last meeting previous to the public exhibition, a great deal of interest was manifested in same. As is usual in such cases, a great many knotty points relating to the exhibition had to be disposed of, and it was a late hour when the meeting adjourned. All signs point to a successful exhibition.

Mamaroneck, N. Y.

June 28 last we visited the gardens and greenhouses of J. M. Constable, Mamaroneck, N. Y., and at that date it is pleasing to note that the eleven acres of garden and pleasure ground were in the most perfect condition for cleanliness and neatness. While accustomed to seeing well-kept establishments we recall none that in this respect excels the one under mention; the lawns and shrubs and hardy flowers were in admirable condition; the glass houses were replete with stock of a high order, and included grapes, melons, cucumbers, tomatoes, Roses, Carnations, and a general line of exotic plants.

But for all this we were most interested in the practical tests of imported versus domestic varieties of cucumbers, potatoes, and tomatoes, especially the last.

At that date we found a row of tomatoes planted out against a wall and somewhat nursed and sheltered by a near-by greenhouse running parallel. There were eight kinds, six imported, and two American, eight plants of a kind, all under the same conditions, so that the test was a fair one, and remembering the good results attending Mr. Anderson's first trial with Sutton's Best of All, we immediately engaged him to make careful notes and comparisons for American Gardening. His remarks appear elsewhere in this issue.

Springfield, Mass.

At a meeting of the Hampden County Horticultural Society directors last week, the following varieties of Sweet Peas were recommended as the best for general culture:

First twelve; Aurora, Blanche Burpee, Blanche Ferry, Burpee's New Countess, Firefly, Golden Gleam, Her Majesty, Lovely, Maid of Honor, Royal Rose, Stanley, Venus.

Second twelve; America, Countess of Aberdeen, Captivation, Dorothy Tennant, Gray Friar, Katherine Tracy, Lady Penzance, Mikado, Mrs. Eckford, Prima Donna, Ramona, Waverly.

Third twelve; Apple Blossom, Brilliant, Coquette, Captain of the Blues, Duke of

Clarence, Emily Lynch, Lottie Eckford, Meteor, Mrs. Joseph Chamberlain, Mars, Ovid, Senator.

The awards that were not made at the time of the recent Sweet Pea show were for Cultural Directions for Sweet Peas and for Criticism of the Sweet Pea Review, the entries in the first case were referred to a committee with power; the award for Criticism was made to W. F. Gale.

Springfield's City Forester has been dismissed for not taking orders from the Superintendent of Streets, under whose care the trees of the city have been placed. The Forester was right in his opinion that to execute his superior's orders was of no use, except to spend the city's money, and the whole affair shows the folly of having in charge of technical work those who have no knowledge of their subject.

Detroit, Mich.

The Park Board finds itself short of funds and has reduced the salaries of the superintendent and discharged some assistants. R. J. Coryell has been engaged as landscape gardener.

Boston.

The special aquatic exhibition of the Massachusetts Horticultural Society held last Saturday, August 21, was a disappointment so far as amateurs were concerned; but the untoward season has operated against best results. The chief display of aquatics came from H. A. Dreer, Inc., Riverton, N. J., to whom was given the first prize in the competition and a certificate for new hardy hybrid *Nymphaea*, named *Falconeriana*, a flower of the odorata gigantea type, very full, six inches in diameter, deep claret-crimson petals, stamens garnet with golden anthers. This is the finest American hybrid yet introduced. Another seedling shown, but as yet unnamed, has creamy yellow petals tinged rose on the reverse, with yellow stamens; an incurved flower, tender and night blooming. Other fine blooms were *Nymphaeas* O'Marana, Laydekeri varieties, and Sturtevant, *Nelumbium* Shieoman, the new giant double white Japanese Lotus. The second place was accorded to Oakes Ames, Esq., (Carl Blomberg, gardener), whose *zanibarenensis* and *eastonensis* among tender, odorata *Caroliniana*, and *chromatella* were specially fine.

From the Cambridge Botanic Garden came a large collection of herbaceous plants. New French and Italian Cannas came from H. A. Dreer, a certificate being awarded to Allemania; the segments are yellow, with red center, larger than Italia; and to *Gladiolus* White Lady from the same source.

H. P. Roses.

The Horticultural Company, Boskoop, Holland, at their branch in this country, situated at Rutherford, N. J., have planted out 6,000 standard H. P. roses; these recently have made a grand showing, having done remarkably well and flowered profusely. One prime old favorite which has been quite a success and is only now just going out of flower, is *Gloire de Dijon*.

How's This!

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Props., Toledo, O.

We the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligation made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.

WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price 75c. per bottle. Sold by all Druggists. Testimonials free.

W. & D's.

Celebrated Sure Crop.

MUSHROOM SPAWN. 8 lbs.
FOR \$1.00.

Lilium Harrisii, Roman Hyacinths, Freesias, Paper White Narcissus, Callas, Etc., Etc.

Special PRICES on application.

WEEBER & DON,

Seed Merchants and Growers.

114 Chambers St., N. Y. CITY.

Mention American Gardening when you write

MacDONALD & McMANUS, Wholesale Florists and dealers in Cut Flowers

50 West 30th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Commission. Best market prices guaranteed.

Mention American Gardening when you write

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

WANTED—A position as gardener and florist either private or commercial place. English, married, small family. Several years' experience in both America and Europe, best of references. Address G. R. Mahood, Box 330, Olmsted, Ill.

WANTED position as gardener, English, married, age 41, life experience in the culture of stove and greenhouse plants, forcing grapes, mushrooms, etc., and the routine of flower and kitchen garden; excellent references. Apply Florist and Gardener, Post Office, Bridgeport, Conn.

SITUATION wanted. — Gardener, experienced greenhouse hand, well up in agriculture and landscape gardening, wishes head position on gentleman's estate under improvements, or assistant in greenhouses; references. Address General, care American Gardening.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 65 W. Broadway, New York

EGYPTIAN ONION sets, for immediate delivery if wanted, \$1.00 per bus. F. O. B. Streator, La Salle Co., Ill. Address R. D. Kline.

EGYPTIAN ONION sets, fine stock ready for shipping. Write for special low prices on any quantity you wish. W. W. Thompson & Sons, Station D, Milwaukee, Wis., Box 24.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

Business Cards.

C. D. Zimmermann, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1607, New York City

AGENTS WANTED.

Read this partial description of the best book of the kind for women which has ever been published, then write us for terms and territory.

HOUSE PLANTS

AND

HOW TO SUCCEED WITH THEM.

BY

LIZZIE PAGE HILLHOUSE.

Scores of books have been written on flowers and their cultivation, but it has been reserved to Mrs. Hillhouse to cover a field of highest interest to women hitherto untouched, and to provide a reference book and complete guide for all her sisters who, loving plants, would ever be surrounded by them did they but know where to turn for such advice as to their preservation and instruction in their culture as would be open to them to follow, easily understood, yet thoroughly practical.

"I have bought book after book," the author says, "in a vain search for that knowledge which would enlighten me as to how to prolong the lives of my precious pets, when nothing with alarm their distressed appearance, only to find them all a delusion and a snare, so technical or ambiguous as to baffle beyond my reach or apprehension. Therefore, for the benefit of fellow sufferers, I have determined to put down what little I have found out from bitter experience, knowing it will be practical and true, as far as it goes."

"HOUSE PLANTS" has been written by a woman for the countless thousands of women who have no conservatory or hothouse, and are compelled to grow their plants in the home, and it gives freely of the knowledge which the author has been gathering through many years of observation.

Recognizing the fact that no book adequately covering the subject has ever been published, Mrs. Hillhouse has undertaken to fill the deficiency, and most ably and effectively has she accomplished the task. The result is a book of information and instruction, written in simple language, which will be prized and consulted by every woman so fortunate as to become its possessor. Of all books of reference issued for domesticated women, "House Plants" will take its position second only to the much prized and ever handy family cook book.

The amateur will be both surprised and delighted with the great range of plants which this book tells us it is possible to successfully raise in the house. Chapters are devoted to Bulbs, Cacti, Ferns, Flowering Plants, Foliage Plants, Lilies, Palms, Shrubs, Vines, Creepers and Basket Plants, and one on plants unclassified. A separate chapter on the propagation of plants is extremely interesting, as it is here so many fail.

Again quoting from the author, "In writing this little book, I have endeavored to keep strictly within the lines of my personal experience, and to select for description and suggestion as to treatment only those plants which I knew could be grown successfully in our living rooms or houses. This, undoubtedly, may be done if my instructions are followed.

"How little most people—bright people, too—know of the marvelous and amazing creations of the plant world. Those silent monitors, the flowers, are not dumb, but speak to us through the delicacy of their scents, their intricate shapes, complex habits, and the glorious penciling of their heavenly colors, that no human artist can command."

HOUSE PLANTS, 12mo., 220 pages, cloth, profusely illustrated, and with complete and ready reference index to all plants mentioned. Price \$1.00. A. T. De La Mare Ptg. and Pub. Co., 2 to 8 Duane St., New York, publishers.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Fittonias for Variety.

Among low-growing plants which may add considerable beauty and also much variety to a collection of plants, are the Fittonias. The foliage is netted much like that of our native Orchid, the Goodyears. The latter plant, however, cannot give us the exquisite pink netting that appears in some of the Fittonias, and which forms such a delightful contrast with the dark green groundwork of the leaves. The plants are classed with Begonias and Crotons, as requiring a rather high temperature.

Are the Eggs All Fresh?

Your hens lay fresh eggs, do they not? An odd question, perhaps, but that a certain would-be funny writer claims that some hens do not. At least, he says, several men of his acquaintance who bring their eggs to market every week do not always bring fresh eggs. Only by constant, daily care, and by throwing out any eggs that one may not be sure of, can any one dare guarantee as fresh, eggs from hens running at large. If the fowls are confined to small yards and houses the matter becomes much simplified but even then the best of care is necessary. And it is never safe to use added eggs for nest eggs.

The Various Solanums.

Is it not a pity that some of the plant dealers and catalogue makers should be so color blind? Solanum Wendlandii, they have told us, is of a most beautiful pale blue. Solanum Rantonetti is described as of deepest sky blue. This last is in bud with us, but we dare not expect it to be sky blue, because all of the other so called blue Solanums have been tinged with lavender or purple, and with not a hint of real blue about them. Wendlandii makes a handsome truss of very large flowers, but they are not blue, by any means. One of the best English authorities affirms that the white sort, Solanum jasminoides, is the most charming species of the family. So far as our own experience goes, we might say that the various "blue" Solanums have little more charm for us than the old deadly Nightshade that grew in a neglected corner. An exception might be made in favor of Wendlandii, however, because of the size and compactness of the truss, and the unusual size of the flowers.

The Otahelto Orange.

"We have seen a plant in a common window that was but 15 inches high, and had 23 oranges on it. With good sunlight they are never out of fruit, and at least two-thirds of the time are in flower also." The hundreds who fall with this plant should notice the clause, "with good sunlight," but it is to be feared that even this would never give us compact sprays of bloom such as the pictures show.

Common Names for Common People.

The Seaforthtias and Kentias and Latantias certainly seem to have more character, and to be better worth their price when appearing under their botanical names. Florists use these names altogether, and under these such plants are generally sold. Yet the demand for a common name for each plant for everyday use is almost universal, and a recognition of this demand appears in a prominent dealers' catalogue. A certain collection for the window, comprising decorative plants of seven different species, bears, in addition to the botanic names, names as follows: the Ostrich Feather Palm, the Fountain plant, the Fan Palm, the Giant Palm, the Silk Oak, the Curly Palm, the Umbrella plant.

Madame Bruant Fuchsia.

Is there any one who would not be tempted by the offer of a Fuchsia giving flowers "of a grandeur never before seen," and all for 20 cents? After this manner is described the new Fuchsia, Madame Bruant, which has pendant flowers of great size, with bright red

sepals, and corolla of lilac-mauve, veined with rose. It is endorsed by some of the best growers in this country, but has yet to make its record in the window garden. It makes a nice-looking and fairly thrifty plant, which has not so far bloomed for us.

Buying Potting Soils.

Many of those who do not have access to garden and fertilizer heap, or even to the rich mould of the woodland, may be uncertain how to obtain soil for potting the plants. Fertilizers of all sorts, they know, can be procured of the seedsmen, but it is not so well known that many of the large dealers will supply potting soils in almost any desired quantity. Rich compost, mingled so as to best suit the majority of plants, pure leaf mould, and other combinations, are available in desired quantities. Peats, fibers, and mosses, for Orchid growing, can be obtained from the dealers in these plants, not to mention the new Jadoo fibre that is to surpass all else as potting material.

Good-by Defender.

As the season advanced, the double white Petunia, Defender, was transferred to the garden for a test of its capabilities there. Weakened by being allowed to bloom while very small, buffeted by wind and storm, burned by fierce sun heat, and drowned by volumes of water, it has found the problem of existence much too difficult, and has given up the struggle. We bid it good-bye with regret, for there is a place in the winter window which it ought to have graced.

Value of Poultry Manure.

Questions as to this value are constantly coming up from those newly interested. A late editorial reply "guesses" it to be 25 cents per hen each year. If poultry manure bears a fair relation to commercial manure, this seems low. One pound of droppings a week, on the roosts only, is surely not a large estimate for a fair-sized hen. Commercial fertilizer at \$30 a ton is worth a cent and a half a pound. If we could figure the same for poultry manure, the value per hen would be more than three times 25 cents per hen, for the year, and for night work alone. Those who properly care for their yards and houses secure also, a large proportion of the value of excrement voided during the day. Now, possibly, these are large figures. It certainly seems large to count the manure from a hundred fowls as having an actual value of well towards \$100 a year. But it may stir up thought and give somebody a chance to throw stones. So much depends upon the life. If a hen produce one pound weekly, and if a pound is worth one and one-half cents, the rest follows without controversy.

Trees as Poultry Roosts.

The evils of trees as roosts are not difficult to see. They consist chiefly of exposure to the elements, and exposure to marauders of various sorts. Many are convinced that it is an unmitigated evil, a carelessness on the part of the owner, to allow the poultry such roosting privileges. "Privileges" they certainly are, as it is almost impossible to keep the young stock out of the trees; and the choice as to handling, may be considered as, at best, but a choice of evils for none other of the young stock thrives so well as that which is allowed to have its own wilful way, with a swaying branch for perch, and the whole earth for a roosting platform.

A Point for Poultry Beginners.

When the size of a single fowl is considered, the amount of refuse from even a small flock is hardly credible to the uninitiated. The platforms can be cleared, but a large half of the refuse is deposited in the daytime, in the yards, where it is mainly uncared for. It is this fact which works havoc in the poultry business so often, rendering the second year less profitable than the first, while the third may be a failure. Let those who are beginners be careful that the yards are kept clean and sweet by spading, by fresh earth, and by cheap disinfectants, such as lime and gypsum.

MYRA V. NORRIS.

WHOLESALE MARKETS.

New York.

Fruits and vegetables continue to move fairly well, as far as clearing is concerned, but prices are rather more inclined to weaken than otherwise.

Supply of all kinds continues to get heavier, consequently there is a greater amount of inferior stock to be disposed of which has a tendency to reduce values very considerably. This is especially true of fruits; pears and peaches feel it perhaps more than any other; prices on these are very irregular and are difficult to quote intelligently. Some peaches make only 20c. per basket while others make 75c. and \$1.

Pears vary from \$1 per barrel to \$2.50 while state Bartlett's, very fine, in bushel baskets make \$2.50 each; such is the disparity in prices owing to the condition.

Tomatoes have improved in quality considerably, but it is too late to catch anything like remunerative figures. Prime fruit of the Acme type makes from 40c. to 75c. per bushel, others vary from 25c. to 35c. only. The continued spells of wet weather interfere with the melon crop and prevent prices from being anything like what they might be, owing largely to the inferior flavor of the fruit.

Potatoes are falling in value; the top price for Long Islands is about \$1.87 and New Jersey \$1.50 to \$1.75. Hot house grapes are plentiful and range from 50c. to 75c. per pound.

Apples—Alexander, hand-picked, per d.-h. barrel, \$2@2.50; Duchess of Oldenburg, hand-picked, d.-h. barrel, \$2@2.25; Gravenstein, hand-picked, per d.-h. barrel, \$1.50@2.50; Holland Pippin, hand-picked, d.-h. barrel, \$1.50@2; twenty ounce Pippin, hand-picked, d.-h. barrel, \$1.50@2; Codling, hand-picked, per d.-h. barrel, \$1.50@2; Orange Pippin, hand-picked, per d.-h. barrel, \$1.25@1.50; open heads, red fruit, per barrel, \$1.50@1.75; open heads, large green fruit, hand picked, per barrel, \$1.25; open heads, small and drops, 75c.@\$1.

Peaches—Missouri, per carrier, \$1.25@2; Maryland and Delaware, per carrier, \$1@1.50; extra yellow, per basket —; extra red, per basket, —; prime, per basket, 50@70c.; common to fair, per basket, 30@40c.; Jersey, extra, per basket, 60@70c.; prime, per basket, 40@50c.; common to fair, per basket, 30@40c.; culls, per basket, 15@25c.

Pears—Bartlett, Jersey, large clean, per barrel, \$2.25@2.50; poor to fair, per barrel, \$1@2; open heads, common, 75c.@\$1; up-river, per barrel, \$1.25@2; Clapps' up-river, per barrel, \$1.25@1.75; per keg, \$1; Bell, near by, fair to prime, per barrel, \$1.25@1.50; common kinds, per barrel, 50c.@\$1.

Grapes—Delaware, North Carolina, fancy, per 24-pound case, \$2@2.25; common, per 24-pound case, 50c.@\$1; Delaware, up-river, per 24-pound case, \$1.25@1.75; Niagara, North Carolina, fancy, per 24-pound case, —; common, per 24-pound case, 50@75c.; up-river, per 24-pound case, 50c.@\$1; Moore's Early Maryland and Delaware, 24-pound case, 50@75c.; upriver, 24-pound case, 75c.@\$1; Champion, up-river, per 24-pound case, 50@65c.

Plums—Damson, per quart, 4@5c.; Botan, per quart, 5@6c.; Green, state, per 10-pound basket, 20@30c.; table varieties, state, 10-pound basket, 30@40c.

Huckleberries—Shawangunk Mountains, per quart, 5@6c.; Pennsylvania, large, dry, per quart, 5@6c.; Pennsylvania, ordinary, per quart, 4@5c.; Jersey, per quart, 4@5c.

Watermelons—Usual qualities, per car, \$75@150; extra large, per 100, —.

Muskmelons—Hackensack, Nutmeg, per barrel, \$2@3; Monmouth County, Nutmeg, per barrel, 50c.@\$1; Jenny Lind, per barrel, 75c.@\$2; South Jersey, Gem and Jenny Lind, fancy, per barrel, \$1.25@1.50; ordinary, 75c.@\$1; Maryland and Delaware, Gem and J. Lind per carrier 40@75c.; per one-half barrel basket 50@85c.; Baltimore Cantaloupe per barrel 75@90c.; Norfolk per barrel 25@50c.

Celery—Choice large per dozen, 25@30c.; fair to prime per dozen, 15@20c.; small and poor per dozen 5@10c.
Corn—Hackensack per 100, \$1@1.50; Jersey per 100 \$1@1.25.
Cabbages—Jersey and Long Island per 100, \$2@2.50.

Cucumbers—Jersey per barrel 50c.@\$1; Jersey per bushel box, 20@40c.; Long Island per 100, 50@75c.; pickles state per 1000, \$1.50@2.50; pickles, Long Island per 1,000, \$1.25@2.25; pickles Jersey, per 1,000, \$1.25@1.75.

Egg plants—Jersey, per barrel, 75c.@\$1; Jersey, per bushel box, 40@50.
Green peas—Western New York, per bag, 50c.@\$1.25.

Lima beans—Jersey, Potato, per bag, \$1.75@2.25; near-by, flat per bag, \$1@1.50; south Jersey, flat, per bag, 75c.@\$1.

Onions—Jersey, white, per barrel,

(Continued on next page.)

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Half Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.

BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

GLASS FOR GREENHOUSES, GRAP- ERIES, CONSERVATORIES, GLASS HOTHOUSES AND HOTBEDS.

VANHORNE, CRIFFEN & CO.,

Importers of French Glass. 40 to 48 VESTRY STREET,
COR. GREENWICH ST.

NEW YORK.

Mention American Gardening when you write.

"JADOO" FIBRE.

A New Potting Material.
A Perfect Substitute for
Earth. : : :

Concentrated "Jadoo" Liquid.

BOTH MEAT AND
DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and . . . THE AMERICAN JADOO CO.
Testimonials, Address

513 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

Catalogues

Will be issued in greater abundance this Fall than ever; every live firm issues one or more, wholesale or retail.

Are You Planning Yours?

We would be pleased to furnish you with an estimate as to the expenses of printing same.

Our facilities are unexcelled; our staff familiar with the work; our presses of the finest; our prices reasonable and our product good.

Printing of Every Description.

Cards, Billheads, Letterheads, Envelopes, Circulars, Price Lists, Pamphlets, &c., at lowest prices and best workmanship.

Trade Marks, &c., Our Specialty.

We furnish illustrations of plants, flowers or designs, which may be copyrighted for your exclusive use, to serve as trade marks, symbols, &c., for use on all forms of printed matter.

A. T. De La Mare Ptg. and Pub. Co.

LIMITED.

RHINELANDER BUILDING, (P. O. BOX 1887) NEW YORK.

Telephone, 2154 Cortlandt.

\$2.50@3.25; other kinds, per barrel, \$1.25@1.75; Orange County, red, per bag, \$1.25@1.75; Orange County, yellow, per bag, \$1@1.50; Orange County, white, per bag, \$1.75@2.75; Long Island, yellow, per barrel, \$1.25@1.50; state and Pennsylvania, yellow, per barrel, \$1.50@1.75; eastern, white, per barrel, \$3@3.25; red, per barrel, \$2. Jersey—Jersey, per barrel, \$3@3.1; per box, 20@30c.

Squash—Hubbard, per barrel, \$1@1.25; Marrow, per barrel, crate, 75c. @ \$1; yellow crook-neck per barrel, 50@75c.; white, per barrel crate, \$1@1.50.

Tomatoes—Monmouth County, Acme, per box, 40@65c.; Monmouth County, ordinary, per box, 25@85c.

Turnips—Russia, per barrel, 50@75c.

Potatoes—Long Island, in bulk, per barrel, \$1.75@1.87; Jersey, per bag, bag included, \$1.50@1.75; prime, in bulk, per barrel, \$1.62@1.75; poor to fair, in bulk, per barrel, \$1.25@1.50; yellow sweets, Virginia, large barrels, \$1.50@1.75; Virginia, small barrels, \$1.50.

Boston.

The market is fairly well supplied with peaches, mostly from Missouri, no Delaware to any amount having arrived. Six basket carriers of Missouri stock selling \$1.85@2.25. Demand is very fair and fruit very good. Six basket Jerseys selling 50c. @ \$1.

Fair demand for home-grown tomatoes; others are not wanted.

Apple market firm; Astrachans and Williams all done; Codlins selling \$2.50 per barrel; Nyack Pippins \$2.50; other inferior grades selling \$1 per barrel.

Pear market very dull. Bartlett's selling \$1.25@1.50 a crate, same as last week. Clapp's Favorites about 50c. a bushel.

Watermelons are a little better demand, selling 12@18c. One commission man had on exhibition on the sidewalk one of the "Darkies' Favorites," weighing 50 pounds. He also had a load counting only 78 melons to the load!

Cantaloupes selling in crates at 75c.; barrels \$1.25.

Montreal melons moving quite freely \$7@10 a basket.

Green corn market unchanged; green peppers very dull; mushrooms \$1 a pound; blueberries 5@10c. a quart.

Celery \$1@1.25 a dozen bunches.

Marrow squash, good demand, about \$1.75 a barrel; homegrown stock is very nice.

Portland peas about all done coming; shell beans \$1.25@1.50.

Potato market strong with stock selling \$2.50, fancy \$2.75.

Sweet potatoes in small barrels, \$1.75; large barrels, \$2.

Cucumbers \$1.

Cauliflower market unchanged, stock very poor; cabbage same as last week, 4@5c.

Carrots 2@3c. a bunch.

Onions still losing strength, 75c. a bushel.

Pineapples unchanged from last week.

Parsley worth about 75c. a bushel; mint 40c. a dozen bunches.

Blackberries 8@10c. a quart.

Big crop of plums, California putting a good many into this market. Fine eating stock selling in 8-pound baskets, 35@50c.; cooking stock 25@35c.

Quite heavy receipts of grapes. Georgias in 5-pound baskets selling 12c. for Concord, 18c. for Agawams, 15c. for Niagaras, 12-basket carriers \$1.50.

The apple crop in Columbia County, N. Y., will be fully up to the average. Greenings will be a large crop, while Baldwins will fall far below the average yield. Pears, according to a Stockport shipper, will be an immense crop.

Southern Missouri is reaping a rich harvest this year from the peach crop. The scarcity of peaches in other large peach-growing sections and an increasing foreign demand have made the prices unusually good. Indeed, Missouri is enjoying the almost phenomenal combination of a big crop and high prices.

ARMSTRONG & McKELVY
Pittsburgh.
REYMER-BAUMANN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR
Pittsburgh.
LOKSTEN
Chicago.
AMERICAN
Pittsburgh.
BRADLEY
Pittsburgh.
BROOKLYN
New York.
JEWETT
Pittsburgh.
ULSTER
Pittsburgh.
UNION
Pittsburgh.
SOUTHERN
Chicago.
SHIPMAN
Pittsburgh.
COLLIER
Pittsburgh.
MINNESOTA
St. Louis.
RED SEAL
Pittsburgh.
SOUTHERN
Pittsburgh.
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
BALKM
Salem, Mass.
CORNELL
Buffalo.
KENTUCKY
Louisville.

WHATEVER is worth doing, is worth doing well. Painting can only be done well by having the best materials—Pure White Lead and Pure Linseed Oil, properly applied. There is nothing else "just as good." Avoid "mixtures" and unknown brands of White Lead—the "sold-for-less-money" sort. (See list of the genuine brands.)

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

Fruit Growers Combine.

According to press report articles of incorporation are to be filed at Grand Rapids, Mich., for the Farmers' and Fruit Growers' National League, the mission of which is protection against unscrupulous salesmen.

In general the plan is that there shall be located in the markets of the country, first in the large cities, approved agents under bond, who will handle the shipments of the members of the association. The association will deal with the railroads, secure the best possible rates, see that all claims for damages to produce in transit are collected, and in general look after the interests of the shipper. It will be provided that there shall be no controlling interests in the corporation, so as to preclude the possibility of any one being given preference over another. It is expected that there will be a fair profit for the members in the difference between local and carload rates, the league being recognized as one shipper.

California crops.—The apricot yield is estimated at three-quarters, and is being shipped East at about seven carloads per diem. Plums and peaches over average; pears, under; grapes, largest on record.

I always find each number of American Gardening useful and interesting.—VOLNEY ROGERS, Park Commissioner, Youngstown, O.

PRICE LIST FOR

Exhibition Stationery

1000 Entry Forms -	\$2.75
Two Exhibitor's Books -	2.00
Two Glass Books -	2.50
Six Judge's Books -	3.00
500 Entry Cards -	3.50
500 Pastors (assorted) -	1.00
Total -	\$14.75

Secretaries of Horticultural, Agricultural, or any other form of competitive show, are invited to write us for full particulars. It is freely conceded that the system we have adopted saves time, temper, trouble, worry and expense.

The clerical work of every exhibition, large or small, should be run on business lines, and you will find this system the best, the easiest, least expensive, and most satisfactory. Address correspondence

A. T. DE LA MARE PTG. & PUB. CO. Ltd
P. O. Box 1697, New York.

HENS AND EGGS

Undoubtedly there are many readers of AMERICAN GARDENING who keep hens who do not take a poultry paper; possibly some take the wrong one. Gardening, fruit culture and poultry keeping dovetail together perfectly, each filling a season comparatively dull in the others.

Realizing the above facts, we have arranged with the publishers of POULTRY MONTHLY, to offer that journal in club with AMERICAN GARDENING, for the coming subscription season, both journals postpaid, one year, for the SMALL SUM OF \$1.25.

POULTRY MONTHLY is now in its nineteenth year; it has always been recognized as the leading publication in its particular field. Sound and reliable in its teachings, and not the mouthpiece of cranks, cliques, or rings. Its correspondents are practical and successful men, in the harness to-day. The publishers of AMERICAN GARDENING recommend Poultry Monthly as being one of the very best poultry papers issued, and advise all interested to accept this Great Combination Offer.

A WONDERFUL OFFER!

American Gardening (Weekly), \$1.00 } Both \$1.25
Poultry Monthly, - - - 1.00 } One Year, postpaid.

Present subscribers who are in arrears must pay up in full to become eligible to this offer.
Address AMERICAN GARDENING, P. O. Box 1697, New York City.

We Believe every reader of AMERICAN GARDENING feels proud of his paper and the practical, uplifting work it is engaged in; it is raising the standard of Gardening, and maintains the dignity of all engaged in the profession.

We Believe the cause of good Gardening to be eminently a missionary one; from which it follows that the circulation of AMERICAN GARDENING can most readily be enlarged through the efforts of its subscribers. Our circulation, therefore, is an index of our subscribers' interest in the paper.

We Believe our readers are anxious to see AMERICAN GARDENING reach the highest possible development in its work of horticultural education. The legitimate aim of a class paper is to increase its influence through an extension of its circulation.

American Gardening is the most successful of all, and has the largest circulation of any weekly Journal devoted to Gardening and Fruit Culture, but has scope and the disposition to add to its list tens of thousands of patrons. "Come with us and we will do you good," is a living truth in our case; all our new friends are loud in their praise of the value of the paper to them. The cause of "AMERICAN GARDENING" is the cause of American Horticulture.

We Believe that our friends are the ones on whom to call to push circulation. Understanding thoroughly the value of the paper to every one interested in gardening, they can best express its spirit and comprehensiveness and succeed in making subscribers.

With a View to obtaining the assistance of our friends in the propaganda for new subscriptions, and in order that they may have something tangible whereby to remember their successful efforts, we have compiled the following list of

SUMMER

PREMIUMS

SUMMER

To which we invite your attention in the hope that each and every reader of the paper will endeavor to send us AT LEAST one new subscriber before the close of the season.

American Gardening for 1896. Containing 832 pages of text and illustrations, with complete index. The most full, complete, and desirable volume on Gardening, Fruit Growing, and kindred subjects ever issued. Few works on horticulture can compare with this in value to the student or the practical man. *Handsomely bound in cloth, with leather back and edges.*

This most desirable volume will be forwarded, express paid, to any address, for only seven new subscriptions at \$1.00 each.

American Carnation Culture. By L. L. LAMBORN. A work on the Classification, History, Propagation, Varieties, Care, Culture, etc., of the Divine Flower. Nothing has been left unsaid from which any practical benefit could be obtained. Illustrated. Third edition. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Beautifying Country Homes. By J. WEIDEMANN. A handbook of landscape gardening. This is the most elegant and useful work on the subject ever issued in this country. It is beautifully illustrated with numerous fine wood engravings, and with 17 full-page and 7 double-page colored lithographs of places already improved. It contains general directions for lawns, roads and drives, walks, hedges, trees and shrubs, gardens, ornamental grounds, hints on burial lots, etc., etc. The beautifully colored plans of improved places are accompanied by descriptions giving the names and positions of the various trees and shrubs employed in planting, thus providing a complete planting map. Cloth, 4to. Reduced from \$15.00 to \$10.00.

Given for 20 new subscriptions at \$1.00 each.

Bulb Culture (Henderson's). By PETER HENDERSON. Contains special cultural directions for over 200 varieties of Bulbs. Compiled with great care, and its information is accurate, reliable and up to the latest. 25 cents.

Given for 1 new subscription at \$1.00 each.

Bulbs and Tuberous-Rooted Plants. (Their History, Description, Methods of Propagation and Complete Directions for their Successful Culture in the Garden, Dwelling and Greenhouse). By C. L. ALLEN. The author of this book has for many years made bulb growing a specialty, and is a recognized authority on their cultivation and management. He has taken the initiative to make bulb growing a special industry in this country, and writes from his own long and extensive experience. The subject is treated in a very exhaustive manner. Handsomely illustrated, cloth, 12mo. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

Canning and Preserving Fruits and Vegetables, and Preparing Fruit Pastes and Syrups. By ERMENTINE YOUNG. This work gives a full account of the best methods by which the surplus fruits may well be saved for home use and for the large market demand, and a handsome profit accrues

to the home workers. A practical chapter on evaporation of fruits is embodied in the book. Paper, 20 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemums and Their Culture. By EDWIN MOLYNEUX. Sixth Edition. By far the best practical work yet written on this subject. 50 cents.

Given for 1 new subscription at \$1.00 each.

Chrysanthemum Culture for America. By JAMES MORTON. This is the only 'Mum book published for American use, and is an excellent and thorough work; especially adapted to the culture of Chrysanthemums in America. The field is fully covered. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Elliot's Practical Handbook of Landscape Gardening. By F. R. ELLIOTT. Designed for city and suburban residences and country schoolhouses, containing designs for lots and grounds, from a lot 30x100 feet, to a 40 acre plat. Cloth, 8vo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Ferns and Fern Culture. By J. BIRKENHEAD, F. R. H. S. How to grow Ferns, with selections for stove, warm, cool and cold greenhouses; for baskets, walls, Wardian cases, dwelling houses, etc. A thorough and complete work by a renowned specialist. 128 pp., thoroughly illustrated, 16mo., cloth. 75 cents.

Given for 2 new subscriptions at \$1.00 each.

Fruit Culture, and The Laying Out and Management of a Country Home. By W. C. STONG, ex-president of the Massachusetts Horticultural Society, and vice-president of the American Pomological Society. Illustrated. New revised edition, with many new additions, making it the latest and freshest book on the subject. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Fruit and Fruit Trees of America, or the culture, Propagation and Management in the Garden and Orchard of Fruit Trees generally. By A. J. DOWNING. Second revision and correction, with large additions. By CHARLES DOWNING. This work has no equal in the country, and deserves a place in the library of every pomologist. It gives descriptions of all the finest varieties of fruit, native and foreign, cultivated in America, and contains the names and synonyms of over 10,000 varieties. Over 1100 pp., with several hundred outline engravings, including supplements. 8vo., cloth. \$5.00.

Given for 12 new subscriptions at \$1.00 each.

Grape Culturist. By A. S. FULLER. New and revised edition, 1894. One of the best works on the culture of hardy grapes, with full directions for all departments of propagation, culture, etc. Illus., cloth, 12mo., \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Grape Growers' Manual. (The Bushberg). An exhaustive work on the cultivation of the grape, with accounts of diseases, insects, etc., by specialists. The descriptive list of varieties is specially useful and complete; the typographical method of designating importance of varieties is a feature. Pp., 200. Royal 8vo. Illustrated. Cloth, \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Gardening for Pleasure. By PETER HENDERSON. New and enlarged edition. A Guide to the Amateur in the Fruit, Vegetable and Flower Garden, with full directions for the Greenhouse, Conservatory and Window Garden. This is a complete encyclopedia of horticultural information, treating on soils, fertilizers, the lawn, garden designs, culture and care of plants, greenhouse building, heating, cottage and window gardening, the orchard, and many other important subjects. A monthly calendar of operations is also appended, which will act as a first-class guide to the amateur horticulturist. Illus., cloth, 12mo. \$2.00.

Given for 4 new subscriptions at \$1.00 each.

Gardening for Profit. By PETER HENDERSON. A guide to the successful culture of the Market and Family garden, profusely illustrated. Although written mainly for the market gardener, the amateur interested in vegetables or fruits can easily adapt its teachings to the smallest requirements. Cloth, 12mo. \$2.00.

Given for 4 new subscriptions at \$1.00 each.

Greenhouse Construction. By PROF. L. R. TAFT. A complete treatise on Greenhouse structures and arrangements of the various forms and styles of Plant Houses for professional florists as well as amateurs. All the best and most approved structures are so fully and clearly described that anyone who desires to build a greenhouse will have no difficulty in determining the kind best suited to his purpose. The modern and most successful methods of heating and ventilating are fully treated upon. Special chapters are devoted to houses used for the growing of one kind of plants exclusively. The construction of hotbeds and frames receive appropriate attention. Over one hundred excellent illustrations, specially engraved for this work, make every point clear to the reader and add considerably to the artistic appearance of the book. Cloth, 12mo., \$1.50.

Given for 3 new subscriptions at \$1.00 each.

How to Grow Cut Flowers. By M. A. HUNT. A thoroughly practical treatise on the cultivation of the Rose and other flowering plants for cut flowers. \$2.00.

Given for 5 new subscriptions at \$1.00 each.

How to Know the Wild Flowers. By MRS. WILLIAM STARR DANA. A guide to the names, haunts, and habits of our common wild flowers. The most handy and easy reference book for amateurs. With 100 illustrations by Marion Satterlee. 12mo. \$1.75.

Given for 5 new subscriptions at \$1.00 each.

Henderson's Handbook of Plants and General Horticulture. By PETER HENDERSON. This has long been acknowledged as the standard American work on general horticulture, giving history geographical distribution and cultural directions for all cultivated fruits and flowers. Illustrated. Cloth, 8vo. \$4.00.

Given for 9 new subscriptions at \$1.00 each.

Insects Injurious to Fruit. By PROF. WM. SAUNDERS. A work of great value to all fruit growers, written by a man of science as well as a practical agriculturist, and the result of careful and minute observations and experience. It treats, under separate chapters, of the injurious insects which prey upon our fruit trees, vines and bushes, together with their mode of operation, and contains careful directions as to the best means of destroying them. With over 400 pages, 440 illustrations. 12 mo. Cloth. \$2.00.

Given for 5 new subscriptions at \$2.00 each.

Johnson's Gardener's Dictionary. This is a new and revised edition, greatly enlarged, of "Johnson's Cottage Gardener's Dictionary," first published in 1846; containing a full and reliable list of every plant in cultivation, names printed in bold type, rendering reference easy. An important feature of the work is the placing of synonyms alongside the correct name, instead of in a separate list. The habitat of each variety is given along with the date of its introduction. The cultural directions are brief and to the point. Insect foes, diseases and their remedies are fully described, and figures of some of the former have been given. Handsomely bound in one volume. \$4.00.

Given for 9 new subscriptions at \$1.00 each.

Landscape Gardening or How to Lay out a Garden. By EDWARD KEMP. Intended as a guide in choosing, forming or improving an estate (from a quarter of an acre to a hundred acres in extent), with reference to both design and execution, with numerous fine wood engravings. Cloth, 12mo. \$2.50.

Given for 6 new subscriptions at \$1.00 each.

Parsons on the Rose. By SAMUEL B. PARSONS. New and revised. A treatise on the propagation, culture, and history of the Rose. Illustrated. \$1.00.

Given for 3 new subscriptions at \$1.00 each.

Peach Culture. By JAMES ALEX. FULTON. New, revised, and enlarged edition. The only practical guide to Peach Culture as followed on the Delaware Peninsula, but essential to those cultivating this fruit in any other part in the United States. Fine cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Popular Flowers and How to Cultivate Them. By E. S. RAND, JR. Illustrated. New edition, with appendix, revised and enlarged. Crown, 8vo. \$2.00

Given for 5 new subscriptions at \$1.00 each.

Poultry Culture. By K. FELCH. How to raise, manage, mate and judge thoroughbred Fowls. Cloth, 12mo. \$1.50.

Given for 3 new subscriptions at \$1.00 each.

Practical Floriculture. By PETER HENDERSON. A guide to the successful propagation and cultivation of Florists' Plants. As in every work from this gifted author's pen nothing has been left unsaid that bears on the subject. Illustrated. Cloth, 12mo. \$1.50.

Given for 4 new subscriptions at \$1.00 each.

Profits in Poultry. Useful and ornamental breeds and their profitable management. This excellent work contains the combined experience of a number of practical men in all departments of poultry raising. It is profusely illustrated and forms a unique and important addition to our poultry literature. Cloth, 12mo. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Secrets of Rose Culture. By W. J. HATTON. In this neat volume are described all the newest and most improved designs for building rose houses, heating, ventilation, management, and much other valuable information on rose culture. The latest and best varieties of roses for every purpose and condition are named, and their special values pointed out. 162 pp. Illustrated, 12mo., paper. 50 cents.

Given for 1 new subscription at \$1.00 each.

Strawberry Culturist. By A. S. FULLER. Containing the history, sexuality, field and garden culture of strawberries, forcing or pot culture, etc., fully illustrated. Flexible cloth, 12mo. 25 cts.

Given for 1 new subscription at \$1.00 each.

Success in Market Gardening. By W. W. RAWSON. Illustrated. This work is written by one of the most successful market gardeners in New England, who gives here the results of his life-long experience in the growing of vegetables out-of-doors and under glass, with special adaptation to the climate of New England. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

The Art of Propagation. By J. JENKINS. A concise, practical treatise on the rapid multiplication of vines, plants, trees, etc., detailing the management in propagation of seeds, bulbs, cuttings, etc., and the manner of operating in grafting, budding, inarching, etc. Ample illustrated. 30 cents.

Given for 1 new subscription at \$1.00 each.

The Amateur Orchid Cultivators' Guide Book. By H. A. BURBERRY, F. R. H. S., orchid grower to the Right Hon. Jos. Chamberlain, M. P. Tells how to grow Orchids, in cool, intermediate, or warm houses, successfully. There is a calendar of operations for each month, and full information as to the treatment required by all orchids mentioned in the book. Just published. New edition, colored plates. \$1.75.

Given for 5 new subscriptions at \$1.00 each.

The Nursery Book. By PROF. L. H. BAILEY. This is a complete handbook of propagation of plants treating on seedage, separation and division, layerage, cuttage, graftage, including grafting, budding, inarching, etc. It tells plainly and briefly what everyone who sows a seed, makes a cutting, sets a graft, or wants to know. \$1.00.

Given for 2 new subscriptions at \$1.00 each.

Potash

is one of the three important ingredients of a complete fertilizer; the others are phosphoric acid and nitrogen. Too little Potash is sure to result in a partial crop failure.

Free

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write.

Diplomas and Certificates



HORTICULTURAL SOCIETIES,
FOR FAIRS, INSTITUTES, : :
GARDENERS' CLUBS, ETC.

These should be selected well in advance of the date needed, and secretaries of above should send now for our set of samples, all of which have been especially designed by first-class artists and engravers for the purpose. Owing to the wide demand for these samples and their expensiveness, we will mail the set of five, postpaid, for \$1.00; money refunded on return of samples, or placed to credit of order, as directed. One single sample sent free on application if the writer will explain the exact purpose for which it is needed.

A. T. De La Mare Ptg. Co., Box 1697, New York.

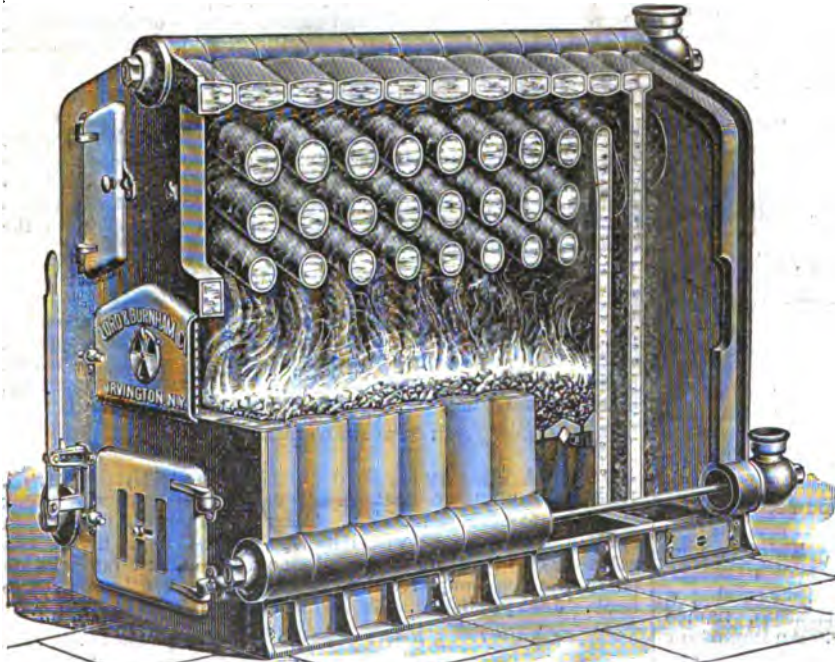
HEADQUARTERS FOR SUPPLIES.

LORD & BURNHAM CO.,

Horticultural Architects and Builders and Manufacturers of Heating and Ventilating Apparatus.

(Established 1856.)

Plans and estimates furnished on application for Heating and Ventilating Apparatus erected complete, or for material only. Highest Awards at the World's Fair.



NEW SECTIONAL HOT WATER HEATER.

Specially adapted to large ranges. Will heat up to 16,000 feet of glass. Highest economy. Moderate cost. Also heaters for smaller work. Send six cents postage to New York office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

INCUBATORS. Self-regulating. Catalogue free. G. S. SINGER, Gardingdon, N. Y. Mention American Gardening when you write.

DWYER'S SUMMER and AUTUMN LIST
Of Pot Grown and Layer STRAWBERRY Plants, CELERY, VEGETABLE Plants, FRUIT Trees and ALL NURSERY STOCK will be mailed free to all who apply for it.



T. J. DWYER, Cornwall, N. Y.
Box 178.

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.

Mention American Gardening when you write.



METAL WHEELS

In all sizes and varieties, to fit any axle. They last forever. Either direct or stagger spoke. Can't break down; can't dry out in resetting of tires. Good in dry weather as in wet weather. Send for catalogue and prices. ELECTRIC WHEEL CO., QUINCY - ILLINOIS.

Mention American Gardening when you write.



OUR LOYAL AGENTS.

One spirit of the success of Page Fence is the fidelity of our thousands of Agents. Many of them claim that it is the genuine satisfaction derived from handling the very best article, rather than the profit, that keeps them in the business. Customers are free to express thanks for having been induced to purchase. Enough to make anybody happy.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.



CATTELYA LABIATA.

We have received advices of an early shipment of

Cattleya Labiata and we are now booking orders.

For other imported Cattleyas and established stock of the finest quality apply at once to

Lager & Herrel,

Orchid Growers and Importers.

SUMMIT, N. J.

Mention American Gardening when you write.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.

CYPRESS
SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.
GREENHOUSE
AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

BIG STRAWBERRIES,
AND HOW TO GET THEM. PAGE 619.

SEE ALSO PAGES 627-628 FOR EXCLUSIVE
PREMIUM OFFER.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII, No. 141.
CONTINUED SERIES VOL. LI.

NEW YORK, SEPTEMBER 4, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Am. Dahlia Society.....	622	Ornamental Trees.....	620	Market Reports: N. Y.,		Root Galls.....	614	Windbreaks.....	621
Big Berries for All.....	619	Florists' Hall Associat'n	622	Phila. and Boston. 623-625		Roses, Favorite.....	626	Window Garden.....	626
Blackberries.....	616	Forest Lands as Parks	617	Missouri Botanical		Scale, Lime Wash for...	618		
Bollers, Some New.....	617	Fruit Garden, The.....	616	Garden.....	616	Spinach.....	615	Illustrations.	
Cabbage & Cauliflower	615	Fruit Trees, Supporting	616	Obituary.....	621	Strawberry plants, pedi-		Bollers, Lord & Burn-	
Chrysanthemums.....	616	Fruits received.....	618	Plum, Pond's Seedling	615	tree.....	621	ham's, New.....	616-617
Cost of some Garden		Herbs.....	615	Poultry Notes.....	626	Strawberries, Big.....	618	Victoria Pond at Shaw's	
Crops.....	614	Home Plot, All About...	627	Private Gardeners.....	622	Vegetable Garden.....	614	Garden.....	613
Crops in Oklahoma.....	619	Jadoo Fibre.....	619	Questions Answered....	621	Village Square, The.....	618	Plum, Pond's Seedling	
Disease of Shade and		Lettuce.....	615	Readers' Notes.....	619	Weeds.....	615	tree of.....	615



FIG. 173.—VIEW OF THE VICTORIA POND IN THE SHAW BOTANICAL GARDEN, ST. LOUIS, MO.

The view presented above shows Mr. J. Gurney the head gardener standing upon one of the leaves of the plant. The pond was constructed in 1894. A great work is being done by the directors of the garden which according to the last report had 301 named species of trees, 561 shrubs, 1129 hardy perennial herbaceous flowering plants, 39 hardy ferns, and 35 named species and varieties of aquatic and marsh flowering plants. The total number of species, other than annuals, grown numbers about 4000.

The Cost of Producing Some Garden Crops.

During the last few years I have kept an account of what it has cost me to produce and place on the market some garden crops. The results are now valuable to me—and perhaps they will be so to others also—for from them I can now decide which crops are the most profitable for me to grow if I am obliged to place them on the wholesale market. About the only crops that I have been able to grow with a profit for other than the local market are small fruits, celery, and cauliflower.

Among the small fruits there is the greatest expense for fertilizers and labor in producing strawberries. My records of the last three years have shown what it has cost me to produce a quart of berries when I have obtained a yield of 700 bushels per acre. When I get larger crops the cost of production is of course much less.

My items of expense in growing an acre of strawberries run about as follows: Interest on money invested in land at 5 per cent., \$10; fertilizers, including mulching material, \$50; plowing, harrowing, and marking, \$5; transplanting, \$10; keeping up stock of crates, \$10; cultivation, \$85; picking 3,200 at 1½ cents, \$48; making a total of \$168. This gives us about 5 cents per quart as the cost of production. Thus, with an average crop of strawberries, one must obtain more than 5 cents per quart to get a margin above the cost of labor, fertilizers, etc., at their market value. Of course if one can do a part of the work himself, or obtain fertilizer more cheaply, so much can be deducted from the expense account.

If a yield of 200 bushels per acre be obtained, the figures show that the cost of production will not be above 3 cents per quart, and if by using more fertilizers and doing more work, a still larger yield is obtained, the cost of product will be less in proportion as the yield is increased.

The records show that raspberries can be produced at a less cost per quart, usually at 3 to 4 cents; currants 2 to 3 cents. The other small fruits I have grown in only small quantities, so have not kept an account of expenses as yet with them.

Among the vegetables my main money crop is celery, and on this I have been able to figure closely as to cost per 1,000 plants. I can grow good celery by the method I use—which is a modification of the "new" celery culture—at a cost of about \$6 per 1,000 plants. The expenses may be briefly itemized as follows: For fertilizers preparing the ground, and interest on investment, \$1.50; growing the plants and transplanting, \$1; cultivating until ready for blanching, \$1.50; placing the blanching boards, 50c.; (the celery is in double rows, so one-half of the work is saved); distributing the water in irrigation estimated at 50c.; trimming and packing for market, \$1; making a total of \$6 per 1,000.

In estimating the market value of the 1,000 plants, one must take in consideration that 25 per cent. or more may be culls, so that it will cost \$7 to \$8 per 1,000 to grow marketable bunches, and by the methods of culture usually practiced, considerably more.

We see from these figures that if one knows how to grow and market celery, he will not lose, if the price in the wholesale or general market for medium celery drops to \$10 per 1,000 or one cent per bunch; also that larger profits are made by producing a superior article.

It has cost me about \$2 per 1,000 to grow marketable cabbages, and from \$3 to \$4 to grow cauliflowers that are marketable; for often there are a good many culls among the latter. In growing these the largest item of expense is for fertilizers, for no other crop require so much feeding.

While keeping these records I have also noted the quotations in the city markets, so that I can now figure pretty closely on the margins in growing these crops when the fertilizers are all purchased and the work paid for.

Some gardeners like to grow crops for me by contract, i. e., I furnish land, fertil-

izers, horses, and tools, while they do all the work. These records show me how much I can afford to pay them for their crops.

About \$5 per 1,000 can be paid for marketable bunches of celery, and everything needed to grow except labor furnished. The cost of producing crops, of course, varies under different conditions, and the inexperienced in growing those crops extensively would probably fail to obtain any margin for profit.

W. H. JENKINS, Delaware Co., N. Y.

Root Galls of Cultivated Plants.*

Galls, that is unusual malformations of small portions of a plant, occur upon leaves, stems and roots, and may be induced by insects or other animals, fungi, etc. The time limits of this paper will not even permit the briefest outline of the various forms of galls of leaves or stems, and the subject assigned me is at once taken in hand.

Root galls are many and equally various as to their origin. A cabbage or turnip plant, for example, is making a death struggle, and upon removing its roots from the ground, they are found malformed beyond what the imagination would picture. The English truckers call it "finger and toes" in an attempt to describe in the name the strange combination of roots. We called it "club-root," or "clump foot," but by whatever name it is known, the fact remains that the root system has been wonderfully malformed, and instead of the ordinary fibrous roots, there are presented a multitude of ill-shaped nodules strung together in a mass.

This galling of the turnip, cabbage and allied plants is due to a minute fungus that makes its attack upon the plant, while it is quite young, and the roots are small and tender. The germs are in the soil and remain there for years feeding upon the roots of weeds or other plants belonging to the cabbage group of plants. Thus the mustards, shepherd's purse, pepper grasses, and similar weedy plants, all harbor the club-root fungus. This fact of the wide range of the turnip club-root pest is brought out to show how plants related to the crop infested may be the means of preserving the enemy and even increasing the germs in a soil, while the field is devoted to some other crop, simply because the weeds as nurse plants of the fungus are permitted to grow.

Instead of a cabbage, one pulls up a vigorous bean plant. Upon its branching roots are a score or more of nearly spherical bodies half the size of small peas. These are the so-called tubercles, and consist of a wall of normal bean root tissue; but within this the cell contents consist of innumerable bacteria-like cells.

The following is Tuleuf's description of these galls as translated by Smith in the large book upon "Diseases of Plants," issued during the present year: "The short-red-shaped microbe forces its way into a root hair or epidermal cell, multiplies there, and is conducted to the inner cortical cells by plasma threads continuous through the cell-walls. A rapid division of the inner cortical cells is set up, till a tubercle is formed. . . . The bacteria multiply simultaneously, and are transferred into new cells where a great change comes over most of them; they enlarge very much and become club-shaped or dichotomously branched bodies without power of division. . . . The great importance of the tubercles of leguminosae is that the plants bearing them are capable of taking up free nitrogen from the atmosphere and utilizing it."

This somewhat lengthy quotation has been made because the finding of these galls upon the roots of clover and other leguminosae by some growers of roses and other ornamental plants had led to some discussion in the public press. The galls common to the clover roots and those of peas, beans and many other plants are not due to the same cause as those met with upon the roots of many ornamental plants, and the finding of them upon the clover growing in a certain soil should be

in no way used as a reason for discarding that soil for greenhouse purposes. In like manner the galls produced in the roots of any clover or clover-like plants in a bed devoted to roses is no index whatsoever that there is danger of the roses becoming galled.

The subject of tubercles and the peculiar relation that they bear in the economy of the plant bearing them forms one of the most interesting chapters in modern vegetable nutrition. In case of the galls upon the cabbage roots, they are a positive injury, and sooner or later the plant loses the power of root absorption and wilts and dies; the roots in the meantime becoming rotten and foul smelling. With the tubercles of the leguminosae there is increased vigor given to the plant that bears them, and the advantage of their development is a well-recognized fact which is taking practical shape in the artificial propagation of the tubercle germs and their being sown where there may be otherwise a lack of them in the soil.

In the third place, let us consider the nature of the root gall of the roses. These are not due to fungi or the organisms that produce the tubercles of the leguminosae plants, but result from the attack of microscopic worms that are known as nematodes. These creatures are in form like that of an ordinary eel, and under the microscope are easily recognized by their almost constant wiggling, thus giving them the common name of eel-worms. The general appearance of rose roots when infested with the nematode worms is not unlike that of a lupine or a sweet clover plant. The galls of the one might easily be mistaken for those of the other until the microscope is brought to the rescue when the differences become so remarkable that the wonder is that cases so widely separated should produce results that to the naked eye are so similar.

The galls of the rose vary much in size and shape, but usually are but a small fraction of an inch in diameter and consist of enlargements of the fibres of the root system.

These nematode galls are much more abundant upon the roots than generally known, and because of their being underground, they remain unnoticed until the infested plants show unmistakable signs of decline, when an investigation results in the discovery of the root galls. They are much more abundant in warm climates than elsewhere, and that is one reason why they are especially prevalent in the greenhouse.

In looking up the subject of a tomato blight in Mississippi, a few years ago, the writer was impressed with the fact that nearly every tomato plant was affected with root galls due to nematodes. In the North the freezing of the soil thoroughly and deeply during the winter tends to keep these roots' enemies in check, and from experience, it is a fact that they are more abundant in seasons that follow mild winters.

In this there is a practical suggestion, namely, the long, hard freezing of a soil that is to be afterwards employed in the greenhouse for the growths of plants like roses and violets that are very liable to attack from the nematodes. These worms propagate with great rapidity where conditions favor them, and it is better to take all precautions in keeping them out of the bed at the outset than to leave the work of eradication until after they are well established in the plants.

This leads directly to a consideration of precautionary measures. In the first place, the plants should be free from the worms—the most difficult end to reach, as it means a removal of the earth and a careful examination of the roots with the rejection of all plants that are infested. The eel-worms may come in with the earth, and, as before stated, they infest the roots of many plants, there is difficulty in making a selection and feel at all certain of freedom from the worms. Soil that has been used for growing a previous crop should be discarded, especially if the plants lacked in vigor, due to inroads upon them made by the nematodes. Freezing, as before stated, is a cleansing process for the soil. On the other hand, a high temperature is also inimical to them. The heating of the soil

*Paper by Dr. B. D. Halsted read before S. A. F. Convention at Providence, R. I.

either baking or steaming, is probably the more valuable of the two treatments, and has been resorted to by some growers with cheering results. If manure should be the chief vehicle for the entrance of the worms, it may be possible to either heat it, or else resort to plant food added in the form of commercial fertilizers. It is also possible that some substance may be put upon the soil, that while harmless to the plants, may kill the worms that are not already in the roots of the plants. Lime is such a substance, which when sprinkled over the surface, will at each watering, yield a lime wash that is destructive to the worms it reaches. Kainit, one of the leading commercial fertilizers, has proved effective in combating insects that work through the soil, and it is not unlikely that this substance may prove of value in the greenhouse.

In conclusion, it has been the attempt in this brief paper to call attention to three classes of root galls by citing one case of each. First, those malformations of roots like the club-root of the cabbage due to a low form of mold, the germs of which enter from the soil, and when in sufficient number, destroy the affected plant.

Secondly, the root galls of clover and

referred to the remedy suggested in Henderson's "Gardening for Profit," for club root, (which was simply an enlargement of the root glands, stopping the flow of sap drawn up by the mouth of the feeding roots, thus checking the development of the plant), and that was lime. Lime is an almost insoluble substance. It takes about 1,000 pounds of water to dissolve one pound of lime. In the application of lime water to greenhouse plants the calculation should always be made that the soil is being put in a semi-tropical condition. It is never subjected to a frost-cleansing influence, unless the soil is thrown out. Mr. May has an expensive plant for sterilizing the soil to destroy all life that was in it, but this would not be practicable on places of smaller extent than his. The speaker advised the use of 100 pounds of lime, thoroughly slacked until it is fine, to which should be added three pounds of nitrate of soda, dried by exposure until it has lost a goodly portion of its crystallization—none of the vital part of the chemical is lost thereby, only a little of the weight; reduce it to a fine powder either by a rolling-pin or by stamping it underfoot. Mix thoroughly with the soil that is to be put in the benches. Or the powder may be applied on the soil after the roses are set, by a

Pond's Seedling Plum.

The accompanying figure shows Pond's seedling Plum, seven years planted, with its third crop of fruit, as growing on nursery grounds of M. J. Henry, Vancouver, British Columbia, Canada. "This variety," that gentleman writes, "has proved to be one of our very best late market Plums for the Pacific Coast, ripening September 1 to 15, directly after the Bradshaw and Columbia; fruit large, egg-shaped, flesh color, selected specimens have weighed three to the pound."

The Vegetable Garden.

Spinach.—Any vacant piece of ground may be utilized now for spinach to stand over winter, and be available for early spring use. The ground having been first prepared by manuring and digging over, seeds should be sown in drills 15 to 18 inches apart. Before hard frost give a slight protection of salt hay or light strawy manure, not covering too thickly before settled hard frost. When this protection is carefully removed in the early spring, the spinach will soon commence to grow, and come in quite early. It should not be sown on any but light dry soils, where surface water quickly escapes.

Cabbage and Cauliflower.—Hoe these after every rain. If they are coming in too early, they may be checked by cutting away one-half of the roots by the use of the spade on one side only of the plants. The green worms are liable to appear at this season in great numbers, and if not checked and destroyed, will soon skeletonize all the leaves, making the plants useless. The plants should be watched every day, and as soon as any worms make their appearance, dust with hellebore or slug shot; these substances, however, should not be used if the plants are heading, and instead a little alum water sprinkled on will be an effective check.

Lettuce.—A good supply of lettuce sown now will come in very usefully later to transplant into the cold frames, and if then properly protected from frost, will give a constant supply until quite late in the winter. The most satisfactory all round variety for this purpose, we find in the Curled Simpson.

The Weeds have of late been growing very rapidly in the garden, owing to the unprecedented wet season. The days are quite infrequent when hoeing can be done with advantage, but every opportunity should be taken to hoe, as weeds look bad and take not a little nourishment out of the ground. It is best in such weather after hoeing to take a coarse rake and gather whatever weeds and rubbish possible and cart them entirely away, taking care not to allow any to remain on the walks. At this season of the year the garden will contain old vegetation, as blighted potato and tomato vines, peas, onions, that harbor fungous spores or insects, or weed seeds. Some part of the premises should be selected where all such could be put, and when it gets dry enough, burn every atom, thus destroying, instead of preserving, many of the causes of blight and insects, that will surely attack the crops another year, if all be dumped into the manure pile, to be in all probability again carted into the garden. This is the only method by which these foes can be kept at bay.

Herbs.—Those desiring to dry any herbs for winter use, should now cut what they want, tying in small bunches and hanging either under a shed or under a tree to dry. If dried in the sun, they become brittle, and are not so useful. Sage, Thyme, Summer Savory and others are useful for this purpose.

W. M. EDWARDS, Conn.

The states of Missouri, Kansas, Nebraska, Iowa, Minnesota, Wisconsin, and Illinois will join in making a gigantic fruit display at the Omaha Exposition next year. The representatives of the societies met recently and further arranged for a grand apple parade and carnival to be given in October, 1898.



FIG. 174.—TREE OF POND'S SEEDLING PLUM.

clover-like plants which are produced by bacterial germs, but instead of inducing decay, promote the life of the plant in which they are lodged. Between the clover and the tubercle germ there exists, so to say, a mutual understanding, and their life processes are united for the benefit of both.

Lastly, a third class of root galls is considered, namely, those most abundant upon the roots of greenhouse plants, and much dreaded by florists. These are produced by microscopic worms that, thriving in the tissue of the abnormally swollen roots, check the activity of the plant, and ultimately may cause it to sicken and die.

For the eradication of these microscopic eel-worms, there are certain precautionary measures that may well be borne in mind, namely, the examination of the roots of plants and the rejection of all that are galled; the cleansing of the soil in all its constituents by freezing, baking, or steaming; the use of lime-water while the crop is growing, and possibly that of kainit or some other commercial fertilizer, bearing in mind always that sick plants are unprofitable, and good management means watchfulness from the start and always.

Benjamin Hammond, Fishkill, N. Y.,

"duster," such as is used for the application of Paris green. The mixture should be spread on top of the soil until there is a white dust all over it. The experiment could be tried in a house where there are two or three benches, and the results could then be noted.

In answer to Mr. Cushman, of Euclid, O., as to the part played by nitrate of soda in the mixture, Mr. Hammond stated that it gave a rapid and vigorous growth to the plants, and the more vigorous they are, the more roots the plants would have to feed them and keep them going.

The fruit-growers of Chattanooga, Tenn., are not altogether satisfied over their crops this year. One of them said recently that the fruit crop was of an inferior grade and the prices were exceedingly low this season. There was an abundance of fruit, but a great deal of it was unfit for shipping purposes. More was realized on the strawberry crop than on anything else.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send a stamp for our new catalogue.

The Missouri Botanical Garden.

To the Editor of American Gardening.

The writer regrets that space will not permit him to give as lengthy description of this noted garden as he would like. The Missouri Botanical Garden was founded and endowed by Henry Shaw, an Englishman, who amassed a fortune in St. Louis, at the hardware trade. His estate was in the suburbs of St. Louis, or now the Botanical Garden. At first the grounds about his country home were planted and laid off with care, as a means of making his home beautiful. But as they began to attract the public and the public began to be interested in them, they were made welcome.

In 1858, their proprietor conceived and began a plan for converting them into a scientific institution, after the model of the gardens at Kew, England. He secured a legislative act from the state to place the garden, during his lifetime or by will, under management of a board of trustees.

Mr. Shaw left a fine endowment for the garden. The board of trustees, according to Mr. Shaw's will, consists of fifteen members, ten of whom are designated by name, while five act as trustees because of their office: the Mayor of St. Louis, the Bishop of the Episcopal Diocese of Missouri, the president of the Academy of Science, the president of the Public School Board, and the Chancellor of Washington University of St. Louis.

In forming the Botanical Garden, Mr. Shaw contemplated providing pleasure with incidental instruction for the public and training gardeners and botanists. The first of these wishes is met by maintaining the garden and greenhouses in as attractive and instructive a manner as the means at the disposal of the trustees permit. For the second he endowed a school of botany as a department of Washington University, in connection with which institution the laboratories are located. The trustees have also established a course of study and manual work for such garden pupils, and have created six scholarships of four years duration for such pupils, who are paid a sufficient sum to cover their board, and in addition are given rooms in the lodge at the northwest corner of Tower Grove and Magnolia avenues, where they have the use of a reading room containing the principal text-books on gardening, and the best of the current horticultural periodicals.

The director of the garden is Dr. William Trelease of Washington University. The director and his assistants, with such special students as are able to do advanced work, are continually occupied with a study of scientific investigation of matters connected with botany and kindred subjects, the results of which are published in a series of annual reports and elsewhere.

There is an herbarium building which contains the herbarium and library of the institution. It is open only to students or investigators and persons having business with the director, whose office is located in it. The herbarium contains the large collection of the late Dr. George Engelmann, consisting of about 100,000 specimens, and a general collection of about the same size, including the herbarium of Professor Bernhardt.

There is also a good library of about 12,000 volumes, some of which are pamphlets. But in the reading room and elsewhere on the first floor, current accessions and works of the most general character are kept. The books most likely to be consulted in connection with the herbarium are distributed through rooms where the specimens of plants are kept. The horticultural library is kept about the offices of the horticultural assistant.

While the library and herbarium are closed to the general public, visitors competent to use them are always welcomed and given every facility for study.

The main greenhouse contains a variety of specimen plants, a large specimen of Mauritian Screw Pine, the Traveler's tree

of Madagascar (*Ravenala Madagascariensis*); also a large collection of Cacti, including the Giant Cactus of Arizona, Agaves, and Yuccas. There is also a nice collection of economic plants.

You also will see in the garden a large specimen of *Fritchardla Gaudichaudiana*, presented by Dr. Asa Gray; the Southern Palmetto, *Kentia Belmoreana*, *Sealor-thia elegans*. Directly in front of the gate and before the main greenhouse is the parterre, a sunken space in which bedding plants are massed during the summer season, while at both sides of the entrance way the larger Cacti and Yuccas are generally grouped.

Near the parterre are several ponds, where some of the more ornamental Water Lilies are grown.

W. L. MOORE, Tex.

Chrysanthemums.

Feeding.—September is the month when feeding occupies a large share of the time, and feeding, like everything else, needs a little care. Many a man has gone around rubbing his hands with glee as he saw his plants running up and making great stems and looking as though they were going to produce a flower big enough to "knock the spots off the sun,"



FIG. 175.—VERTICAL SECTION OF LORD & BURNHAM'S STANDARD BOILER. (See page 617.)

and (incidentally) his rivals, and later wondered why somebody else with a comparatively insignificant looking lot of plants produced flowers just as good as his. Plants can get a surfeit of good living just as easily as a man can. Natural manures as horse, cow or sheep manure seem to be of more use to the Chrysanthemum than artificial ones, changing off from week to week from one to the other, and not forgetting every little while to stop and give some clear water to wash down the manures and sweeten things out a little.

Well Ripened Wood is the only secret of high-grade flowers. Back in the summer in these notes I said that the less manure was used in soil the better. The plants should make in summer good healthy wood without being rank; then when fall comes, such wood ripens well, with little pith in the center, stands with impunity lots of feeding, and does credit all round. The crown bud is swelling rapidly, and the stem is hardening and thickening down in a manner that gladdens the heart of the grower; such wood is easily ripened, but where the bud has not yet appeared run easy on the feeding till it shows itself.

Syringing should be eased up as the days get shorter, and the house should

be pretty well dry before nightfall; a spray over in the morning and after dinner on sunny days is ample. When the weather is dull, run dry, and mildew will not make its appearance on your premises.

The Army Worm must be closely watched for now. In the day he bores in the soil at the foot of the plant; at night he varies it by boring the buds; and the poor grower he bores all the time.

C. TOTTY, N. J.

The Fruit Garden.

Blackberries.—Cut out the old canes and tie the new wood to the supporters, if any. The growth being rather refractory to handle, it would be better if some inconspicuous yet convenient part of the ground could be given up to them where they could enjoy a heavy mulching all summer that would also keep down small weeds. I am not sure that pruning of the blackberry is necessary other than to cut away weak growths and old canes. My experience this summer has again convinced me that double the quantity of berries and those of as fine a quality can be obtained from the unpruned bushes, as from those pruned in the orthodox style, providing plenty of mulching or water can be had.

Grapes.—Where the fruit is within 18 inches of the ground, a light mulching will keep all clean even if bagged. They will look more respectable to the visitor too.

Supporting Fruit Trees.—This will be necessary work if the owner takes any pride in his garden. It is not always convenient to obtain the right kind of stake for the purpose, and when such is the case it is possible to get along fairly well by using binder twine. A peach tree, for instance, seldom has a main central branch, so we tie two of the central opposite branches together, near the top, then tie another pair or two opposite in the same way, making thus four or six starting points and continue on outward and downward to the bottom or lower branches where needed, forming, if you like, a crude spider's web, lacking acenter. Taking care that all ties or loops are loose about the branches, and start from just below the loop from above.

A more convenient way, if a long strong pole is at hand, is to put it in the ground six inches, and bind it to the trunk and start the tying from that. By using a little time at this work, there are no unexpected splits and regrets about your best peach and plum trees.

Looking around, I don't see a more handsome tree in sight just now than a small one of *Wealthy*, trunk $2\frac{1}{2}$ inches in diameter, height 10 feet, fairly weighted down with glowing dark red fruit, rather flat in shape, $2\frac{1}{2}$ by $3\frac{1}{2}$ inches; by the way, this apple is described as being in season from December to February; queer that now they are practically ripe here.

We Have Now in use for table, *Rivers* and *York peach*, *Bartlett* and *Buffum pears*, *Gravenstein apple*, and *Imperial Green Gage plums*. *Doyenne Boussock* pear makes a fine one for market, and cooking purposes and is one of the trees that bear well every year.

JAMES HOLLOWAY, N. Y.

Investigations made by the Department of Agriculture show that the pith of the Sunflower stem is the lightest substance known, with a specific gravity of 0.028, as compared with 0.09 elder pith, which has heretofore been considered the lightest of all materials. The specific gravity of reindeer hair is 0.1, and of cork 0.24. Cork has a buoyancy of 1 to 5 in its use in life-saving apparatus at sea, and reindeer hair is rated at 1 to 10. The world's visible supply of reindeer is limited. The demand on the cork tree, too, is rapidly increasing, owing to the development of the world's thirst. Thus it is that the discovery that the buoyancy of sunflower pith is as 1 to 35 is of some consequence. There is no scarcity of sunflowers.

Some New Boilers.

Greenhouse heating is perhaps the most perplexing of the many problems that confront the practical and amateur gardener, because without adequate heating power during wintry weather, all knowledge and skill in plant growing amounts to naught. Therefore a talk about boilers and heating now, at the time when all who have glass erections, are, or should be, making their preparations for the coming winter, is seasonable.

American Gardening opens the subject with illustrations and remarks from the most expert manufacturers in the line, and introduces views and descriptions of some new patterns from the famous Irvington firm, whose reputation for more than 20 years has been of such a nature that further comment is unnecessary.

The Lord & Burnham Company of Irvington, N. Y., and 160 Fifth Avenue, New York City, is bringing out some new boilers adapted for heating greenhouses and residences. The Standard boiler has been on the market for 20 years, but recent improvements to increase its efficacy have led to the construction of an entirely new set of patterns, in which an increased fire surface is provided, as well as a fire travel which is designed to extract the principal heat from the pro-

Another new boiler of the sectional type is shown in fig. 177, which is a broken view showing the construction, the fire travel, and the arrangement of the heating surface. The sections are united by means of a machine-finished surface, into which small grooves are milled, which are brought up tight against asbestos gaskets by means of a long tie rod running through the sections, as shown, which, it is said, secures a perfectly tight joint with little labor. The intermediate sections consist of a water leg forming the side of the ash pit and fire chamber, and at a sufficient distance above the fire line to permit of an ample combustion chamber, and three slanting waterways, one above the other, the bottom one being the smallest and the others increasing in size, run from the side water legs and connect with a central column which runs to the top of the boiler. This construction permits of an unrestricted upward circulation and an internal circulation. It also permits the direct impingement of the fire on all of the slanting waterways, and has the effect of increasing the size of the combustion chamber so that the gases may be thoroughly ignited and consumed, all of which tends to increase the power of the boiler. At the back of the boiler a diving flue is formed by two solid

Forest Lands as Parks.

Where you have the natural forest, every move made to smooth and clean up the grounds means the death of more or less of the trees. It is only a question of time when you will lose all that portion from which the underbrush has been removed. To prevent such calamity, constant attention should be given to introducing young trees in with the older ones, which must surely die. To keep up a plantation requires constant renewal, some being replaced every year or two, or five or ten, or fifty, or one hundred years. We suppose this ground is to be kept for this purpose forever, and it will be a constant renewal of material there.

The history of the forest is the same everywhere. In almost any primeval forest on flat or slightly rolling land, the melting snows make the grounds swamps every spring. The accumulation of leaf mould retains that moisture at the surface. The roots lie near the surface, giving practically surface trees. All leaves that fall should, therefore, be left upon the ground; there is nothing else that can take the place of that mulch of leaves or similar material. To cover the roots of many of our trees with soil is to kill them.

The Beech is particularly susceptible

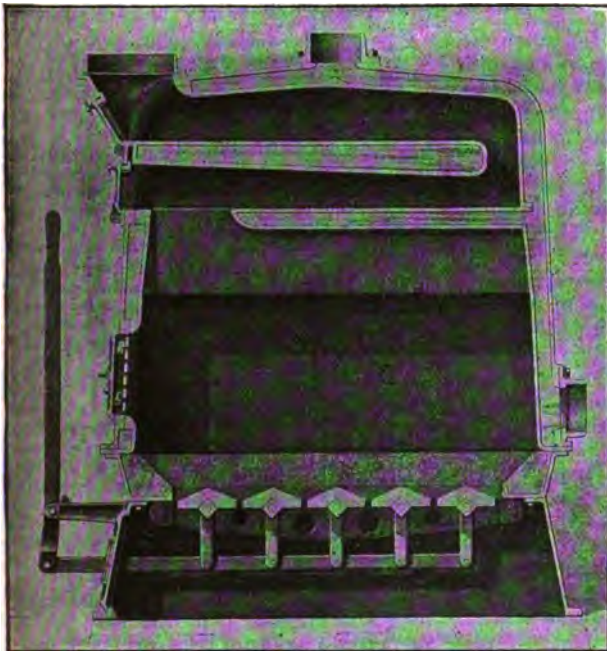


FIG. 176.—LONGITUDINAL SECTION OF STANDARD BOILER.

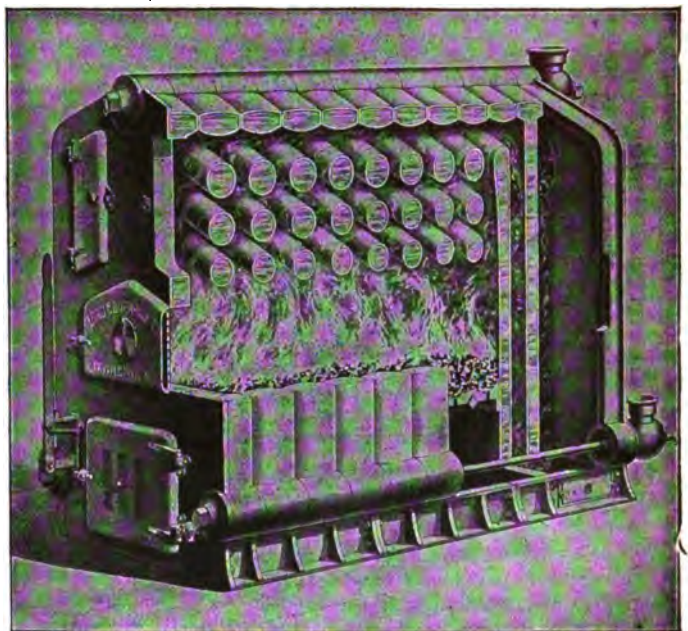


FIG. 177.—BROKEN VIEW OF NEW SECTIONAL BOILER.

ducts of combustion previous to their exit. Fig. 175 shows a vertical section of the boiler, looking towards the front, from which it will be seen that a large surface is exposed to the direct radiation from the fire. In fig. 176 the fire travel is shown, the gases rising from the fire at the front of the boiler, and passing under a thin, flat, horizontal water chamber to the back of the boiler, where they rise again and pass under the dome of the boiler to the smoke outlet at the front. This construction provides an ample combustion chamber and a sufficient depth of fire chamber to permit of a sufficient body of fuel to carry a fire through long winter nights. The flow and return connections are made by means of flange joints, so that the heater may be readily disconnected for making changes. The grate is of a construction to be readily operated and at the same time promote combustion by permitting a free entrance of air to the fire. The boiler is made in four sizes, presenting respectively 2, 2½, 3½, and 5¼ square feet of grate surface, and rated to carry, 450, 650, 1,050, and 1,850 feet of 4-inch pipe, which is approximately equal to the same number of square feet of surface in the form of radiators. Two larger sizes of the heaters are arranged to be set in pairs, when they are rated to heat from 2,100, 2,700, and 3,800 feet of 4-inch pipe.

water sections, a flue and damper being placed in the rear section so that a direct draft may be effected to facilitate starting the fire. On closing this damper the products of combustion must dive to the bottom of the boiler before they can rise and reach the smoke outlet at the rear. It is pointed out that the boiler presents a large amount of direct heating surface in proportion to grate surface provided. Large doors are provided in the boiler for removing any accumulation that may form on the surfaces of the boiler. A grate is provided of the labor-saving type. The pipe mains may be connected at either or both ends of the heater, as desired, by means of flanged elbows. It is pointed out that the boilers may be used successfully with any kind of fuel. They are made in four sizes, composed of 9, 10, 11, and 12 sections, and have respectively 10, 12, 14, and 16 square feet of grate surface, rated to carry 3,500, 4,200, 4,900, and 5,600 feet of 4-inch pipe. Where large capacities are required the boilers are adapted for double connections, when they are estimated to heat double the amount of surface given above. An eight-page circular giving full descriptions, illustrations, dimensions, and ratings can be secured on application.

Our publishers will supply any book wanted. Send your orders.

to such treatment. The root grows along with half of its diameter out of the ground and under an old Beech tree you are continually tripping over the roots. Wherever there is a break there will be a sprout. The breaking of the roots seems to be like the breaking of the trunk, and it is probably for that reason it will not bear covering.

I do not think that even where people are passing it is well to protect the roots with a covering of sand, but that leaves are all that is necessary; or in their absence a straw or straw manure could be used. I do not think the bruising with shoes is as bad as covering with soil. It is injurious, I suppose, to have people stamping around, but I think of the two it is less harmful than covering the roots. It is like putting an impervious plaster on a man's skin. The underbrush and trees in any part are mutually essential. —J. F. COWELL, Buffalo, N. Y.

Peach Diseased.

(To F. A. T.)—The specimens are affected with brown rot (Monilia) for which the only known remedy is the destruction of all diseased fruit.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 15, 1904.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

* * It is earnestly requested that all correspondence arising from articles appearing in our columns be addressed to THE EDITOR at the office of this paper and NOT to the authors or signatories concerned. A matter that will interest one person, so that he will desire further information, will doubtless interest others. Our columns are open for discussions.

BY the title Village Square The Village Square is meant a space which is to be treated as an ornamental garden or small park area, and as such could with equal propriety be named a city or town square. It is in fact a development of the building scheme of the place, and if properly carried out, serves to very greatly enhance adjoining property values. This is a material gain not to be forgotten, but there is another equally important feature that applies strongly in the more densely populated areas, that of affording a breathing space in the midst of the conglomeration of brick and stone.

The work of beautifying a town is too often neglected by the governing authorities, and except when an energetic Improvement Association is operating, posterity has to lament the selfish greed of its ancestors, in that for a fancied immediate gain in dollars and cents the aesthetics of town construction have been

sacrificed, or so placed that their recovery is attended with great difficulty, and sometimes enormous expense.

It is a healthy sign in the majority of rising townships of to-day that provision is being made for small park areas, as they are called. For our own part we would prefer to confine the term park to the larger tracts of land, designating these smaller spaces as town or village squares.

The possibilities of treatment which these two areas offer to the landscape gardener are entirely different, and more skill is requisite for the proper handling of the smaller area. The restricted area usually offers no great natural effects that can be seized upon by the artist, as is often the case in large parks. In the city square the effect has to be made absolutely; it is a creation. The mere dotting of trees here and there, displaying chiefly their trunks even with gracefully winding walks, is not enough. Again, the common error of outlining the whole with a bank or solid mass of greenery, however designed, is to be severely condemned.

A city square is a part of the town itself, and as well as serving as an open area for repose of the weary, should present from all the surrounding streets and buildings pictorial effects equally as beautiful as those that can be seen from the inside. With this object in view, the plantings should be blended into those that are on the streets in the form of shade trees. How to arrive at this result is beyond our present province, the matter is best demonstrated by a plan, and in our next issue we intend to give such an one which has been specially prepared for American Gardening by Mr. J. Forsyth Johnson. This plan will show a village or city square, in which provision is made for a pavilion, band-stand, Water Lily pond, and promenade. The plantings will be designed to be of a permanent nature, with no "bedding out," thus avoiding what is always a very heavy drain on the finances of a small community. If such planting be desired, however, there is ample space where it may be indulged.

The plan to be given will prove of great value to all improvement associations and can be easily adapted to suit any situation or condition.

Big

Strawberries.

Many have tried to do so, and the majority have failed. A man who for a score of years has produced the best berries sent to the New York market is certainly capable of teaching others, and we have therefore great pleasure in announcing that Mr. Jerolaman, who has this enviable record, has contracted to write for American Gardening exclusively, his methods of culture and begins this week by giving the first part of an autobiography.

A letter from Mr. Jerolaman in a recent issue of American Gardening has caused the strawberry experts of the country to enter into correspondence, and the interest evinced has resulted in the present series of articles. Mr. Jerolaman has been frequently sought before for information, but never yet have his methods been laid before the public.

Fruits Received.

A New Plum.—Samples of a seedling plum were lately received from M. J. Graham, Riverside Nursery, Adel, Iowa, who writes concerning it as follows:

"The new plum of which samples are sent you, originated with Henry Hunt of Dallas County, Iowa, some ten or twelve years ago. These specimens are not over two-thirds normal size, as they have ripened during a protracted drought, and the trees stand in hard ground without mulch or cultivation.

"It was grown from seed of the Wild Goose plum, supposed to have been pollenized by the Lombard, as a tree of the last-named variety stood quite near the tree of Wild Goose, from which the seed was taken.

"In the same vicinity also grew a tree of a large native plum brought from the woods, the fruit of which closely resembles the De Soto plum in size and quality. This is a true *Prunus americana*, and it is possible that the new plum is the result of a cross between the wild plum and the Wild Goose. The fruit of the new plum averages larger than the Wild Goose when grown under same conditions, and is far superior in quality.

"The tree is perfectly hardy, is very productive, and does not split down like the Wild Goose tree.

"The fruit ripens soon after the Wild Goose, and before the americanas, thus coming on the market when it is bare of really good fruit.

"Mr. Hunt has heretofore called my attention to this plum, but not until he brought me a jar of the canned fruit did I fully appreciate its work. 'The proof of the pudding is in the eating,' and for culinary use we claim this plum superior to any heretofore introduced."

The fruit, as seen by us, is roundish oval, 1½ inches in length; cavity, shallow; suture, very shallow and distinct; apex, slightly elevated; skin, red, with slight bloom, covered with numerous dots; flesh, yellow, tender, juicy; stone, flat, 1x½ inch; flavor, sweet. A very pleasant eating plum.

Champion Peach.—Fruits of this have been sent by C. A. Baird, Baird, N. J. The fruit is heavy, of fair size, yellow, flushed red. Flesh white, juicy, flavor sweet, not aromatic; a refreshing peach for eating out of the hand.

Lime Wash for Scale, Etc.

I have tried common lime-wash, and tried it so successfully for the past forty years that I have not tried anything else, says William Saunders, superintendent of the grounds of the Department of Agriculture, Washington, D. C., and not only for fruit trees, but for all sorts of trees; for instance, trees in cities frequently become somewhat stunted in growth and covered with the bark-scale. When a case of this kind is encountered the trees are headed back during the fall, and small twigs removed and the whole body and branches covered with lime-wash, which effectually cleans them. Orange trees when attacked are treated in the same way, and with the same result.

A grapevine becoming infested with mealy bug had, after pruning, the entire wood, old and young, covered with the wash, and the bugs were exterminated. Last fall I came across an old *Opuntia* in an out-of-the-way corner, which was entirely covered with scale. It was completely covered with the wash, and is now perfectly clean. The wash flakes off and the scale insects with it, smothered to death. In fact, any plant with bark-scale is cleaned and cured in this way, so that a boy with a bucket of whitewash is our cure-all for scale.

One effect of the new tariff will be to increase the cutting of native forests, the Canadian timber being practically excluded by the duty of \$2 per 1,000. This is protection of a wrong kind. Preservation of the forests is a national necessity.

Big Berries for All.

Being the Cultural Methods of Henry Jerolaman, the Strawberry King. Preceded by an Autobiography.

I will first give you a short sketch of my life in order that your readers may know something as to what manner of man it is that attempts to instruct them in strawberry culture. Commencing with the records, I find in our old family Bible, that I was born on the 14th day of November, 1834, at Peapack, Somerset County, N. J., in the center of a lime stone district, not because of any particular desire on my part at that time to be born in the center of a limestone district, but as I have always believed it was entirely owing to the fact that I happened to be there at that time.

Let me here state that lime stone or lime is one of the very best materials to sweeten wet, sour, and heavy lands; also a word about the above record. In after years, in trying to find out on what day I was born, being afraid it was on Friday, I spoke to my father about this record. His reply was: "Henry, I never bothered about putting down any little thing. I waited until I had a whole lot, then I got at it, and put you all down together; it might have been three or five years after when I set it down. I know I figured you all out; there was about two years between you all and I guess I got you down about right." From this it will be seen that my father had a method—most farmers have!

Being very young at the time I was born, my father had no use for me, and my grandmother took me to live with her, and when I was old enough, she sent me to the Old Stone school house that stood upon the bank of the mill race on one corner of her farm. In the old stone school house I received a very common and unfair education, for my grandmother said that she paid out \$3 per quarter for my schooling, and could never see the worth of her money in me.

When about ten or eleven years of age, I began to play what the boys now call "hooky," that is, would get off very early in the morning for school, then slipping off to some of the farmers, plant or hoe corn all day for 50 cents. The teacher going to see my grandmother in order to find out why I was absent from school, found out all about it, and told my father, who as soon as he saw that I was getting useful, moved me to his farm, which was midway between Mendham and Peapack, in Morris County. My father was a very good and kind father, if you let him have his own way—much better than the general run of fathers that get themselves into the newspapers, and of whom you read. He was known throughout as the man that owned one of the largest (about 300 acres) and the rockiest farm in the country; and also as the man who always planted 60 acres of corn, 60 acres of oats, and 60 acres each of wheat and rye, not having fertilizers enough for a single 10-acre lot. He also was famous for keeping just enough old horses to eat up nearly all that he did grow. My father ran a great many things all at once, or a good many things ran him, I never could find out which way it was. He had a grist mill, a saw mill, a cider mill, and still house, and I do not remember his ever finishing anything that he ever undertook. Yet he was always very happy and had plenty of time for fishing, hunting, etc.

Working very hard on this rocky, worn-out old farm until I was about 15 years of age, getting up in winter each night about 12 o'clock (midnight). In order to drive to Newark, good 25 miles each way from the farm to sell a load of oats or corn or what little grain we had to sell, arriving in Newark about sunrise, selling the load, resting the old horse at Doyle's Hotel, foot of Market street, at near noon hour I would start for home, arriving there each day about sundown, making the 50 miles each day and night. For every other load I took a fresh pair of old horses, and even this was pretty tough on the horses, but my father never gave me a thought. This was kept up for three or four years or until I was 15 years of age, when finding out through

my mother that my father never made or laid up over \$100 per year after he paid all his debts, I set to thinking.

One day one of our neighbors, a Mr. Ballantine, calling to see my father, drove under the wagon house on one side of which was a corn crib. I happened to be present, and thought I had a good chance then to give my father some advice. I began by saying: "Father, why do you not do as Mr. Ballantine does, plant only 10 or 12 acres of corn, feed it well, and have two cribs full of corn instead of only (pointing to our crib) one crib half full of nubbins?" Mr. Ballantine laughing angered my father, and as I did not charge father anything for this advice, he charged me with an old black horsewhip. I got out first and jumping over the fence into an old peach orchard I made good time for the other side, my father being a close second. Arriving at an old worn fence, I caught it before I got to the top, but when I did get out of reach I shouted, "Father, I will live to see the day when I will get more off a single acre than you get from your old 300 acre farm," and I am happy to state that my father too lived to see the prophecy fulfilled, and was pleased to acknowledge it to me.

After and for the past 24 years, I have made more from a single half-acre than my father did, as he afterward told me, in any one single year from his whole farm.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Use of Hydrocyanic Acid.—I was much interested in the article of B. T. Galloway in *American Gardening* of August 21, page 585, on "Injury to Violet Leaves." Will Prof. Galloway please state through *American Gardening*, how he prepares and uses the hydrocyanic acid gas? And will it injure any other plants?—THOS. L. CONE.

Crops in Oklahoma.—The grapecrop of Oklahoma is now about harvested, and the yield has been the largest on record with correspondingly low prices. Excellent Grapes could be had in wagon-load lots at 1½ to 2 cents per pound; much wine has been made where good shipping facilities did not exist. At the Oklahoma Experiment Station where more than 200 species and varieties are being tested, the crop was very satisfactory.

Shipments of Peaches have been larger than ever before, large consignments being made daily from Oklahoma City. The yield has been enormous and part of it is being worked into brandy by a recently established distillery at Guthrie. Prices varied from "if you pick them, you may have them" to a dollar per bushel.

Oklahoma watermelons bring special prices in Western markets. Lawrie is the principal shipping station where about 2,000 acres in the sandy ridges along the Cimarron River are planted almost exclusively to watermelons and cantaloupes, the soil being especially adapted to them. The industry, however, is an important one all over the territory.—JOHN FIELDS.

Tomatoes Eclipse and Nicholson's Hybrid.—Replying to J. C. who asks in your last issue (page 603) where he can obtain seed of Eclipse and Nicholson Hybrid Tomatoes, I would say that he can procure the last-named sort from R. and J. Farquhar & Co., seed merchants, Boston, Mass., who are the only firm cataloging it so far as I am aware. Eclipse originated with a Glasgow (Scotland) firm, and cannot be procured here. If "J. C." will forward me his address, I will, however, be pleased to send him a few seeds of this variety and of Comet, another first-class imported tomato.—W. N. CRAIG, Taunton, Mass.

Jadoo Fibre and Liquid.

To the Editor of *American Gardening*.

The workings of the human mind are similar among all the sons (and daughters) of Adam. We read an advertisement for months, for years perhaps, without taking in its full signification. Suddenly we are seized with the temptation to prove the merits of the advertised article, and we send our order forthwith. The above bit of philosophy is introductory to the story of an amateur's experience with Jadoo fibre and Jadoo liquid.

The word "Jadoo" was graven on my mind from having seen it in this paper every week for months. In the early part of July the thought struck me suddenly that I ought to give it a trial. I sent for a 120-pound bale of the fibre and a 2-gallon can of the liquid. Just at the time I received them, I also received from Costa Rica some tubers of fancy Caladiums, which a friend sent me, thinking they were something indigenous to that country. Packed in wet sphagnum, they had made during their two or three weeks' journey a frail, sickly growth of about three or four inches. Two of the tubers were planted in rich soil and four in the Jadoo fibre. Those planted in the fibre immediately grew, the sickly white growth changing quickly to healthy green, handsomely spotted leaves. Those in the soil made no additional growth, and finally died down entirely. I thought they were dead, but they sprouted again, and are now growing well, but not so freely as those in the fibre.

A *Latania borbonica* had been perishing for years from inanition, or some other occult cause, until it had dwindled down to nothing, and naught but a single point of green could be discovered. On shaking it out of the soil, I found that every trace of root was gone. I immediately potted it in the fibre. It picked up from that moment, and while the improvement is so slow as to be almost imperceptible, yet it really has made a new growth of at least two or three inches. My hired man is exceedingly pleased with it as a potting medium for Ferns.

The cost of the fibre renders its use impossible in the open border, although I wrapped the roots of some *Crotons* and *Geraniums* in it and planted them in the ground in the same bed as others. I cannot say that I notice any advantage in so doing.

The Jadoo liquid appears to be remarkably concentrated, and it must be diluted with water forty-eight times. This I gave used about twice a week for plants in the open ground, in tubs, and in pots.

Conditions vary so much in gardening, that it is impossible to attribute to any one cause given results. My opinion is that for *Roses* in open ground this liquid is very beneficial. For soft wooded plants and those grown in pots or tubs, there seems a possibility of its turning some of the lower leaves yellow, even diluted as freely as above. Whether that result with tuberous *Begonias*, *Abutilons*, and some other plants, was due to the use of the liquid or to other causes, I cannot positively say, however.

My feelings in the matter may be summed up as follows: Every plant that I have in the house this winter shall be potted in Jadoo fibre. It is clean to handle, light in weight, and will no doubt obviate bringing into the house many eggs of insects found in garden soil. Retaining moisture, it obviates the necessity of watering so often. As it never bakes or gets matted, all my seeds shall be sown in it in the spring in boxes. For this purpose it is necessary to sift it. Amateurs should give it a trial. Perhaps more anon on this subject.

L. C. L. JORDON, N. J.

A movement is on foot for the reorganization of the old Larimer Co. (Colo.) Horticultural Association, which for a number of years was very successful. A meeting of Larimer County fruit growers was held on August 21 in the District Court room, Fort Collins, for the perfection of the organization.

Diseases of Shade and Ornamental Trees.*

By B. T. GALLOWAY AND ALBERT F. WOODS.

(Continued from page 573.)

GASES AND OTHER POISONOUS SUBSTANCES IN THE SOIL.

Asphyxiation of the roots of trees is sometimes produced by illuminating gas which has escaped from some nearby gas main. It probably also acts as a direct poison. Diseases produced by other poisonous substances in the soil or by too great concentration of substances not poisonous are too rare to warrant their treatment here. The injuries from escaping gas can be remedied only by stopping the leak, and after removing as much of the old soil as possible filling in with fresh, rich earth.

DISEASES DUE TO ATMOSPHERIC CONDITIONS

As already pointed out, no sharp line can be drawn between the diseases due to conditions of the soil and of the air. As a matter of fact, a weakened state of the tree, due to certain conditions of the soil, will make it all the more liable to succumb to atmospheric influences. Again, it may happen that very favorable conditions of the soil may start growth at a time when it might be injured by cold or other conditions of the atmosphere.

DEBILICATION, OR DRYING OUT.

Young leaves and sometimes tender shoots which have pushed out during a spell of cold or cloudy, moist weather frequently wither and die when suddenly exposed to bright, hot sun. This is ordinarily called sun scald. It is not, however, a true scalding of the tissues, but is due to the fact that the latter lose water more rapidly than they can obtain it, and so wilt and dry out beyond the power of recovery. The excessive loss of water is brought about mainly by the leaves produced in very moist air not being adapted to resist excessive evaporation, even when there is an abundant supply of water in the soil and in the main parts of the plant. The trouble occurs more often in spring, when growth is rapid, and cloudy, moist days are followed by hot, dry ones. Later in the season the death of the margins and tips of the leaves of a great variety of trees, shrubs, and other plants is often observed. This is especially noticeable when a rather moist spring, favorable to growth, is followed by dry and very hot weather. Trees making a poor, stunted growth, suffer most, although any tree is liable to injury if the right conditions prevail. In parts of the West and Southwest the disease described is produced in a very short time by hot, dry winds, which sometimes sweep over the country. Frequently the leaves are literally cooked, but oftener the edges wilt, turn red or pale yellow, and then dry up.

Desiccation may also occur in the winter; in such cases parts of the tree or even the entire tree may be killed. Evergreens, especially Pines, are frequently seriously injured from this cause. A few warm days, occurring at a time when the roots are frozen or when the ground is so cold that it hinders root action, cause the needles to turn reddish yellow and to fall. Frequently only the tips of the needles at the ends of the branches are affected, and again young and exposed trees may be thoroughly dried out and killed. Cold, dry winds may bring about the same effects as warm ones with sunshine. Any condition, in fact, which will cause a more rapid evaporation of water than the roots can supply, will, if continued a sufficient length of time, eventually result in the injuries described.

Preventive measures.—In cases such as have been referred to it would be difficult to carry out remedial measures. In most instances the injuries are done before any steps are taken to prevent them, and of course it is then too late to save the tree or the parts of it that may have been injured. The efforts of growers, therefore, should be largely toward keeping the trees in such condition that the

injuries may be prevented. The means of preventing summer desiccation, while simple in themselves, are not always easily carried out. In cases where the injury results from imperfect root action owing to soil conditions, the latter may be changed by drainage, by cultivation, and in other ways by which more air is given to the roots. If the soil is too dry, as is often the case, its water-holding capacity may be improved by proper cultivation, by the addition of organic matter or humus, by mulching, etc. Top-pruning in dry seasons will often check the excessive demand for water and thus prevent injuries to the remainder of the tree. At present there seems to be no practical way of preventing the sudden damage which may be done by hot winds, except by copious watering of the soil, and even this may not always prevent serious injury, owing to the rapid evaporation at such times.

In the matter of preventing the winter "blighting," or drying out, of evergreens, every effort should be made to keep the roots in such condition that they can respond when a demand for water is made upon them. It is evident that if the soil is well dried out when winter sets in injury will result whenever the conditions already described prevail. When practicable, therefore, liberal applications of water to the soil may enable the trees to successfully pass through winters which, if such precautions were not taken, might prove injurious. Liberal mulching with straw or manure may also prove beneficial both as a conservator of the moisture and as a means of preventing the ground from freezing too deep and hard.

The most trying time for the trees is when they are young and small, that is, before the roots have extended very deeply into the soil. At very little expense, however, such trees may be protected from both wind and sun by straw.

EXCESS OF ATMOSPHERIC MOISTURE.

During periods of long-continued rains or fog, evaporation from the leaves of trees is slow, and as a result the entire plant becomes charged with water. One of the results of this is an unusual mechanical stimulation of growth, and this growth is increased by changes in the cell contents, which give the cell in question an abnormal attractive power for water. Under these conditions nutrition is interfered with and the growth produced is thin-walled, unhealthy, easily dried up, and a ready prey for insects and fungi. Older parts of the plant are affected by these conditions in various ways, one being the production of little warts and swellings by the abnormal growth of cells, as described above. These may appear on leaves or stems, the tissues of which still possess some power of growth.

It often happens that leaves in the diseased condition described become water-logged in spots. This is especially common where two leaves are stuck together with a film of water, instances of which have been observed this year on the Norway, the hard and the soft Maples, as well as on various other trees and shrubs. The close contact of the water with the cells of the leaf is very favorable to its absorption. Wet, translucent spots appear, especially around any little injury like the puncture of an insect or tear in the leaf surface. The presence of this water between these cells cuts off their supply of oxygen, and consequently they soon die and turn brown. The same trouble occurs when the leaf surface remains wet for twenty-four to forty-eight hours, even though not stuck to another leaf. The conditions about Washington, D. C., for example, have been unusually favorable to this trouble during the present season. In early spring vegetation was at first a little retarded by cool weather, but this was suddenly followed by good growing weather, during which the leaves of most trees and shrubs, especially those of Norway Maples, pushed out with great rapidity. This latter period was followed by one quite dry and warm, during which red spiders increased to unusual numbers, particularly on the lower and more protected leaves of the crown. After this came a period of several days of rainy weather, and many of the spiders were

washed off, but the leaves where they had been working became water-logged, as described elsewhere. The Norway Maples and Horse Chestnuts suffered most, the leaves of these trees in many cases appearing to have been scorched by fire.

Preventive measures.—Water-logging and other injuries resulting from an excess of moisture in the air are not easily prevented; in fact, it is questionable whether anything practical can be done in such cases. However, trees can be made much less liable to such trouble by proper care in planting, feeding, etc. As already described, such trees as Norway Maple and Horse Chestnut, which are peculiarly susceptible to injuries of this kind, require special care, and it is a question whether it would not be best in the end to discard them entirely where the conditions are such as to make it almost impossible to keep them in health.

LOW TEMPERATURES.

The injuries from freezing are closely related to those brought on by desiccation. In fact, freezing of the tissues is a drying out of the water which they contain. If the tissues are dried beyond the point where they are able to again take up water, they are killed.

In a state of maturity and rest most of our trees and shrubs, indigenous to regions subject to frosts, stand freezing without the slightest injury, provided they do not thaw out too rapidly. In case of plants introduced from warmer climates, however, all degrees of ability to withstand cold are to be found, some being killed by the slightest frost, while others appear to adapt themselves readily to the changed conditions and withstand quite severe freezing. The fact that trees, especially exotics, growing in wet situations are more easily injured by cold than those growing in drier places, is probably because the former do not mature their growth, while the latter do to a great extent. This is true also as regards the more succulent parts of plants, which are notably more subject to frost injury than the drier portions. Smooth-barked trees sometimes have their trunks and larger branches injured on the southwest side during winter, the injuries being characterized by the death of large patches of bark. During the latter part of winter, and early spring, when there are periods of several days of warm weather, the cambium on the south side of the trunk and larger limbs is stimulated to premature activity. If the warm spell is followed by cold, freezing weather, these partially active areas will be killed, after which they gradually dry out, the bark, young wood cells, and cambium shrinking. After a time the bark separates from the wood and finally splits. This may not occur until pretty well into the summer months, and may not then be evident except upon close examination. During rains these portions become water-soaked, various ferment and decay-producing fungi gain entrance, and the rotting of that part of the trunk begins, extending rapidly from year to year, until the tree either blows over or is killed.

(To be continued.)

Double Petunias.

I got some seed of Double Giant California Petunias. Some plants come double, very ugly, and some single; but all are small. I have them in woods dirt and well decayed horse manure, almost half an inch. They do not suffer for water.

What should I do to develop size? Some seed of single white Petunias I got for five cents a paper are nearly double the size of these.—H. C., Ont.

—Possibly the season has been too wet and cold to properly develop the largest doubles. Anyway, singles are always more satisfactory outdoors.

The Manhattan (Kansas) Horticultural Society held their August meeting at the home of Mr. C. G. Howard. Mr. W. J. Griffing read a paper on "Profit in Horticulture," and Mr. F. A. Mariatt talked about "Autumn Insects of Economic Importance to the Horticulturist." Mr. Griffing thought that the profit was pretty small with grapes at one and a half cents a pound for good table grapes.

*In Yearbook of the U. S. Department of Agriculture 1896.

Strawberry Growing.

He Claims Crankiness.

To the Editor of American Gardening.

Permit me to heartily thank Mr. E. W. Wooster of Maine for referring to me as "a little cranky" (page 587.) I am not only cranky but a combination of cranks. I even confess to being a stickler for many small details not noticed by the average fruit grower.

I understand a "crank" to be a person who finds an effect and keeps things turning until he finds the cause, and then makes good use of that cause. For a want of knowledge of this "cause," our markets have been glutted with fruit which people do not care to eat at any price.

For the last few years fruit growing has paid far better than any other branch of agriculture, and the "cranks" in the business will find it the most profitable for many years to come. Hundreds have gone into the berry business with the idea that it was a question of broad acres. There are men who have set out several acres when they had not facilities for manuring and cultivating one acre. Extensive general farming may do, but it is the prime cause of numerous failures in fruit growing. Intensive horticulture only pays now. Last spring I set out 39½ acres of Strawberries, but then I am a crank and things are turning nicely.

A year ago all this ground was sown to cow peas. They made a wonderful growth and were turned under in October. Then during the winter we went to Chicago stock yards and loaded on the cars nearly 1,000 tons of that grain-fed, thoroughly rotted, almost clear dung, besides a very large amount gathered here in the city. It was carefully spread as drawn, so the winter rains would wash it into the soil. We also added a good dressing of wood ashes and ground bone.

This spring the spading and Acme harrow and roller went over it sixteen times. I hired extra teams, and my men said I was a crank on manure and cultivating. Then I went for those "cranky plants" and set every one as carefully as if there were only a dozen to be handled. We trust no one except the foreman who stands behind the gang of men and sees that every plant goes in just so.

As quick as the men had made a round the twelve-tooth Planet, Jr. started and has gone over the ground every five days since. A gang of ten to twenty men drilled to handle a hoe as skillfully as a soldier would a musket, go over the ground ahead of the cultivator and remove every weed and loosen up and fine the soil directly around the plant, and the cultivator following, loosens up their tracks so the entire surface is covered with a fine dust mulch. Every plant is treated as tenderly as if it were a nursing babe.

We have had plenty of rain all summer, but it would have made no particular difference if it had not rained at all. The black nose of a 6-inch iron pipe sticks out of the ground at convenient places. The other end of the pipe is 1,200 feet away, attached to a centrifugal pump capable of sending more than 1,000,000 gallons of warm river water to any acre on the farm in ten hours, where it is distributed by floods and ditches in the most approved fashion known to irrigation.

Of course all this costs money; but being a crank and turning things so we sell everything for enough more than common fruit to pay our entire expenses and sell in advance, we can afford to have these things.

Come over to Michigan next June, brother Wooster, and see what an old broken-down soldier has done by being cranky. We run a free 'bus and free "hotel" to all visiting berry growers. I believe the visit will change your faith in some things.

R. M. KELLOGG, Three Rivers, Mich.

The superintendent of the greenhouses of the Pennsylvania Railroad at Altoona has been instructed to propagate 150,000 Ivy and Virginia Creeper vines for use along the lines of the railroad in embellishing and ornamenting the rocky and other cuts.

Some Questions Answered.

Windbreaks.

The nicest place for a flower garden is a strip about 100 feet from north to south and 150 east to west. On the north is a row of maples forty years old, on the east two large walnuts, and on the west a hedge of large evergreens between this strip and the drive. There is grass inside all the trees leaving the plot the size given. What would be best to break the force of the north wind coming under the maples? A trellis covered with Roses or Clematis, or what? Or would it be best to abandon it as is being done? The land is stiff and heavy and has been used for vegetables for 40 years till just lately.—H. C., Ont.

—The question suggests a great possibility for a handsome trellis either of various Roses or singly Crimson Rambler, or better still, a combination of the last-named, with Carmine Pillar, Bardou Job, and several others. Or a permanent bank of shrubs could be used.

Fertilizers.

How much barnyard manure and how much and what kinds of commercial manure would it be practical to use on one-tenth of an acre of pretty heavy land? The subsoil is heavy clay from one foot to 18 inches down?—H. C., Ontario.

—Two to three tons of stable manure would be a safe application. Two tons worked in properly, and later a dusting of lime on the surface should make the soil rich enough for ordinary purposes.

Greenhouse Building.

(To H. C., Ont.)—From the few details furnished, it is hard to give advice, and it seems as though the only practical solution is to build a small veranda. The exposure is such that a large number of plants other than Roses would thrive. Perhaps with more particulars, elevations, etc., we may be able to furnish more information.

Ladybirds.

(To J. H.)—The very small blackish insects are those of a little ladybird which is usually found upon trees infested with scale insects. It is beneficial and should be protected.

Insects on Strawberries.

(To A. C. J.)—The small circular holes on the strawberry leaves have been made by the strawberry slug (*Emphytus maculatus*). It is the larva of a four-winged fly and is pale green in color, about three-fourths of an inch long. The change to the mature insect takes place in the ground. Paris green is an effective remedy.

Spider on Lemon Verbena.

Is *Eucalyptus citrodora* as much troubled with spider as Lemon Verbena? Spraying with a force-pump six times a day, tobacco water, sulphur, or kerosene, all failed to rout it. Now I turn the plant upside down in a pail of water for hours at a time about once a week, but it is getting rather large for such treatment. I note the carbon bisulphide treatment and wish to try it, but can't just now.—ANNA CRANDON, Ont.

—If the above treatment is persevered in, success must follow; we cannot advise better; spider is cured by moisture. We do not think the *Eucalyptus* named is very subject to spider.

Obituary.

Erastus Corning, the well-known amateur of Albany, N. Y., died suddenly on August 29, at his home. Mr. Corning, who was one of the pioneer horticulturists of this country, early appreciated the beauties of the Orchid family, and years ago had got together a rich and varied collection. This unique and interesting lot of plants has of late years been much reduced. So great indeed was this gentleman's enthusiasm for the gathering of Orchids that heaven sent out a collector

of his own. *Cattleya Trianae* Corningii, one of the most beautiful of the almost white forms, was named for him; the name is also perpetuated in *Phalanopsis Corningiana* and *Vanda Corningii*. The collection has been under the charge of the veteran Orchid grower, Mr. W. Grey.

Odgen Goelet of Newport, R. I., died on his yacht off Cowes, England, on August 27. His estate at Newport was one of the most recent and was being developed into a first-rank horticultural establishment, under J. R. Johnson. The range of glass is specially fine.

William Murdoch, one of the pioneer nurserymen and florists of western Pennsylvania, died at Pittsburgh, August 4. Mr. Murdoch was born near Belfast, Ireland, in 1801. His parents were Scotch-Irish. The place was formerly called Hedgerow farm nursery.

Alfred Sutton, a former member of the firm of Sutton & Sons, the well-known seedsmen, Reading, England, died August 7, aged 79 years. He, with the founder, retired some years ago in favor of their sons.

William C. Young, a well-known southern Ulster fruit-grower, died at his home in Marlborough, N. Y., on Thursday night, August 12, aged 80 years. He was one of the pioneers in the fruit-raising business.

Robert McKinstry, a well known fruit grower at Greendale, N. Y., died recently in New York City. He was born near where his orchards were later established, and was 80 years of age. He was a large shipper of apples to Europe.

Calvin S. Goddard died very suddenly on the morning of August 4, at his home in Deering Center. It is thought that his sudden demise was probably owing to pleurisy of the heart. Mr. Goddard had been known as a successful florist in Deering for some 25 years. He originally came from Brunswick to Morrill's Corner as manager of Adams' nursery, and later started in business for himself at his present stand.

Nathaniel P. H. Willis died on August 3, in Chelsea, Mass., at the advanced age of 87 years. Mr. Willis was perhaps the oldest salesman in the country and undoubtedly the oldest in any seed store, having served for sixty-four years, prior to August, 1894, in the constant employ of Joseph Breck & Sons and their predecessors. Mr. Willis was the son of Charles Willis, well known among the farmers at the beginning of this century, and was descended from Charles Willis, of Puritan fame.

Henry A. Gane died at his residence in West Newton, Mass., on Monday evening, August 9. Mr. Gane had always been an ardent and successful horticulturist, and devoted much time to cross-fertilization of *Chrysanthemums*, having produced the Mrs. Jerome Jones, Golden Ball, West Newton, and many others. Mr. Gane was born at Frome, Somersetshire, England, in 1811, and was therefore 86 years of age.

Edwin M. Buswell who died recently was well known to horticulturists in the vicinity of Boston. He came originally from Lebanon, N. H., and was for many years in business in Boston, residing in the suburb of Malden. His love of plant life was inherent, and in his Malden garden it is said that he had at one time perhaps the most complete collection ever brought together in this vicinity of hardy herbaceous plants and shrubs, embracing, as it did, some four thousand different genera and species. From 1866 to 1881 he was treasurer of the Massachusetts Horticultural Society. To him belongs the credit of introducing the *Freesia refracta alba* into the United States, having received it in exchange for some tree seeds sent to the secretary of the Cape of Good Hope Agricultural Society. He was 84 years of old.

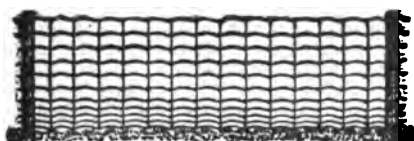
W. & D's.
CELEBRATED SURE CROP.
MUSHROOM SPAWN.
8 LBS. FOR \$1.00.
 Lilium Harrisii, Roman Hyacinths, Freesias,
 Paper White Narcissus, Callas,
 Etc., Etc.
 Special PRICES on application.
WEEBER & DON,
 Seed Merchants and Growers,
 114 Chambers St., N. Y. CITY.

Mention American Gardening when you write

MacDONALD & McMANUS, Wholesale Florists and
 dealers in Cut Flowers
 50 West 30th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Commission. Best market prices guaranteed.

Mention American Gardening when you write



SEE OUR FENCE AT THE FAIRS.

Our exhibit of native wild animals will be found at nearly all State Fairs and will well repay a call. Don't fail to bring the children. What they learn about Nature and Page Fence will prove of value in years to come.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist
 Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. **Joel Forsyth Johnson,** P. O. Box 1697, New York City.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at **TWO CENTS PER WORD** each insertion, payable in advance. The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

PANSY Giant Trimardeau, pkt. 10 cents; price list free. **H. Beaulieu,** Woodhaven, N. Y.

EGYPTIAN ONION sets, for immediate delivery if wanted, \$1.00 per bus. **F. O. B. Streater,** La Salle Co., Ill. Address **R. D. Kline.**

L. O. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

EGYPTIAN ONION sets, fine stock ready for shipping. Write for special low prices on any quantity you wish. **W. W. Thompson & Sons,** Station D. Milwaukee, Wis., Box 24.

DIRECT from the grower, duty free. **Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue** is now out, prices very reasonable, anybody who has not received a copy should address **Hulsebosch Bros., Englewood, N. J.**

TO LEASE for a term of years. The land and ten greenhouses, with cottage and stable, also small store attached, where a good business is done in the cut flower trade. 86 Palisade Ave. West Hoboken, N. J. 15 minutes from the Hoboken Ferries. Terms easy to responsible party.

Situations Wanted.

Advertisements will be inserted under this heading at **ONE CENT PER WORD** each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

WANTED—A position as gardener and florist on either private or commercial place. English, married, small family. Several years' experience in both America and Europe, best of references. Address **G. R. Mahood,** Box 380, Oimhurst, Ill.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Society of American Florists.

We have received from Mr. Frank H. Child, 242 Thames street, Newport, R. I., a copy of the photograph of the group of members of the Society, taken in that city, August 20. As many of the gardeners throughout the country have friends in Newport, these may be interested in knowing that copies can be procured.

What the Delegates Consumed.

The following particulars are taken from the Newport, R. I. News and show the amount of provender put up for the S. A. F. on the visit of that body to Newport as told in our last issue.

What was Consumed.

40 bushels of clams; 800 ears of corn; 800 sweet potatoes; 400 pounds of fish; 800 lobsters; 1600 clam cakes; 800 rolls; 40 loaves of brown bread; 1½ barrels of crackers; 800 pickles; 120 gallons of chowder; 2 gallons of ketchup; 80 pounds of butter; 40 pounds of lard; 40 water melons.

Help and Utensils Used.

9 cooks; 75 waiters; 5 dish washers; 2400 pieces of silver; 1600 plates; 400 platters; 65 large chowder bowls; 300 bowls for clams; 650 vegetable dishes for salt and pepper; 300 water pitchers; 60 small pitchers for drawn butter; 65 ladles for chowder; 800 glasses; 900 yards of tablecloth.

American Dahlia Society.

We are in receipt of the schedule of prizes for the Society's second annual exhibition to be held in Philadelphia, Pa., on September 21 and 22. The display will be made in the hall of the Pennsylvania Horticultural Society, and under its auspices. The awards in the competitive classes consist of silver and bronze medals and certificates. Intending exhibitors should communicate with the secretary, **E. C. Taylor,** 4827 Main street, Germantown, Philadelphia.

Responsibility of Delivery.

A decision rendered by Judge McCarthy in the City Court (New York), in *Siebrecht & Wadley vs. Pennsylvania Railroad*, seems to establish the fact that shippers can hold a transportation company responsible for losses occurring through frost and cold where the goods have been subjected to such cold through a delay that was unnecessary, or neglectful on the part of the forwarder.

Port Chester, N. Y.

The Westchester County Gardeners' Association held its regular monthly meeting at Irving Hall, Saturday, August 28, President Smith in the chair, and 18 members present. The principal business of the evening was the election of new members and making preparations for the forthcoming Chrysanthemum show to be held November 5 and 6. From reports of committees and others, there is abundant reason to expect a very successful exhibition, and that the exhibits will be of a very high order.

The following were elected to full membership: **G. B. Winslade**, superintendent of the Osborne estate, Mamaroneck; **F. Fremd** and **C. Fremd**, nurserymen, Rye, N. Y.; **W. A. Mills**, Port Chester, an interested amateur; **L. McCoy**, Richard Burdell, A. Scott, and Richard Cotterell, of Purchase, N. Y.

Several members made a creditable display of novelties, etc. **G. Draycott**, gardener to W. H. Parsons, Rye, N. Y., had superb Coxcombs, 16 to 18 inches over; **W. H. Harvey**, gardener to Hobart Park, a collection of Cannas and some grand samples of Semple's Asters; **A. Grierson**, gardener to Hicks Arnold, Esq., put up a flowering branch of *Polygonum cuspidatum*, also various varieties of *Gladiolus*, including White Lady and Snow White, and several *Liliums*.

Riverton, N. J.

The annual reception given by the **H. A. Dreer Co., Inc.**, to the private gardeners and florists of Philadelphia and the surrounding cities, towns and villages, came off on Tuesday, Aug. 31. Fully fifteen hundred people attended, of whom about 1850 went direct from Philadelphia on the steamers furnished by the **H. A. Dreer Co.** The weather was charming, and the visit most enjoyable, everything passing off very agreeably. Particulars of what we saw and heard there will be forthcoming in our next.

Tarrytown, N. Y.

There are rumors of the breaking up of the many fine estates and their gardens in and about this district. The owners say the assessors of taxes have made it impossible for them to continue longer there. At present, however, nothing is definite.

Florists' Hall Association.

TENTH ANNUAL REPORT OF SECRETARY.

The number of members of the Florists' Hall Association at the close of this report is 705.

The risks assumed are as follows: Upon 2,488,592 square feet of single thick glass. Upon 5,741,098 square feet of double thick glass. An extra one-half insurance upon 136,912 square feet of single thick glass. An extra one-half insurance upon 239,669 square feet of double thick glass. An extra whole insurance upon 356,811 square feet of single thick, and upon 1,122,417 square feet of double thick glass, making it equivalent to a single insurance upon 10,097,209 square feet of glass.

The Reserve Fund consists of \$3,000 in bonds and \$2,215.26 cash in hands of the Treasurer.

The amount of Emergency Fund on hand at the close of this report was \$3,865.79 making the total cash balance in the hands of the Treasurer \$5,581.05.

The Seventh Assessment levied March 1st, 1897, brought to the Treasury \$5,353.68.

The expenditures for salary of officers, stationery, advertising, postage, etc., have been for the year \$796.63.

The sum of \$2,919.13 has been paid for losses during the year: 36,783 square feet of single thick and 6,232 square feet of double thick glass, belonging to members, have been broken during the year.

The percentage of loss has been 1 square foot of single thick glass broken to every 67 1/4 feet insured and 1 square foot double thick glass broken to every 921 1/4 square feet insured.

The especial feature this year is that the loss on double thick glass has been unusually small.

The record for satisfactory adjustment of losses remains unbroken, and notwithstanding the universal business depression, the Florists' Hall Association has grown more rapidly during the past year than at any time since incorporation, and it closes the tenth year of its existence with an average gain of insurance upon 1,000,000 square feet of glass annually.

JOHN G. ESLER,
 Secretary.

Deafness Cannot be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENNEY & CO., Toledo, O.
 Sold by Druggists, 75c.

WHOLESALE MARKETS.

New York.

Owing to the absence of society people from town and the falling off in the shipping trade with other cities because of being now able to supply themselves, the cut flower trade has reached an unprecedentedly low state, and outdoor grown stock no longer pays to ship to this market, sales failing to cover express charges.

The fruit and vegetable market is overstocked with stock of all kinds, and only with difficulty manages to clear.

Hothouse grapes are greatly in excess of the demand, no matter what price they are offered at even 25c per pound very frequently fails to tempt buyers.

A few forced mushrooms have been seen this week; they sell freely at 75c. per pound, despite the competition of the outdoor crop.

Peaches are very abundant and sell at all manner of prices from 15c. to \$1 per basket. On Saturday very fine quality sold at 35c.

Plums have scarcely got a grip on the market yet, and are selling at very erratic figures; a stated price is difficult to give.

Pears are abundant and cheap, many of the finest samples are being placed in cold storage and are never exposed for sale; \$2.20 per barrel may be regarded as the extreme top notch.

Potatoes have gone up again, and Long Island stock is again making \$2, \$2.12, and \$2.25. Jersey stock is inferior and sells at from \$1.50 to \$1.87, with a few rounds and Rose at \$2.

Apples—Duchess of Oldenburg, hand-picked, d.-h. barrel, \$2@2.50; Gravenstein, hand-picked, per d.-h. barrel, \$1.50 @2.50; Holland Pippin, hand-picked, d.-h. barrel, \$1.50@2; Fall Pippin, hand-picked, per d.-h. barrel, \$1.50@1.75; twenty-ounce, hand-picked, per d.-h. barrel, \$1.75@2; Codling, hand-picked, per d.-h. barrel, \$1.50@2; open heads, red fruit, per barrel, \$1.25@1.75; large green fruit, hand-picked, per barrel, \$1.25@1.50; small and drops, 75c.@\$1.

Peaches—Maryland and Delaware, per carrier, 50c.@\$1.25; extra, per basket, 60@70c.; prime, per basket, 40@50c.; common to fair, per basket, 25@35c.; Pennsylvania, per 20-pound handle basket, 30@60c.; Jersey, extra, selected, per basket, 50@60c.; good to prime lines, per basket, 30@40c.; good to fair, per basket, 20@25c.; culls, per basket, 15@20c.

Pears—Bartlett, large, clean, per barrel, \$2@2.25; poor to fair, per barrel, \$1 @1.75; open heads, common, 75c.@\$1; Clapps, up-river, per barrel, \$1.25@2; up-river, per keg, \$1; Bell, near by, fair to prime, per barrel, \$1.25@1.50; common kinds, per barrel, 50c.@\$1.25.

Grapes—Delaware, up-river, per 24-pound case, \$1@1.25; Niagara, up-river, per 24-pound case, 50c.@\$1; Moore's Early, Maryland and Delaware, 24-pound case, 50@60c.; up-river, 24-pound case, 50@75c.; Worden, up-river, 24-pound case, 50@75c.; Champion, up-river, per 24-pound case, 40@50c.

Plums—Damon, per quart, 2@4c.; green, State, per 8 and 10-pound basket, 15@18c.; table varieties, state, 8 and 10-pound basket, 15@20c.

Watermelons—Prime, large, per 100, \$10@12; small to medium, 100, \$4@8.

Muskmelons—Hackensack, Nutmeg, per barrel, \$1@1.25; Monmouth County, Nutmeg, per barrel, 40@75c.; Jenny Lind, per barrel, 75c.@\$1.50; south Jersey, Gem and Jenny Lind, ordinary, 75c.@\$1.

Honey—State, clover, comb, per pound, 10@18c.; buckwheat, comb, per pound, —; extracted, white clover, per pound, 4½@5c.; extracted, buckwheat, per pound, 3½@4c.

Beets—Local, per 100 bunches, \$1.

Celery—Choice large, per dozen, 30@40c.; fair to prime, per dozen, 20@25c.; small and poor, per dozen, 8@15c.

Corn—Hackensack, per 100, \$1@1.50; other Jersey, per 100, \$1@1.25.

Cabbages—Jersey and Long Island, per 100, \$2@3.

Cucumbers—Jersey, per barrel, 50c.@\$1; Jersey, per bushel box, 25@50c.;

ARMSTRONG & McKELVY
Pittsburgh.
BEYMER-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR }
Cincinnati.
ECKSTEIN }
ATLANTIC }
BRADLEY }
BROOKLYN }
JEWETT }
ULSTER }
UNION }
SOUTHERN }
SHIPMAN }
COLLIER }
MISSOURI }
RED SEAL }
St. Louis.
SOUTHERN }
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY }
Cleveland.
SALEM }
Salem, Mass.
CORNELL }
Buffalo.
KENTUCKY }
Louisville.

IGNORANCE in regard to paint materials or painting would seem in this age to be inexcusable, when full information can be had free. If interested, it will pay to get pamphlet and color cards, also twelve pictures of houses painted in different shades or combinations of colors, free. Send your address.

National Lead Co., 1 Broadway, New York.
Mention American Gardening when you write.

Diplomas and Certificates

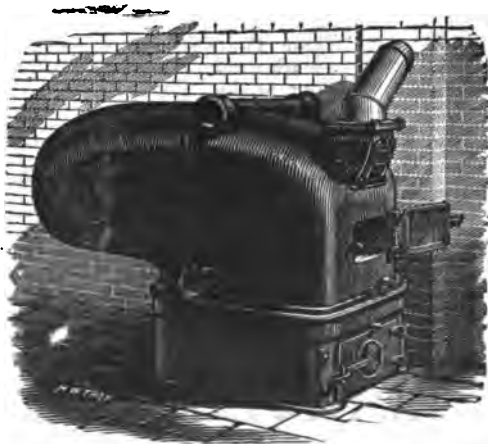


HORTICULTURAL SOCIETIES,
FOR FAIRS, INSTITUTES, : :
GARDENERS' CLUBS, ETC.

These should be selected well in advance of the date needed, and secretaries of above should send now for our set of samples, all of which have been especially designed by first-class artists and engravers for the purpose. Owing to the wide demand for these samples and their expensiveness, we will mail the set of five, postpaid, for \$1.00; money refunded on return of samples, or placed to credit of order, as directed. One single sample sent free on application if the writer will explain the exact purpose for which it is wanted.

A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.
HEADQUARTERS FOR ALL PRINTED SUPPLIES.

GREENHOUSE HEATING AND VENTILATING,
Horticultural Architecture and Building.



Hitchings & Co
ESTABLISHED 1844.
233 Mercer Street, NEW YORK.
FIVE PATTERNS OF BOILERS
NINETEEN SIZES
Perfect Sash Raising Apparatus
Rosehouses, Greenhouses, Etc., of Iron
Frame Construction erected complete
or the Structural Iron Work ship-
ped ready for erection.
Iron Frame Benches with the
"Perfect Drainage Bench Tile"
or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.
Mention American Gardening when you write.

Long Island, per 100, 50@75c.; hot-house, per 100, \$1.75@2; pickles, state, per 1,000, \$1.50@2.50; pickles, Long Island, per 1,000, \$1.25@2.25; pickles, Jersey, per 1,000, \$1.25@2.

Carrots—Local, per 100 bunches, \$1. Egg plants—Jersey, per barrel, 75c.@ \$1; per bushel box, 40@50c.

Green peas—Long Island, per bag, \$1.50@2.

Lima beans—Jersey, Potato, per bag, \$1.25@1.75; near by, flat, per bag, \$1@1.25; south Jersey, flat, per bag, 75c.@ \$1.

Onions—Jersey, white, per barrel, \$2.50@3; other kinds, per barrel, \$1.25@2; Orange County, red, per bag, \$1@1.75; yellow, per bag, \$1@1.50; white, per bag, \$1.50@2; Long Island, yellow, per barrel, \$1.50@2; state and Pennsylvania, yellow, per barrel, \$1.50@1.75; Eastern, white, per barrel, \$3@3.25; Eastern red, per barrel, \$2@2.50.

Peppers—Jersey, per barrel, 50@75c.; per box, 20@25c.

Parsley—Local, per 100 bunches, \$1.

Squash—Hubbard, per barrel, \$1@1.25; Marrow, per barrel crate, 75c.@ \$1; yellow crook-neck, per barrel, 50@75c.; white, per barrel crate, \$1@1.25.

String beans—Long Island, per bag, 40@50c.

Tomatoes—Choice, round lots, per box, 40@50c.; ordinary, per box, 20@30c.

Turnips—White, per 100 bunches, \$1@ \$2; Russia, per barrel, 50@75c.

Eggs—Refrigerator eggs are not finding favor with dealers just now, consequently there is a brisk demand for fine fresh gathered. Commission men are finding no difficulty in obtaining 15c. to 17c. per dozen for good marks or country eggs.

Philadelphia.

This market has been fairly well cleaned up on most days of the past week, but prices have ruled low, and much complaining is heard.

Peaches were very poor at the close of business last week, and baskets could be bought as low as 15 and 20c. The only fair fruit received is from Western points; from the Blue Mountain belt of Maryland, of which so much was expected, the fruit is small and inferior, and can be bought in the orchards at 25c. per bushel. On account of cool nights is ripening very slowly.

Tomatoes have improved in quality, but the season is now so far advanced that growers are rushing too much unripe fruit on to the market, and prices keep low in consequence.

Apples—hand-picked, Gravenstein, per barrel, \$2@2.50; Holland Pippin, per barrel, \$2@2.25; Oldenburg, per barrel, \$2.25@2.50; Jersey mixed, per barrel, \$1@1.50.

Pears—Bartlett, Jersey, choice, \$2.25@2.50; fair to good, \$1.75@2; Clapps', per barrel, \$1.40@1.60. Peaches—Missouri, per carrier, \$1.25@1.75; Maryland choice, per carrier, \$1@1.25; fair to good, 50@75c. Upper Jersey, per basket, 50@85c.; fair to good, per basket, 25@40c.; upper Jersey, white fruit, per basket, 60c.@ \$1; fair to good, 35@50c.

Grapes—Niagara, 5-pound baskets, 15@18c.; Concord, 5-pound baskets, 10@12c.

Plums—Red, per quart, 3@4c.; table varieties, 10-pound baskets, 25@40c.

Watermelons—Per 100, \$10@18.

Muskmelons—Jenny Lind, per barrel, 75c.@ \$1.25; mixed, per barrel, 50@75c.; Maryland and Delaware, per one-half barrel basket, 40@75c.; South Jersey, Jenny Lind, per barrel, choice, \$1@1.25.

Celery—Choice, per dozen, 25@40c.; fair to good, 15@20c.

Corn—Jersey, per 100, 75c.@ \$1.

Cabbages—Jersey, per 100, \$1.75@2.25.

Cucumbers—Jersey, per barrel, 60c.@ \$1; pickling, per 1,000, \$1@1.50.

Egg plants—Jersey, per barrel, 75c.@ \$1; per five-egg this basket, 30@40c.

Lima beans—Per five-eighths basket, 60@75c.

Onions—Jersey, white, per barrel, \$2@2.50; yellow, per barrel, \$1.50@1.75.

Peppers—Per bushel basket, 40@50c.

Tomatoes—Choice, Jersey, 40@50c.; fair to good, 25@30c.

Potash Free

ant, must not be stinted. Send for our books mentioned below.

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write.

NEWPORT GROUP PICTURE S. A. F.

The photograph made of the members of the Society of American Florists at Newport, R. I., can be obtained by addressing

FRANK H. CHILD,
242 Thames Street, NEWPORT, R. I.

They are 14x17 in size, and the price is \$2.00 each. When the money is remitted with the order, the photograph will be sent by express prepaid.

Mention American Gardening when you write.

DWYER'S SUMMER and AUTUMN LIST

Of Pot Grown and Layer STRAW-BERRY Plants, CELERY, VEGETABLE Plants, FRUIT Trees and ALL NURSERY STOCK will be mailed free to all who apply for it.

T. J. DWYER, Cornwall, N. Y.
Box 175.

Mention American Gardening when you write.

LORD & BURNHAM CO.,

Horticultural Architects and Builders Steam and Hot Water Heating Engineers.

(Established 1856.)

Plans and estimates furnished on application for Greenhouses, Conservatories, and all kinds of Horticultural Buildings, erected complete with our patent iron construction; or for material only, ready for erection.



Largest Builders of Greenhouse Structures. Plans and construction embrace latest improvements. Six highest awards at the World's Fair.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when .

Catalogues

Will be issued in greater abundance this Fall than ever; every live firm issues one or more, wholesale or retail.

Are You Planning Yours?

We would be pleased to furnish you with an estimate as to the expenses of printing same.

Our facilities are unexcelled; our staff familiar with the work; our presses of the finest; our prices reasonable and our product good.

Printing of Every Description.

Cards, Billheads, Letterheads, Envelopes, Circulars, Price Lists, Pamphlets, &c., at lowest prices and best workmanship.

Trade Marks, &c., Our Specialty.

We furnish illustrations of plants, flowers or designs, which may be copyrighted for your exclusive use, to serve as trade marks, symbols, &c., for use on all forms of printed matter.

A. T. De La Mare Ptg. and Pub. Co.
LIMITED.

RHINELANDER BUILDING, (P. O. BOX 1697) NEW YORK.
Telephone, 2154 Cortlandt.

Boston.

Peaches are not coming from everywhere, but all kinds of Peaches are coming here. Stock from New Jersey mostly comes in refrigerator cars, bringing 80c. @ \$1.25 for 16-quart baskets; some Blue Mountain, Pennsylvania and Maryland stock in six basket carriers finds its way here by express and readily brings \$1.75 @ 2 per carrier; some fine Pennsylvania stock in 20-pound baskets catches buyers at 80@90c.

Apples are in large supply, some 20 cars arriving here from Missouri points, and while the best bring \$2, a range of prices follows down as low as \$1 per barrel.

Pears are dull, it takes a fine Bartlett to bring \$2.50 a barrel; Clapps' Favorite might bring 50c., while some of the early odd varieties sell as customers can be found willing to open pocket-book at some figure.

Watermelons easier, larger stock, 14@15c.; while a range of prices extend downward until 6c. is reached; it is a time when loads counting 80 to 90 take the highest prices.

Regarding cantaloupes a wide range appears. Black Japs found ready sale this morning about \$4, with white Japs moving easily around \$2; the beauty of the former is that in cutting, one is sure to find a good eating melon. Montreal melons still moving at a premium among those who have largest amount of money to spend.

Green Corn, large supply, and everybody eating it, therefore fair demand. Very healthy demand for near-by tomatoes.

Limited demand for peppers. Mushrooms still bring \$1 a pound whenever any wanted.

Blueberries reach this city from New Brunswick, and bring 5 @ 8c., according to their blueness.

Celery holds steady; so much fruit around demand is not large; choice marrow squash in good demand about \$1.50 per barrel; near-by growth showing up fine.

Peas about out of the market. Potatoes are very firm; nearly all receipts showing much decay; the growers praying for cold weather, hoping it may stop the rot; \$2.50@2.75 is the lowest good stock can be purchased.

Sweet Potatoes are off a little; selling \$1.62@1.75.

Cucumbers about 1/4c. apiece; cabbage 8@5c. a head; with very little demand for Cauliflower.

Onions have lost another peg, and \$1.75 highest price for best stock to-day, while some Ohio barrels can only be sold at \$1.50.

Carrots steady at 2@2 1/2c. a bunch. Pineapples hardly wanted with so much other fruit.

Mint 45c. a dozen bunches; parsley 75c. a bushel.

Plums are here in immense quantities; there are so many people still in the country, that preserves are hardly in order, therefore 20@25c. per 10-pound basket seems to be the moving price; California crop is little more than we should have if we want to get big prices for that grown in New York state.

Some Worden grapes have appeared from Hudson River, likewise a few Delawares; but there is hardly color enough on the latter to give satisfaction; in 5-pound baskets Delawares brought 18c., and Wordens brought 15c.

The work of the National Farm School at Doylestown, Pa., is progressing very satisfactorily. The faculty of the school is gradually being enlarged. S. S. Darlington has been chosen instructor of pomology, B. T. Adler, instructor of the breeding of live stock, and Joseph S. Andre, instructor of floriculture. The first two instructors are specialists in their respective lines at the Burpee Seed Farm, opposite the school.—*Ledger* of Philadelphia, Friday August 27.

The Los Angeles Co. (Cal.) Horticultural Commission acting in conjunction with the Agricultural Experiment Station has been trying for some time past to devise an apparatus which would permit the use of insecticide solutions at different degrees of heat for spraying trees. Charles B. Boothe, of the firm of that name in Los Angeles, claims to have devised such an apparatus, one which, it is said, answers all requirements, enabling the spray to be applied at any degree of heat. The trouble, hitherto, has always been to keep the wash hot and to so regulate the temperature of it as to prevent injury to the tender growth, but still with sufficient heat to be effective in the destruction of scale. The apparatus is automatic in its operation and two, four, or more spraying nozzles can be used at the same time.

Probably there is no better fertilizer for fruit trees than a mixture of muriate of potash and ground bone (one part of the former to one and a half parts of the latter.) A good practice is to apply this mixture to clover or some other leguminous crop which is turned under as a green manure, and, in addition, where tobacco stems can be obtained cheaply, to apply these about the trees. Wood ashes or cotton-hull ashes may be substituted for muriate of potash if these products can be obtained at reasonable prices.

In deciding upon the kind of manure to use the character of the soil must, of course, be taken into account. Crops grown on soils poor in decaying vegetable matter (humus) are, as a rule, benefited by applications of nitrogenous manures, while those grown upon soils well supplied with this substance are more benefited by phosphates and potash. Upon heavy soil phosphates are likely to be more beneficial than nitrogen, while the reverse is the case on light, dry soil. All sandy soils are, as a rule, deficient in potash, while clayey soils contain this element in larger quantities.

INCUBATORS. Self-regulating. Catalogue free G. S. SINGER, Gardingen, O. Mention American Gardening when you write.

Grape Vines Small Fruits
Descriptive list free. Varieties. Old and New.
Extra fine stock of **CURRENTS**, including the new and unrivalled **WILDER**. Lowest rates. Quality extra. Warranted true. T. S. HUBBARD CO., Fredonia, N.Y.
Mention American Gardening when you write.

50 FOR FIFTY CENTS 50
We will send you prepaid to any part of the United States
50 2 yr. old CHERRY CURRANT ROOTS 50
50 6 ERIE BLACKBERRY ROOTS 50
50 4 HOUGHTON GOOSEBERRY ROOTS 50
The finest rooted plants you ever bought.
50 Address LEROY N. BROWN & SON, 50
Woodland Fruit and Plant Farm, 50
Clyde, Ohio, U. S. A. 50
Mention American Gardening when you write.

"JADOO" FIBRE.**Concentrated "Jadoo" Liquid.**

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and Testimonials, Address **THE AMERICAN JADOO CO.**

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

A New Potting Material. A Perfect Substitute for Earth.

BOTH MEAT AND DRINK TO PLANTS.

NOW READY.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$2.00. 25 per cent. off to subscribers to American Gardening and Florists' Exchange.

This work contains nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work. On heavy enamelled paper. Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8 Duane Street, P. O. Box 1697, New York City.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Favorite Roses.

The question of plant growth aside, the favorite Roses are those most exquisitely moulded and textured, and in one's favorite color. In market cut flowers, where the question is one of becomingness for personal adornment, largely, Bridesmaid, Augusta Victoria, Meteor, and Perle des Jardins, have been prime favorites. For bold interior decoration, American Beauty has scarcely seemed to have a rival. General growers of Tea Roses outside, have placed their affections on oddly-colored Roses, like Madam Margottin (with its citron yellow outside petals, and beautiful pink center), Mdme. de Watteville, Lucile, Charles Rovelli, etc.; while the favorites in the more finely formed Roses have been Etoile de Lyon, Marie Guillot, Princess Vera, Perle, Cochet, Bravy, and many others. When the question of plant growth comes in, partially as to other qualities must often be set aside, though nearly every Rose named above is good.

The Neglected Rose.

An old, but little known Rose, known as Madam Marie Blanche might, if more grown, help out the cause of Roses generally. It is dwarf, never making a large bush, but the blooms are large, pale, silvery lilac-rose in color, and produced with more constancy than is shown by almost any other Rose in the long list of hundreds. So good a Rose must have been neglected because of its delicate color—not a very popular one, or else because it has not been pushed.

Average Prices for Poultry Products.

The Maine Farmer affirms that the two articles of daily consumption which have stood the test for years, and maintained the most uniform prices are butter and eggs. This one simple fact ought, alone, to give sufficient quietus to the fears of those who think the poultry business overdone, or liable soon to become so. Poultry carcasses do not appear in this mention, to be sure, but reason for this may be found in the fact that they are not fairly considered as being articles of daily consumption. Any one at all familiar with prices for the past fifteen years, can confirm the affirmation that poultry products have maintained a decent average, generally without the "slumps" so common in many other classes of farm products.

One Dozen Eggs.

Eggs are cheap, they say, so cheap many think that it doesn't pay to bother with them; and six cents a dozen is cheap. Too cheap, all but the consumers will admit. But in many parts of the country such low prices are unknown. Wherever a dozen of eggs is equal in average yearly price to a bushel of potatoes, to a half-barrel of apples, to two pounds of butter, to two baskets of berries, the price for eggs is better, proportionately, than for most other products of the farm; and it is well worth while to inquire whether this dozen eggs cannot be produced more easily than any of the other items mentioned.

The Farleyense Fern.

Some window gardeners measure the height of their ambition by their ability to successfully grow the florists' Maidenhair. Few of the average growers know that there is more than one variety of Maidenhair Fern, and few can keep one in decently fair condition a month after receiving it from the florist. Perhaps the greatest success of some may be due to the fact that they have one of the less tender sorts. Farleyense, however, so often chosen for its great beauty, is not one of the easiest to grow. It requires strong and even heat, as well as moisture in the atmosphere. No living room can furnish this atmosphere to the Fern. The necessary moisture for the foliage may be in part secured by using a very fine atomizer frequently upon the foliage. Yet water must not be applied so heavily

that the fronds will remain wet over night. Good, fresh, turfy loam is the best potting material for a Farleyense. It may be made moderately rich. Cuneatum is considered by many an easier Maidenhair to grow. However, probably the greatest help to Fern growing for the window gardener would be to procure plants grown as cool as possible. This applies, also, to Palms. These cool-grown plants may possibly not be of such luxuriant beauty as others, but they will feel the change less, and will thus be far more satisfactory.

Combining Manettia Bi-color.

We find this peculiar looking plant strongly advised for combination with Roses. It seems that there should be much distinction made here. With pale creamy yellow and whites, it might be very pretty indeed, but the artistically inclined should beware of placing it beside the purple-reds and rose-pink sorts of Roses.

Rabbits and Poultry.

In Australia, where rabbits are almost too plentiful, poultry keepers are utilizing rabbit flesh as meat for the poultry. As poultry keeping, and rabbit keeping so often go together here, it is a question whether our Australian friends' practice may not hold a hint for us. There may be those having more rabbits than they can dispose of freely, who might work them off to profit in this way. Hens will stand a considerable amount of meat, provided they have bulky food enough to offset it.

Enough Room.

Room enough to be happy, room enough to be healthy, room enough to be prolific; this, and only this, is enough room for poultry, anywhere. There is some difference of opinion as to how much room it takes for this. It might almost be said that hens in confinement are never happy. Yet, after they have been confined long enough to have forgotten their freedom, with the one proviso that they be kept busy, in wholesome quarters, they may be made to seem happy enough to pass very well for actuality. There is really not a more paying way to get room than to cull, and cull, and cull yet again. Not merely to feather, as does the fancier, but to thrift and prolificacy. It is ever the weak that bring down the average productiveness of the flock, and therefore the average profit.

Gynura Aurantiaca.

Day by day this handsome novelty grows in the estimation of the window gardener. It is not merely its unique beauty that calls forth praise, for this would count for little without the good constitution which enables it to hold its beautiful foliage, and to withstand alike the untoward drought of summer and the excessive soaking of a protracted rainy period. Unlike most leaves having a heavy pile, like velvet, these have shown no sign of suffering from daily sprinklings, when given plenty of fresh air. And, although the coloring seems but a mere touch at the end of the plush-like hairs, it is strong and unfading, and does not fall, even in shade.

A Specimen Hoya.

In the window of a woman who disclaims any special knowledge of the needs of various plants, was lately seen a Hoya carnosa which disputes nearly every theory as to the needs of this favorite plant. It covered the entire archway of a large bay window, a solid mass of overlapping greenery. In summer it enjoys a monopoly of window privileges; in winter it takes just what it can get after all the other plants have received place and light. With this scant care, it flourishes and blooms regularly, if not profusely. It is never close to the light, is never removed from its position, and is seldom even sponged. Yet it, apparently, has never lost a leaf. Many an "expert" plant raiser might envy its owner's success with a subject sometimes found difficult. A large receptacle and a large amount of letting alone seem to be the specifics in this case.

Studying Descriptions.

It is quite the fashion in certain

quarters to decry the descriptions of the catalogues, and to hint that interest in sales influences descriptions. Critics fail to note that plants are, as a rule, accurately described except as to omissions. Manifestly, not everything about any offering can be told in the few lines usually allowed, and if the poor human nature of the average dealer allows it to happen that the omissions are such as relate to defects, this is only what we should expect and allow for in our receipt of the intended impression. And, in spite of human nature, it generally falls out that a faithful study of the catalogues of a number of firms will give a pretty accurate idea of any particular specimen. If one firm tells us only of the exquisite coloring and matchless profusion of Duchesse de Brabant, for instance, another will chance to admit that it is not quite full, and a third that it lacks the highest perfection of form. Those florally inclined cannot live on catalogues, especially in these days of delightful horticultural publications, but they make these dealers' tools systematically useful, and that entirely outside the line of the colored plates.

MYRA V. NORTH.

BLINDNESS PREVENTED

The Absorption Treatment a Success. Blind successfully treated for all diseases of the eyes without knife or risk at their homes and at our hospital, the largest and most successful institution in America. "Don't wait to be blind." Pamphlet Free. THE BENIS EYE SANITARIUM, Glen Park, N. Y. Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO.
Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

PRICE LIST FOR

Exhibition
Stationery

1000 Entry Forms - - - -	\$2.75
Two Exhibitor's Books - - -	2.00
Two Glass Books - - - -	2.50
Six Judge's Books - - - -	3.00
500 Entry Cards - - - -	3.50
500 Pastors (assorted) - - -	1.00
Total - - - -	\$14.75

Secretaries of Horticultural, Agricultural, or any other form of competitive show, are invited to write us for full particulars.

It is freely conceded that the system we have adopted saves time, temper, trouble, worry and expense.

The clerical work of every exhibition, large or small, should be run on business lines, and you will find this system the best, the easiest, least expensive, and most satisfactory. Address correspondence

A. T. DE LA MARE PTC. & PUB. CO., Ltd.

P. O. Box 1697, New York.

READ THIS FIRST

The publication of the below article in a recent issue of **AMERICAN GARDENING**, has brought Mr. Jerolaman hundreds of letters from every part of the country.

Strawberries Henry and Mary.

We have grown almost all varieties of berries, but have only found two really large fruited ones. The one is Mary, originated by the late H. Alley of this village, the other is called, here on Boyden Farm, Henry. We grow tens of thousands of quarts from each variety every year, and they are without doubt the largest and best of all grown in the whole world. I have had this season thousands of quarts of Mary, where from five to ten berries would make a heaping wooden quart, and I have preserved several in glass jars, with formalin, so that all who doubt can come here and see for themselves. Some of these berries in the jars measure thirteen inches around. I am the present owner of the Seth Boyden farm. Seth Boyden originated the first large strawberries, perhaps, in the world (Agriculturist and others); he died in 1870. I then bought his farm, and have continued to grow strawberries from that time to this, and will say that I am positive the plant called Henry is, beyond all doubt, not only the strongest plant, but the largest, best, hardest, and sweetest strawberry ever yet produced; color dark crimson; it is perfect (staminate), very large, round, and no coxcombs grow on it. I have grown it for the past four years for market in a small way, and this season nearly one-half of all that I grew was Henry; it will out-produce any strawberry plant that I have ever known, four-year-old plants giving very large, and just as fine berries as plants one year old. The plants as yet have shown no disease, while all other varieties, such as Great American, Jersey Queen, and nearly all varieties except those soft berries not good for market (Sharpless, Bubach, and others), have shown disease in the plant. The Mary this season could not stand the hot sun, and nearly one-half of all the plants burnt and dried up while full of berries. Mary will not bear the second season, but must be set every year, while of Henry, not a single plant has died, either old or young; it is the first berry ripe and the last. I am picking large berries from the Henry to-day, July 15.—HENRY JEROLAMAN, N. J.

Mr. Jerolaman will not answer any further correspondence except through the columns of **AMERICAN GARDENING**.

NOW READ
The Advertisement.

YOUR FORTUNE IN STRAWBERRIES!

The Strawberry King and his Remarkably Successful Career: How a Poor Boy Became Wealthy.

THROUGH one of those strange dispensations which often mock in real life the wildest imagination of the novelist, the publishers of **AMERICAN GARDENING** have become possessed of the story of the life and cultural methods of **Henry Jerolaman**, undoubtedly the **STRAWBERRY KING OF THE UNITED STATES**. We have prevailed upon Mr. Jerolaman to write the history of his life and a full description of his cultural methods, exclusively for the readers of **AMERICAN GARDENING**. Further than this and at our urgent solicitation we have prevailed upon him to make a contract to supply us **One hundred thousand plants of the HENRY STRAWBERRY**, which we will distribute as premiums to subscribers to **AMERICAN GARDENING**. The Henry Strawberry has positively never been advertised until now.

THE CONTRACT

Publishers American Gardening.

Gentlemen,

I hereby agree to furnish you within the next twelve months in quantities as ordered. One Hundred Thousand plants (100,000) or any portion thereof, of the Henry Strawberry. To be used solely as premiums for subscribers to American Gardening and not to be sold.

Witness
Thos. D. Colthur.

(Signed)
Henry Jerolaman

The Best Berry of the Age.

Four Berries of the Henry, grown by Mr. Jerolaman, rounded a wooden quart measure. Individual berries were three-and-a-half inches through each way. Mr. Jerolaman's description of this wonderful berry in a recent issue of **AMERICAN GARDENING** has brought him hundreds of inquiries from the cream of the professional growers.

A GOLD MINE AT YOUR OWN DOOR.

"He who hesitates is lost." It is not likely that such an offer or such an opportunity will occur again in years. More than one strawberry grower in every town, village, and hamlet can come into a good thing through practicing the cultural methods and getting some of the plants which have made Mr. Jerolaman not only wealthy and well-known, but so wonderfully successful, by at once

TAKING ADVANTAGE OF OUR OFFER:

For \$1.00 (check or money-order preferred) we will at once forward you, by mail, postpaid,

FIVE PLANTS ..Of the.. **HENRY STRAWBERRY**
Unequaled
And AMERICAN GARDENING One Year.

Plants to be shipped this Fall or in the Spring, as you prefer.

Mr. Jerolaman's story will be found in the first issues mailed you and his cultural methods will be published in time to be of service for Fall planting.

TIME IS SHORT—ORDER AT ONCE.

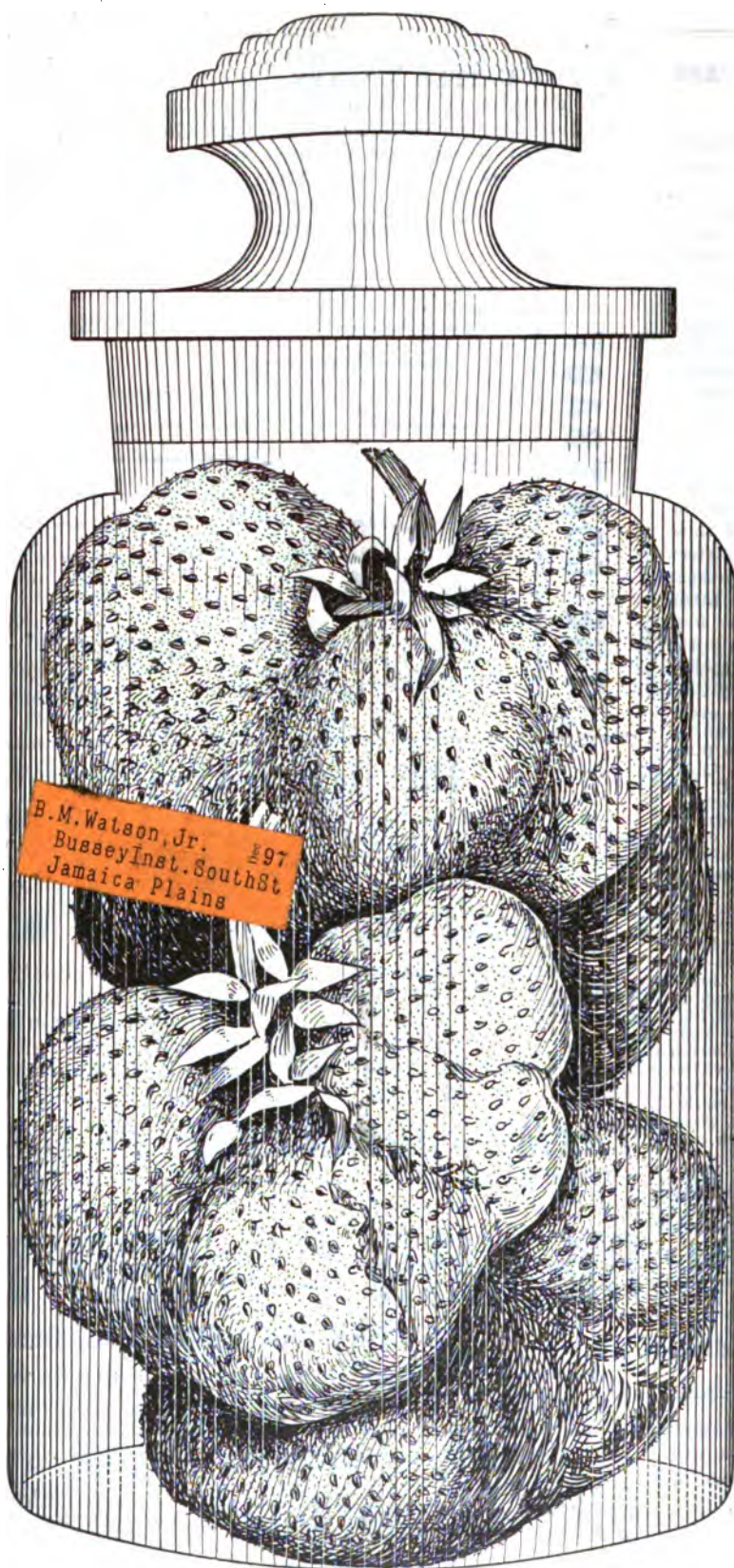
Offer Extraordinary As a premium we will mail, post-paid, Five plants of the **HENRY STRAWBERRY** to any subscriber sending us a new subscription at \$1.00. Five Henry plants will also be sent to the new subscriber. This is a **BIG OFFER** to all who want to become larger holders of this wonderful Berry, never before advertised.

Present subscribers are entitled to this Offer on renewal if their subscription has not expired, it will be dated ahead.

THE HENRY

The Most Wonderful Strawberry of the Age.

MESSRS. STEVENS, SIMPSON & CO., Commission Merchants, 232 West Street, New York City, state they handle the HENRY Strawberry, and have realized for it the highest price obtainable for any outdoor stock coming into New York market. Mr. Simpson further states that, in his opinion, as grown, packed and shipped by Mr. Henry Jerolaman, it is the BEST HOME MARKET BERRY in existence. For SIZE, COLOR, and SWEETNESS, and, in its KEEPING QUALITIES, IT HAS NO EQUAL; these many points in its favor rendering it easy for the grower to realize considerably more per quart than the regular market value of Strawberries generally.



MR. JEROLAMAN says, and his statement is corroborated by those who have seen the fruit: The HENRY is beyond all doubt not only the strongest plant, but the largest, best, hardiest and sweetest Strawberry ever yet produced; color, dark crimson; it is perfect (staminate), very large, round, and no coxcombs grow on it. . . . It will out-produce any Strawberry plants that I have ever known, four-year old plants giving very large and just as fine berries as plants one year old. . . . The plants as yet have shown no disease. . . . It is the first berry ripe and the last.

Read about it on Preceding Page.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 142.
COMBINED SERIES VOL. LI.

NEW YORK, SEPTEMBER 11, 1897

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Am. Pomological Soc'ty.....	632	Chrysanthemums.....	631	Hydrangeas, Blue.....	635	Poultry Notes.....	639	Window Gardening.....	639
Apple, Holland Pippin.....	632	Corn.....	630	Kale, Siberian.....	631	Private Gardeners.....	636	Illustrations.....	
Apples and Pears.....	632	Currants and Gooseber- ries.....	632	Lettuce, House for.....	635	Readers' Notes.....	635	Berckmans, P. J., Por- trait of.....	633
Aquarium Matters.....	632	Dwarf Fruit Trees.....	634	Market Reports: N. Y., Phila. and Boston.....	640-641	Societies, Reports of.....	636	Pear Louise Bonne in a Pot.....	631
Asparagus for July.....	635	Exhibiting.....	631	Planting for Timber.....	630	Tomatoes.....	630	Plum Tree, Pot Grown.....	631
Berckmans, P. J.....	633	Fruit Garden, The.....	632	Pot Culture of Orchard Fruits.....	631	Trees and Shrubs, Mov- ing.....	630	Pot Fruit Trees, Group.....	639
Bulbs, Where will our Supply come from.....	637	Fruits of Experience.....	633	Potatoes.....	631	Vegetable Garden.....	631		
Cauliflower.....	631	Home Plot.....	639	Potato Rot.....	634	Water Lilies in Pots.....	635		



Pear Louise Bonne de Jersey.

Early Transparent Gage.

Peach Foster's Seedling

Pear Souvenir de Congress.

Pear Souvenir de Congress.

Plum Belgian Purple.

Planting for Timber.

Please give me name of book that gives most reliable and fullest information on cultivating the black walnut for profit. Somewhere I have seen much of the information I wish, but have forgotten exact name of book containing it and by whom. As well as I remember it was something like "How to Grow Rich in the South," and published by some man in Cincinnati or Chicago.

I have "Nuts for Profit," by Parry, but it gives little of what I wish to know. Best information may be found in some work on timber, as it is from the timber rather than nuts, I expect the returns. I want to know: kind of soil, how best to plant nuts in field, or first in nursery to transplant, how to select best nuts for planting, how to cultivate and how long, if land that overflows can be used to advantage, and how long small trees could be covered with river water and live; how old or what size trees should be for first cutting or thinning of grove, how close planted, and how close left after each cutting.

As nearly as can be made, an estimate on the output, itemized, say for 200 acres, as to fencing, labor, care-taking, etc., as well as land and transportation. Then as to income, as to when first returns may be reasonably expected, amount of same of each succeeding cutting, as to time and amount. When remaining trees will reach what may be considered maturity.

Of course it will be many, many years hence, if the river bottoms of the south that crops can't be grown and harvested on, could be utilized in growing timber (where first growth of timber has been cut) for coming generations, but those now planting will accomplish something, though personally reaping no benefits.

Some book you publish may answer these and many other important questions on the subject.

Of course any estimate would be subject to change in each detail, but some one has figured on it and given rough estimates worthy to be considered.—L. B., Ga.

The planting of trees is always to be commended whether the object be profit or pleasure, but perhaps more especially so when, as our correspondent says, no personal benefit is expected therefrom. I am inclined to believe, however, that every planter of trees does derive much solid satisfaction from the mere fact that he is leaving behind works, not words—a living, growing monument.

We hear so often such selfish expressions as, "What's the use? I'd get nothing out of it;" or, "It would be of no use in my time," and in reply to them I repeat the words of an active gentleman, sixty years of age, who is gradually working his immense business into younger hands: "Now we have got this large country place for the boys and girls, plenty of room for houses and crops, with abundant woods and water, and yet I believe it will pay to cover some of our poorest land with timber trees." The words have been put into practical operation and to-day—seven years after—there are under way 15 acres of Pines, 20 of European Larch, 8 of American White Ash (*Fraxinus Americana*), 20 of English Walnut, and 30 of Black Walnut, and by the appearance of stock in the home nursery, the end is not yet.

This was done on Long Island and what can be done there can no doubt be much better done by our correspondent in more genial climate and soil. Perhaps a few details of the work connected with the Black Walnuts may give more satisfaction and points for guidance than any figures however well computed.

The nuts were gathered from a grove on the place, and sown in the fall in shallow trenches 12 inches wide, and 3 inches deep. The plants began to appear the following May and continued growing until August, making a growth of from 8 to 12 inches. These were dug the following year and when necessary a part of the tap root was cut off, a noticeable point being that there were very few to cut, which was attributed to the very stony piece of land on which the nuts

were sown. The seedlings were transplanted to rows 4x2 feet, and planted permanently two years later (1892). The site was on a hillside and bottom lands; the soil, gravelly loam, the bottom portion with slight hummocks here and there and underlaid with blue clay.

The planting on the hill side was fairly good. In the bottom, except on the hummocks, it was not good as water would be at the surface for seven to ten days at a time in winter, causing a number of blanks.

Holes were dug in the sod for all this planting, and the labor afterwards consisted in mowing the land over twice a year and using the mowings as a mulch about the trees.

This I considered the least satisfactory of the Black Walnut planting, partly because the trees were too large at the time of planting, and partly because the natural springs in the bottom portion caused the young roots to rot.

Our most satisfactory plot is on the lower part of a sand and gravel ridge where the depth of top soil is about 6 inches. These, planted in the spring of '96, were sown in '94, and taken direct from the seed rows, and had plenty of fibrous roots. The land was plowed and harrowed, trenches six feet apart were opened with the plow, and the trees planted six feet apart in the lines so that a one-horse cultivator can be run in all directions and stir almost the entire surface, the balance being done by hand. Thus the land is kept free from weeds; no fertilizer was used nor any crop grown—except weeds—for a number of years.

At this writing the plants average four feet in height and one inch in diameter at the base. The oldest young trees are 20 feet high, and measure three inches in diameter at three feet from the ground.

The selection of nuts for seed is only a secondary consideration as very few trees would produce nuts like the parent. Sow in trenches in the fall and transplant to permanent place from the seed bed; plant 6x6 and cultivate as for corn as long as the horse can push through without damage to the trees.

Our correspondent will please note that land suitable for farm crop has not been used for any of the aforementioned trees excepting the English Walnuts.

I think that figures would be of little use to L. B., as so much depends on location, labor, and market, but I would strongly advise the planting of all lands not first-class for farm purposes, and it is very poor land indeed that cannot be utilized and improved in every way by some kind of wood. If marshy, sow White Cedar; if sandy, put to Pines. Land almost destitute of "soil" will support White Birch, Black Birch, and Red Cedar. Among higher lands some of the Oaks and Larches will be at home. In fact, some woody growth can be found to cover almost all the extensive waste portion of this vast country.

The varied purposes to which wood is put and the call for it will depend on the locality of the planter, who will be the best judge of what he should plant after careful inquiry in the nearest market or city.

JAMES HOLLOWAY.

Bagging Grapes.

I have tied a paper bag on a cluster of grapes to see if they will ripen sooner, as I saw in your paper some time ago. Please state if you think they will, and oblige an old subscriber.—J. M., Mass.

—The paper bag possibly will not cause the fruit to ripen more by quick, but certainly will make cleaner and better fruit, and preserve the bloom on the berry, thus getting a better appearance.

Pear Trees Suckering.

Why do suckers grow so freely from the base of pear trees? I cut them away each spring, yet they repeat themselves before the season is over.—J. M., Mass.

—Probably the fault is with the grafting and the suckers are coming from the pear stock. This fall clear away the earth from the bole and cut the offsets away clean.

Chrysanthemums.

Cool nights are with us and a little attention to ventilation is now in order. Our ventilators are never closed through June, July, and August, save during a gale, for plants fairly revel in the cool night air after a hot, exhausting day; it hardens the wood and builds up the plant, but when September is ushered in, and the temperature outside drops to 48 degrees and thereabouts, the side ventilation should be reduced, or the quick transition from a hot day to a cool night may cause a check to the buds. Plants should not be "coddled" by any means, but the change in temperature is very great and should be guarded against a little.

Plants outside will very soon need housing, for any time after the middle of the month, we look for a touch of frost in Jersey.

If it is desired to retard some plants for late work the terminal bud should be taken and the plants put in a house by themselves. The ventilators should be closed only in case of actual frost. Late varieties only should be used for this work as early kinds would only open in midseason, and the flowers would not be nearly so good as they would if let flower when nature intended they should.

Feeding with manure water is probably the biggest job now, and it must be persevered with. Changing the barrels from week to week, from one kind of manure to another, is better than mixing it together, change of diet being very beneficial. It is pretty hard work and not the most agreeable in the world, but on it depends a large measure of success, and the only way to do is to put on your boots and sail right in, never looking "where the chips fall." It is just about now that we realize that the 'mum is a gross feeder.

C. TORRY, N. J.

Moving Trees and Shrubs.

Can I safely move pines, hemlock, spruce, etc., and what evergreens in the fall? What is the best time to move deciduous trees, shrubs, etc., and ordinary herbaceous plants? Also, I have about two acres of very sandy loam, which is only six inches deep, under which is yellow sand six feet deep. I wish to make a first-class vegetable and flower garden of same. What had I best put on it to do so? I have my own ideas, but wish to hear yours.—W. L. P., Mass.

—Fall planting whenever practicable is certainly the best for nearly all classes of trees and shrubs, also herbaceous plants. Such planting may be safely begun now very shortly, unless the trees are of such size that in order to retain the ball of earth at the roots they need to be frozen. When such is the case, a trench needs to be cut around ahead of severe frost in order to bring about the desired result. In regard to the soil preparation inquired about, it would certainly seem necessary to bring some of the sand to the surface in order to give a greater depth of soil than six inches. To thoroughly enrich this, it will be best to trench and at the same time turn in quantities of barnyard manure now during the fall, and in the spring give a surface dressing of well-rotted stable manure. With such treatment good results may be expected.

How to Get Rid of Nut Grass.

I would like to inquire if you have ever heard of nut grass, and if you have, how to kill it. It is a very troublesome grass and spreads. There may be another name for it which I do not know. It grows from a nut in thick patches.—Wm. H. SOCLA.

—*Cyperus rotundus*, or nut grass, is a very difficult weed to exterminate. In the South one of the methods adopted is to fence off squares and turn hogs in who root it up. Another method adopted and which, in your case, may have to be resorted to, is to smother it out with some other strong quick-growing crop.

Pot Culture of Orchard Fruits.

Grown Under Glass.

Orchard-house fruit growing is, comparatively speaking, an unknown and unpractised art in the United States, and it will therefore be of the greater interest to our readers to learn about the success achieved in this line at Rockwood, the country seat of W. Rockefeller. This estate stands out prominently in many horticultural respects, owing to the excellent condition in which the 646 acres are kept, and by the lavish expenditure upon the landscape gardening operations.

The 20 well-appointed greenhouses are also no mean feature. But at this time there is only one portion of them, that devoted to fruits that interests us. It is questionable whether indoor fruit growing in this country has ever been brought to such a degree of perfection as has been the case at this establishment during the present season, and it is to the capable gardener, Mr. William Turner, that the credit of this high state of excellence is due, he having personally attended to this portion of his varied charge. At the same time his success is in relation to the interest of his employer who has stinted nothing that would tend to bring about the desired results.

The orchard house proper is 80 feet long by 30 feet in width, with a curvilinear roof, three-quarters covered, resting on a high back wall; the aspect of the house is east and west. Against the back wall on the west side stand a number of peach and nectarine trees in 24-inch tubs; these are covered with fruit, and consist of Pitmaston Orange nectarine, Crawford's Early, Crawford's Late, Oldmixon, and Foster's Seedling peaches. Two peach trees of the variety Crimson Gland in 10-inch pots are bearing profusely; this is a peach of a very high color and medium size.

Rivers' Early peach was gathered some time ago, and the fruits are said to have been very fine. The other peaches mentioned are yielding now, and will give a

Watering is an important feature, and careful attention is given to it, overhead syringing is also done twice each day.

All the pear trees are double grafted and worked on the quince stock, while the plums are single grafted with the union showing from 8 to 10 inches above the pot. Very few roots work through the pots and wood is made sparingly.

The plum trees are about four feet six inches high, and the pears about five feet six inches. Nearly all the trees have been imported from the well-known English firm T. Rivers & Son, Sawbridgeworth, England.

Only two American varieties are grown; these are Lincoln and Spaulding plums, and neither the trees nor crops can compare with those already mentioned, enormous crops are the rule otherwise.

Among those bearing largely of large high-grade fruit are the following: Monarch, The Czar, a large black plum of fine flavor; English Green Gage (full flavor), Transparent Gage (see fig. 179.), very large and carrying more than 100 fruits; Mallard, a heavy cropper; Belgian Purple, enormous crop and a grand plum; Jefferson, fruit very large; Coe's Golden Drop, very prolific. Kirke's Seedling is not a success, and will be discarded after this season; it fruits freely but lacks quality.

Among pears the most conspicuous are Souvenir de Congress, on one tree of which are thirteen fruits, and while not yet ripe, would easily weigh one pound each, and already girth over 12 inches; another tree of this variety bears eight fruits of even greater size. Conference is bearing from twenty-five to thirty fruits each. Louise Bonne de Jersey is bearing thirty even-sized, high-colored fruits of very handsome appearance as our fig. 180 shows. Doyenne du Comice does not appear to bear so well as the other kinds. Pitmaston Duchess makes a great display, its large even clear-skinned fruits are remarkably striking. The fruits not yet matured, measure five inches in length and have a girth of 11 inches, and will probably average in weight about 14 ounces each. No fire heat is ever used in this house.

The Vegetable Garden.

Siberian Kale.—This is a very useful vegetable for early greens, being very hardy. A supply of this can easily be had for early spring, by sowing in rows 18 inches apart, now.

Cauliflower and Cabbage should now be sown to be transplanted later into cold frames and protected over winter. They must be freely ventilated at every opportunity.

Corn.—Any ears of corn that may not have been utilized when frost comes, can easily be kept two weeks or more after then, by cutting the stalks and putting them in shocks not large enough to become heated in a sheltered position. It is a good plan to have a few rows of good late corn for this purpose, the ears of which should not be picked. The corn if left on the stalks in this manner will keep fresh a long time in the cool month of October.

Tomatoes.—Wherever there are plenty of tomatoes, as many plants as possible should be left without gathering the fruit. Before frost pull up the vines, roots and all, and hang up in a dry, warm shed or greenhouse, and every tomato will ripen, and be nearly as good as if ripened on the vines outside. All scattering green tomatoes can be gathered up, put on shelves and will also gradually ripen. In this way tomatoes can be had quite late in the season.

Intending Exhibitors at the many county fairs will now be getting ready for exhibiting. To progressive gardeners, many county fairs do not offer much inducement as the schedules for vegetables are frequently out of date. In order to give a fair chance and to encourage the growth of well-selected and a good variety of vegetables, premiums should not be offered for the largest collection of vegetables, but for the best. In the first premium collection of vegetables in Rhode Island last year, I noted 33 varieties of shelled beans, 6 varieties of old

peas shelled and corked up in glass bottles, together with a mixed collection of seeds of self-saved onion, oat, rye, buckwheat, also in glass bottles, which could not be classed as vegetables, but all counted and made up the largest collection. Any rational judge would disqualify such a collection as this. It is not the quantity of anything that should be



FIG. 180.—PEAR LOUISE BONNE DE JERSEY GROWN IN A POT.

grown that is to be encouraged, but quality, and judgment in the proper selection of varieties, these well grown and tastefully arranged on the tables, having all the specimens as near of equal size as possible, celery to be nicely blanched, and roots and useless leaves trimmed; they everything should be fit for culinary use as we llas for show. Vegetables grown especially for show purposes are often useless freaks. It is better to show a large fine-shaped egg plant, than a big squash. Award premiums to skill, and encouragement is given to excel in quality and not in quantity.

W. M. EDWARDS, Conn.

No Money in Sunflowers.

Can you give me any idea if Sunflowers can be successfully raised in this part of the country, and whether a living could be made out of them. Is there any more money in it than there is in corn?—W. F. SCHMEISKE, Pa.

—It would be impossible in your location to raise Sunflowers as a crop and make a profit. The industry is already at a low ebb as regards value. St. Louis, Cincinnati, and Chicago are the centers where the seed changes hands in bulk and there the selling price to jobbers and dealers in bulk, does not exceed one cent and a half per pound, sometimes falling lower than \$30 per ton.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send ac. stamp for our new catalogue.



FIG. 179.—EARLY TRANSPARENT GAGE FRUITING IN A POT.

succession of fruit till the end of this month.

Pears and plums are pyramid trained and are in 10 and 12-inch pots, each pot being sunk up to the rim in humous soil, which prevents drying out and maintains a moist cool temperature near the roots.

Twenty Fifth Session of the American Pomological Society.

[Special report for AMERICAN GARDENING]

The 25th biennial session of the American Pomological Society was held at Columbus, O., September 1 to 3, by invitation of the Ohio State Horticultural Society.

Wednesday morning was devoted to preliminary matters, such as the enrollment of new members and the appointment of committees. In the afternoon the Society was taken about the city upon the electric cars, stopping at the State Fair, where particular attention was paid to exhibits in the Agricultural Hall. The walls and side tables were occupied by tastefully arranged displays of vegetables and grains. Next on either side was a wide table filled with plates of fruit; apples of, course were in largest numbers, and while the crop throughout the state is nearly a failure, many of the specimens were very fine, especially where they had been sprayed. The benefit of spraying was well illustrated by a number of trays of sprayed and unsprayed apples in the exhibit of the Ohio Experiment Station. Not only was the effect shown in the increased size, but the fruit from the unsprayed trees was so scabby and wormy that few were marketable, while the trees sprayed with Bordeaux mixture gave fruit that was free from culls.

The exhibit of pears, grapes, and plums was also very creditable, but the peaches did not number over a half-dozen plates.

On Wednesday evening there was a joint session with the State Horticultural Society. An address of welcome on behalf of the city was made by Mayor Black, while N. H. Albaugh gave the welcoming address for the state society. He "pointed with pride" to the progress made in pomology in Ohio. As in addition to large orchards of apples, pears, and plums, there is a large area along Lake Erie entirely given up to grapes, while peaches are largely grown in the northwest portion of the state and along the Ohio River. The Ohio State Horticultural Society is even older than the American Pomological Society, having some years since celebrated its semi-centennial, and it has a number of old and thriving county societies; among them is that of Montgomery county, which for thirty-one years has not missed a monthly meeting. He also commented on the benefits to pomology of the work of Elliott, Warder, Kirtland, and Weltz. In the way of varieties of fruits Ohio has furnished the Stark and Rome Beauty apples, the Gov. Wood and other cherries originated by Dr. Kirtland, and the Diamond peach, besides numerous other sorts.

In his response President Berckmans commented on the excellence of the fruit exhibit at the State Fair, which showed that Ohio is not surpassed in growing the fruits adapted to its soil and climate. In addition to the names mentioned above he commented on the benefit that had been done by Johnny Appleseed who in his peregrinations about the state, had scattered seeds from which many trees of much value had come.

In his biennial address, President Berckmans referred to the great increase in the number of plant diseases and insects, and the benefits that had come from the work of the experiment stations in furnishing methods of combating them. They have also been of much value in testing the new varieties of fruits that are introduced and in learning their adaptation to the different parts of the country.

Among the members who have passed from earth since the session of 1895 are Dr. C. V. Riley, A. S. Fuller, H. M. Engle, W. W. Adams, Franklin Davis, John Saul, Robert Douglass, David Allan, John S. Harris, and David Scott.

In the discussion on new varieties of fruit, George W. Campbell of Delaware, Ohio, gave the history and a description of Campbell Early grape, specimens of which were on exhibition. It was originated in 1885, and was either one-eighth or one-fourth Muscat Hamburgh, and was the only one that he thought worthy

of introduction of thousands of seedlings that he had grown during the thirty or forty years that he had spent in endeavoring, by crossing and hybridizing, to improve our American grape. He had determined not to introduce them unless they were in some important respect better than the varieties we already had.

The season and hardiness of Campbell's Early admits of its being grown wherever the Concord succeeds, as it is nearly two weeks earlier, and in vigor, foliage, and hardiness is equal to that variety. It has a more tenacious skin and handles without breaking, and is never known to crack. They will also hold on the vines for six weeks without breaking down. This shows that it is unsurpassed in its shipping and keeping qualities, and it never shells. The skin is thin but firm, and there is no acid taste beneath it. The seeds are small, few in number, and are free from the pulp. The fruit stems are very stout, the bunches are large, close, and generally shouldered; the berries are about the size and color of Moore's Early, but are of a higher flavor. In making his crosses he used the harder sort as the female and found that the character of the new sort was a union of those of the parents.

Brilliant grape was reported by Mr. Woodard of Ohio as far from promising, the plants being unhealthy and the fruit setting poorly.

Diamond peach was described by N. H. Albaugh as a large, handsome yellow cling of fine quality.

Prof. W. J. Green of the Ohio Experiment Station at Wooster, spoke upon new and promising small fruits. Although not as early as claimed, King has proved the best early red raspberry; it is large, bright red, quite firm, and of good quality. In growth and productiveness it is preferable to Loudon. While the latter hangs on a little too firm, the King drops too readily. Miller is good, but not up to expectation, as it is too weak in plant and not productive enough. Lotta is black, three or four days earlier than Gregg, and as large as that variety. Kansas seems better each year. It is a strong grower and productive, and the berries are large, firm, and of good color. It is of rather short season, but that is not always a fault. Eureka has been disappointing as it is so severely injured by anthracnose as to lessen its vitality; it is earlier, but the plants are less strong, and the fruit less firm than Kansas.

Of strawberries there are few of the newer kinds that are worth mentioning. Clyde takes front rank on account of its extreme vigor and productiveness; the flowers are perfect, but the fruit is rather soft and light in color. Glen Mary is inclined to be rough, but is quite promising. Staples does well as a fertilizer of Warfield, as it is perfect flowered and of the same color, although a little earlier. Ruby is a perfect flowered sort that is medium in season, as it begins early and hangs on late; color scarlet. Carrie seems to be an improvement on Haverland. Although Brunette often fails it excels all other varieties in quality. Brandywine comes on late, and the last pickings are best, and although it is not very productive, its large size and good quality make it a desirable sort. William Belt has the one fault of rusting badly.

Prof. H. E. Van Deman of Virginia confirmed Prof. Green's opinion of the King raspberry, as it is of a beautiful color, and as he had seen it at its home in Virginia it was better than the best of the standard sorts. Miller as grown on the Chesapeake peninsula is more productive and a better variety than Loudon.

Prof. Alwood, of the Virginia Experiment Station, spoke of Tennessee strawberry as one of the most valuable market sorts for the South. Rathburn blackberry was a failure at first, but for the last three years has excelled all other sorts in the size and quality of its fruit. While it is said to root from the tips, it seldom does so.

(To be continued.)

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

The Fruit Garden.

Currants and Gooseberries.—If there are any blanks among the bushes, the present is a good time to replant, and the bushes will practically be established before winter, if heavily mulched at the first appearance of frost. Cuttings made now and thickly dibbled into deep boxes (plunged in the ground, lifted and brought into a cool cellar before the ground freezes hard) will make very lively cuttings to plant in the spring.

What of the Fruit Rooms? "Are all repairs made, the walls and all corners clean, and ready for use?"

Selling.—If you have fruit to sell, put it in clean receptacles, which bear your name. A good name is a good selling card, do not forget that a good market can often be found or made nearer home.

Season.—Yes, I confess it is rather a disappointment to buy a winter apple and find that it has to be used in September. Salome is catalogued as in use from December to May, but it does not pan out that way around New York, not but that the fruit is good and handsome, only it was not bought for that season.

Apples and Pears are dropping very badly this year, caused probably by the unusual season—very dry in June followed by a long spell of cold rainy weather—leaving the foliage in bad condition with fungi, followed naturally by a weakening of the whole tree.

Peaches and Grapes are nearly two weeks later than last season.

Budding.—The season will soon close and any peach budding had better be done at once if the wood is in the right condition.

Thinning.—This is also the time when we regret that the thinning of fruit was not more severely done, and we vow it shall not happen next year. Write it down!

A Grand Tart Apple for cooking now is the Holland Pippin. Fruit very large, a little flattened, stalk one-half inch long; skin, a pale green, with a few large darker dots, pale yellow when ripe, with a little dull red on one side. Fall Pippin is sometimes catalogued as the same, but the stem and calyx are very distinct.

Peach Red Rareripe is not at first a very taking variety, but it is one that is more appreciated by use.

J. HOLLOWAY, L. I.

Aquarium Matters.

(1.) Can an aquarium of about eight gallons capacity be successfully conducted during the winter months in a conservatory, temperature 40 degrees to 60 degrees, without a constant supply of running water?

(2.) If so, what plants should be introduced, where can they be procured or seeds of same?

(3.) What cement is used in constructing an aquarium, where procured, or how manufactured?

(4.) Please refer to some good work or number of American Gardening containing notes of management of an aquarium.—J. W. O., Ont.

—(1.) Yes, but it should not receive too much light.

(2.) The best plants to supply an aquarium with the necessary oxygen are: *Sagittaria natans*, *Ludwigia*, *Mulertii*, *Cabomba carolinensis*, *Myriophyllum spicatum*, *Ceratophyllum demersum*. These can be bought from any first-class aquarist.

(3.) Mulert's waterproof cement is the handiest and most reliable cement for setting the glass in an aquarium frame. The components are a secret; it is for sale at the manufacturer's and in all first-class aquarium establishments.

(4.) A note on the construction of an aquarium is given on page 91, vol. XV. of American Gardening. Get the Amateur Aquarist, which we can supply at \$1.

Our publishers will supply any book wanted. Send your orders.

P. J. Berckmans.

The name of P. J. Berckmans has for a long time occupied a high place in the horticultural annals of America. As the president of the American Pomological Society, he has been a prominent personage for a number of years, and at this time when that exceedingly useful body has just held its regular biennial gathering (of which a report is found elsewhere), a few words concerning him who has for a decade been its head will not be out of place.

As a nurseryman, the proprietor of the Fruitland Nurseries, Augusta, Ga., has been a very successful business man. The nurseries are on the outskirts of the city and when Mr. Berckmans acquired possession of the property in the year 1856, it was but little better than a barren waste. The grounds altogether cover an area of about 400 acres, 300 of which are under cultivation for nursery stock, besides 40 acres in bearing orchards and vineyards. There is also an acre under glass. The Fruitland Nurseries are the most important and extensive of the kind in the

describing them are familiar to our readers. The firm does not employ agents. A large export trade, particularly to the East and West Indies, South America, European countries, and South Africa, is being developed.

Mr. Prosper Julius Berckmans is a native of Belgium. He came to Georgia in the year 1850, six years prior to assuming the control of his present establishment, where he now has associated with him his sons, Messrs. L. A. Berckmans, R. C. Berckmans, and P. J. A. Berckmans, Jr., all of whom have a life-long familiarity and experience of everything connected with the business, acquired under their father's teaching and surveillance. These gentlemen give their close and active attention to the various details of the enterprise.

Some statistics concerning the nurseries are: 200,000 peach trees, 30 acres entirely given to Roses, including 40,000 of the superb yellow tea *Marechal Niel*; Palms are in profusion, 25,000 being a moderate estimate; 15,000 *Camellias*; of tropical trees and shrubs a surprising number may be found, camphor trees, cork oaks,

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

In layering black raspberry tips, especially if the weather be dry, we are careful to bury the tips deep enough so that they will be wholly in the moist earth. But a person can go to extremes in this matter, and bury them too deep, thus causing the roots of the parent plant to be injured in digging the plants.

An ordinary stone mason's trowel is the tool for layering black raspberries. We never tried it until this year and it works a little awkwardly at first, but one gets used to it in a very short time. The trowel is forced into the soil at the angle at which you wish to bury the tip and then drawn toward you while the end of the lateral is placed; then with the fore part of the foot press gently on the soil to firm it.

Watermelons seem to be a paying crop in Michigan this year; the crop is large and prices fair.

Sometimes a home market for berries is hurt for a short time by some grower getting scared about prices, or a little glut in the market, and he sells his load much below the other growers in order to get rid of it quickly. This kind of management injures the market for himself as well as others.

Early Puritan seems to be a promising potato.

The Ninety-day Monarch sweet corn is claimed by those who have planted it to be an excellent sort.

Raspberry plant layering should be practically over now if good large plants for next spring are desired, but if liable to run short of plants, I would rather layer them late than not at all.

The Ridgeway strawberry on our grounds is taking the lead (with the exception of two or three other varieties) for both vigor of growth and luxuriant foliage.

Don't haul that thoroughly decayed manure on the ground until fall rains commence, unless you plow it as soon after applying to the land as possible.

The good qualities of it will more or less be lost on account of the hot sun and drying winds.

Evidently most nurserymen are trying to be on time with their price lists this season, judging from the way they are rolling in.

A sharp budding knife as used by nurserymen and which only costs 25 cents, is as good a tool as can be found for nipping off cucumbers.

Much caution should be used in keeping the chicken houses strictly clean at the time of year when the young are making their most rapid growth.

Farmers are getting a much better price for wheat, and this will probably have some tendency for farmers who have small farms to stop trying to get money out of strawberries and raspberries, etc., thus leaving a more healthy market for those gardeners who make a large part of their living out of small fruits.

Grapes are promising a good crop in Michigan at this time, but not so heavy as was expected.

As soon as the leaves drop the currant hills will be in the best condition to take cuttings from.

If any tree or bush prunings are on the place, now is as good a time to gather and burn as there will be this season.

Very rich soil and heavy crops are what give the profits in vegetable gardening.

Low land when used for gardening should be drained very thoroughly, so that water will run off rapidly after heavy rains, thus leaving the soil porous and much warmer.

If you wish to get a good supply of sphagnum moss now is a good time to gather it.

Remember to mark the grape hills on which you pick the finest fruit of each variety so as to procure your cuttings from them.

CHARLES NASH.

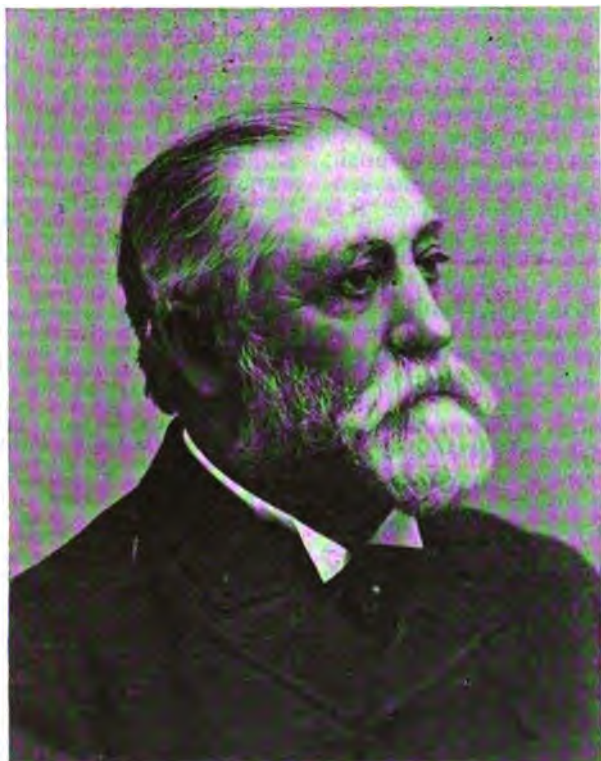


FIG. 181.—PROSPER J. BERCKMANS, LATE PRESIDENT OF THE AMERICAN POMOLOGICAL SOCIETY.

South, and probably at no similar establishment in the country is to be found a wider range and diversity in the products, the climate being particularly well suited to the culture of fruit and flower-bearing trees and plants in variety. Mr. Berckmans grows quantities of fruits for market. Pears, peaches, and plums are shipped North in large quantities during the season. About 80 men are employed during the busy season, and on the grounds are suitable and comfortable dwellings for the work-people. There is a well-arranged packing department supplied with all facilities, and the packing cases are made on the premises by skilled workmen, who have been in the employment of the house for many years and who thoroughly understand their business.

A portion of the grounds is devoted to fruit and plant testing. The variety of trees, plants, and shrubs raised here is very large, and the handsome illustrated catalogues and special wholesale lists

guava, coffee, orange, and lemons, and others of economic value, are to be seen at Fruitland, which is truly well named.

Some idea of the extent of the trade is seen from the figures of the annual output—300,000 to 400,000 fruit trees and 200,000 grape vines.

Commendable Premiums.

Last spring I received your premium offer No. 45, a collection of Roses. Eleven out of the twelve lived and thrived and have been in continual bloom for the past month and are full of buds now. Please advise me how to care for them during cold weather. Our winters are quite severe, the temperature sometimes falling to 15 degrees below zero.—W. B. LEE.

—Winter protection will shortly be taken up in a lengthy article.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1897.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.

Telephone, 3154 Cortlandt. P. O. Box 1897.

REGISTERED CABLE ADDRESS

Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per agate line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Big Berries for All.

Owing to the pressure of detail in connection with the N. J. State Fair at Waverley, Mr. Jerolaman has not been able to continue his autobiography in this week's issue of American Gardening, in the next number, however, the matter will be continued. Mr. Jerolaman will enter into a discussion of the cultural methods by which he has been able to raise regularly for the New York market the largest berries it has ever received.

Dwarf Fruit Trees. IF the correspondence which is received at this office be any index to the evolution of horticultural progress in the mass of our readers—and we suppose it to be so—then it is certain that there is a demand for further knowledge along the lines of dwarf fruit trees. Nor is the desire to become better acquainted with their possibilities by any means confined to one particular section of the country. In response to this indicated want we have, in issues of recent date, given space to a few remarks upon the subject, and have presented illustrations of Cordon and other methods of training, and when last the topic was

touched upon it will be remembered allusion was made to the practice of growing orchard fruits in pots and cursory comments on the results of the system at various places were made. So far as concerned pot culture and orchard house methods adopted at Rockwood, the residence of W. D. Rockefeller, we promised our readers that the matter should be taken up in detail later, and in another column of this issue, the details of the procedure are in some part given. Our frontispiece this week shows a group of fruiting pears and plums in 10 and 12-inch pots, and a peach tree in a 24-inch tub, and on other pages will be seen both a pear and plum in fruit.

There are two very distinct phases of the great fruit-growing problem; on the one hand there is the necessity, which confronts the commercial fruit grower, of producing the most for the least expense, quality of course being understood; on the other hand there is a more or less luxurious class to whom the raising of the finest fruit for their personal gratification is an object not measured strictly by the cost of production.

It is to the latter that our few notes and the illustrations will serve as interesting object lessons. But as a commercial enterprise it would seem that there must be some field for the very beautiful, large, tender, juicy, and early fruits, such as are shown in the photographs. It is an old axiom that the best is always in demand, and if the neighborhood of the larger cities where a wealthy buying community is to be found affords a good cultivator the opportunity to try the experiment, the results may be entirely satisfactory, but of course much depends on local conditions.

While we hold to the above ideas, yet we realize that orchard house fruit culture will probably never be a great industry in this country, owing to the general excellence and abundance of our outdoor fruits, and we have such a wide expanse of country to draw upon. Nevertheless, with the rapid advance of knowledge and wealth, there arises a fuller and keener appreciation of the very finest productions of which our art of gardening is capable; it has been so in older countries, it will be so here. Ornamental gardening has made rapid progress with us and the march is still going on, but owing to the very lavish natural profusion of food articles, attention has not been devoted to the highest development of the cultivator's skill in that direction, we have been quite content to take what nature offered, but did not show great desire to place her out of the influences of vicissitudes of climate and atmosphere where she could do still better. The vegetable raiser has indeed lately realized that a glass structure is a powerful aid to him in his work, and the fruits that grace the tables of the land should be of equal quality with the lettuces and radishes. To this end tends the pot culture of orchard fruits.

The Village Square.

The model plan which has been prepared for the guidance of Village Improvement Associations and allied organizations is ready for publication, and will appear in the next issue of American Gardening.

American Pomological Society.

The well-known Iowa nurseryman C. L. Watrous of Des Moines, an energetic and capable horticulturist, was elected at the late Columbus, Ohio, meeting to succeed P. J. Berckmans who has held the office of president for many years.

Other officers are G. W. Campbell, Delaware, O., Vice-president; W. A. Taylor, Washington, D. C., Secretary; L. R. Taft, Agricultural College, Mich., Treasurer. The membership fee was reduced from \$4.00 to \$2.00.

The place of the next meeting is not yet decided upon. The first portion of our special report of the meeting appears on page 632 of this issue, and the conclusion will be given next week.

The Potato Rot.

BYRON D. HALSTED, N. J.

From the many complaints received and a personal inspection of several potato fields in the state, it is evident that the potato rot is prevalent this season. This disease is caused by a fungus (*Phytophthora infestans*) which is closely related to the downy mildew upon the grape. It first attacks the potato leaves, causing them to curl and become "frosted" upon the under side, after which they quickly turn brown and decay. From the leaves the fine threads of the fungus pass to the stems, and if the conditions are favorable the vines are soon dead and leafless. The potatoes are the last to be attacked, and owing to their size and solidity, may be considerably infested internally with the fine filaments of the fungus before the condition familiarly known as the rot becomes evident. From this it follows that the loss from the decay of the tubers after harvesting the crop may possibly be more than that occurring in the field.

Conditions Favoring the Rot.—The first essential is abundant moisture. Since 1840, when it is thought that the trouble was introduced into this country from South America, the wet years have been the seasons of most rot. A moist atmosphere favors the development of the fungus in the leaves and stems; the rain assists in conveying the germs (spores) from the foliage to the tubers, and the wet soil encourages the growth of the filaments that may have reached the potatoes by descending through the stems. A second favoring condition is warm weather—not hot or cold, but a condition of the atmosphere which obtains when there is a week or month of showery summer weather, often spoken of as "close" or "muggy"—just such weather, in fact, as we have experienced throughout the state for the past four weeks. A large quantity of decaying organic matter, as coarse barnyard manure, perhaps, stimulates the development of the rot, especially if accompanied by favorable conditions of temperature and moisture.

Treatment of Infested Fields.—It is evident that after the vines have been killed there can be no further growth of the tubers, and as the disease first attacks the leaves and tips of the vines and works downward toward, and finally into, the tubers, it follows that there can be no loss in yield, and a great possible gain in healthfulness by early digging. As a rule, the potatoes should be removed from the soil as soon as possible after the vines have been "struck" by the rot. The dead vines abound in the spores of the disease and it is possible for the tubers to be infected by contact with the vines at the time of digging. Therefore, it is an important and inexpensive precaution to rake the vines into heaps and burn them before the potatoes are dug, at the same time destroying millions of germs of the rot, some of which might otherwise do injury elsewhere.

The same conditions favor the rot after as before digging, and, therefore, the dug tubers should be left to dry thoroughly, then the sound ones may be stored where they can be kept dry, cool, and with a good circulation of fresh air. A damp, warm, close cellar favors the growth of the rot. Air-slaked lime, a handful or so per bushel, may be dusted over the fresh-

ly harvested potatoes to destroy any adhering germs.

Preventive Measures.—The conditions which favor the rot are not under human control; but knowing the habits of the pest and that it does not usually make its appearance until midsummer, it follows that early varieties of potatoes, when planted early, will usually mature before the rot appears and thus escape. It is also to be borne in mind that a loose light soil does not promote the decay like a clayey one in which the water is held and the air enters with difficulty. From the nature of the disease, it is not expected that any one would think of attempting a second crop upon an infected field until some years have elapsed. Probably much of the trouble arises from the seed not being free from the disease. If possible, the potatoes for planting should be obtained from a locality where rot has not prevailed. The tubers for seed may be soaked in a solution of corrosive sublimate before planting. Some recommend placing the "seed" in an oven for a few moments heated to near a hundred degrees. If possible, plant upon a naturally dry or well-drained soil, and hill up the earth well around the vines at the last plowing, thus giving a good covering to the potatoes and making it less easy for the germs to reach the tubers through the soil. Experimentation may determine that some mixture can be applied to the young vines that will prevent the loss of foliage, and thus save perhaps a half or more of the crop that would otherwise either fall to develop or be lost by the rot. Until then, preventive measures are the only ones to offer.

What to Do Now.—The important thing now is, to save the crop or fraction of a crop. To those, therefore, whose vines have died a month or less before their time this bulletin is issued as a warning to not leave the tubers in the ground any longer than possible. Burn the vines; let the potatoes dry out thoroughly in the field or elsewhere, and, if not marketed, store them in shallow bins, etc., in a dry, cool, airy place, being careful that all rotten tubers are excluded. Decayed potatoes should be removed from time to time through the autumn and winter as soon as detected in the bins. A sprinkling of air-slaked lime may be applied as a further preventive of the rot.

House for Lettuce.

I think of building a greenhouse for lettuce this fall. The house will be 18x50 feet; which is the best, steam or hot water? What size boiler will it take? There will be three benches in the house; should I put pipes under all the benches, or just under the sides or the middle? How many pipes under each bench and what size? I want to start right. Is the Big Boston Lettuce as good for forcing as the Grand Rapids?—ED. SCHRICKEL.

—Hot water should always be used for lettuce culture; steam is not desirable, owing to the quicker and more fiery nature of the heat given out. For such a small house as is suggested, only a small boiler would be needed. But for lettuce, a crop to which heat must be applied slowly, it is better to err on the side of size so that the fire would never need pushing. The pipes need to be disposed in such a manner that they will give off the greatest amount of heat near to the plants without drying them out. In large houses where the plants are grown in solid beds it is customary to have the pipes 18 to 20 inches above the plants. Perhaps in your case, with benches, a 4-inch flow and return down each path would be ample. On the coldest side of the house, perhaps two returns would be advisable. In regard to variety to grow, for the New York and Boston markets, the one almost exclusively used is Boston Market. (See detailed directions in volume for 1895, pages 89 and 135.)

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multiplicity of counsel there is wisdom and safety. Write us often.

Blue Hydrangeas.—I know some people consider these an abomination, as much so as a double Sweet Pea, but nevertheless, some other people like them. Among the latter benighted heathen I class myself. It is a very simple matter to change the pink *Hydrangea hortensis* to a blue, and a neighbor of mine discovered the fact by a mere accident. One fall she left a trowel accidentally around the roots of a large *Hydrangea*, and the next season it produced blue flowers. As there were nearly a hundred clusters on the bush, it was an exceedingly handsome sight. The next year I imitated her example, and my pink *Hydrangea* has since borne blue flowers. It is not necessary to use iron filings. Any old iron thing by the roots will answer the same purpose.—L. C. L. JORDAN.

—In answer to Dago about iron filings turning *Hydrangeas* to purple or blue, I have tried it with success early in spring at time of potting, and before the buds are set. Take and mix well in soil at time of potting, or use steel filings which will answer the same purpose. I have had the flowers a very dark blue and purple.—Geo. P. MAHOOD.

The S. A. F.—In your article entitled "The Florists and Others," page 602, occurs the following: "This result very plainly demonstrated good fellowship does not suffice to carry an election; indeed, this very fact combined with the desire to have one of themselves, won the day for the Washington florist." It appears to me that you are mistaken in your premises, and faulty in your deductions. It is unjust to Mr. Gude to say that he holds aloof from good fellowship, indeed, any one who was present at the banquet in the tent at Newport and heard the cat calls, cries of "Bully boy, Billy," "You're the stuff," "Go ahead old man," etc., and saw him grinning his acknowledgments would not accuse him of want of good fellowship, neither would his adherents be accused thereof; 'tis unjust to both.

Again you say: "To the readers of the American Gardening this will be satisfactory news, for in past years, they have stood aloof from the Society of American Florists, owing to the fact that the so-called social element was reputed to predominate, and the meetings generally balanced up in favor of pleasure rather than profit." That looks like casting an imputation on the retiring officers—president and vice-president, and yet it is conceded that the convention just held in Providence was a most successful one socially. There was more than the usual liberality displayed in the way of entertainment and the retiring vice-president, with the aid of the florists and gardeners of Providence and Newport, aided and abetted by the unflinching zeal of the secretary of the S. A. F., deserve unqualified praise rather than implied censure for their efforts in that direction. That they were fully appreciated by Mr. Gude and his supporters their presence attested. Your claim that it "will be satisfactory news" to your readers, who have held aloof does not seem consistent with your assertion that it was "the desire to have one of themselves," i.e., a florist pure and simple, which "won the day for the Washington florist." This was not catering to the large class of horticulturists—ornamental and otherwise—whom you allege have held aloof, and it was apparently the spirit of class distinction, as shown in the selection of Mr. Gude, which prompted the very disparaging remarks anent the vegetable gardener uttered by his distinguished fellow-townsmen. If the selection of a president was intended to show that others than tradesmen pure and simple could be entrusted with the helm, it failed lamentably, and there is

little inducement for those "who held aloof" on the ground that the society was purely a trade organization to alter their opinion. If the gentleman who was unsuccessful had been elected president, those "who held aloof" on that ground would have no further cause for complaint, because of his well-known connection with the Massachusetts Horticultural Society, which encourages all branches of horticulture. The change of name does not indicate a change of policy; in fact, it was generally understood that Mr. Wood's candidacy was bitterly opposed by the majority of the executive committee, and that several of them personally conducted the canvas against him, this coupled with the desire to maintain the Society on its present lines, not youth and want of good fellowship "won the day for the Washington florist."—LAWRENCE COTTER.

Water Lilies in Pots.

To the Editor of American Gardening.

As an amateur I have grown many fine plants, but prominent among the best is a plant of Water Lily (*Nymphaea Laydekeri* rosea) which I have grown the past season in a 6-inch pot in an aquarium with gold fish.

It was in full foliage May 1, when it commenced blooming, and has continued with an almost daily succession of its beautiful flowers and foliage, but I intend soon to put it outdoors in order to check its growth and ripen the bulb. The flowers open in the morning and close at night three days in succession, occasionally four times, at the first opening a rose color of delicate shade, difficult to describe, deepening in tint at each successive opening, the deepening shades contrasting as if they were different varieties. There is at all times in sight coming up through the water a succession of flower buds and fine foliage.

I have also grown the *pygmaea alba* in a 4-inch pot, and *p. Helvola* in a 5-inch pot, and the *Zansibar* varieties in 6-inch pots with fair success. I might add more of my experience in this matter, but I see you are just now issuing a work on the subject which would render unnecessary anything I could say.

FLETCHER WILLIAMS, Newark, N. Y.

[Not at all! We are always glad to hear from our readers any of their experiences. We trust Mr. Williams will not stop now.—ED.]

Asparagus for July and August.

A correspondent writes: "I have a summer resort for a market and asparagus sells high during July and August. How can I work it to get shoots at that time?"

—Do not cut it in the spring, but cultivate often until your summer resort opens and market is ready. Then mow it off close to the ground and the new shoots will quickly come up. You can then cut clean until middle of August and then let it grow until it freezes. I know of no plant which will bear cutting the tops off as long as asparagus, not even the Canada thistle, but you can kill it in that way. If the tops grow in the spring the roots will get their strength and be ready to force a vigorous growth, provided there be plenty of moisture. The shoots are largely water and if ground dries out they will grow slow, and be very tough and woody. Some scheme of irrigation would be very profitable for it. July and August cutting will soon destroy the vigor of the bed and should be continued no longer than necessary, as the plants must have leaves to digest their food and assimilate it. Every plant without leaves during the growing season is like an animal without air—it's only a question of time as to when it will die.

R. M. KELLOGG, Three Rivers, Mich.

A canvass of the big fruit growers brings to light the fact that the Mason County, (Mich.) peach crop is going to be light. Two months ago it was estimated that there would be 300,000 bushels, but now the most generous estimate is only one-third of that amount.

W. & D's.
CELEBRATED SURE CROP.
MUSHROOM SPAWN.
8 LBS. FOR \$1.00.
 Lillium Harriett, Roman Hyacinths, Freesias,
 Paper White Narcissus, Callas,
 Etc., Etc.
 Special PRICES on application.
WEBER & DON,
 Seed Merchants and Growers.
 114 Chambers St., N. Y. CITY.
 Mention American Gardening when you write

MacDONALD & McMANUS, Wholesale Florists and
 50 West 30th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Com-
 mission. Best market prices guaranteed.
 Mention American Gardening when you write

GREAT
Horticultural ..
.. Exposition,
MADISON SQUARE GARDEN,
NEW YORK.

SEPT. 27th TO OCT. 23d.

**\$5,000 IN CASH, ALSO MEDALS, CUPS,
 DIPLOMAS AND CERTIFICATES.**

Dahlias, tropical flowering and
 other plants, Roses, Carnations,
 Chrysanthemums.

Novelties in plants, and floral
 work.

Fruits of all kinds.

Vegetables of every description.

During the first week the
 American Dahlia Society offer
 special premiums.

The National Chrysanthemum
 Society of America will, on October
 21st, offer a silver cup for the best
 six blooms of six standard kinds.

For particulars and schedules
 apply to the superintendents,

JAMES W. WITHERS,
 P. O. Box 1697, New York City.

PROF. VAN DEMAN,
 Parksley, Virginia.

C. L. ALLEN,
 Floral Park, New York.

or the President,

DR. F. M. HEXAMER,
 52 Lafayette Place, New York.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

Mr. Richmond W. Husted, late of Tuxedo, to succeed Mr. Harry Hogan as head gardener for Elbridge T. Gerry Esq., Newport, R. I. A Violet house is to be erected, and other improvements carried out.

Mr. Harry Westley as head gardener for I. T. Burden, Esq., "Fairlawn," Newport, R. I.

A. Dimmock, representing F. Sander & Co., St. Albans, England, arrived in New York, Saturday, September 4, per S. S. Etruria.

R. M. Grey, formerly with Henry Greaves, Esq., South Orange, N. J., where he had charge of the famous orchid collection, and later with R. J. Mendenhall, Minneapolis, where he acted as superintendent, is now with Julius Roehrs, Carlton Hill, N. J. Mr. Grey assumed his new duties as foreman September 1.

Mr. David Houston, staff biologist of the Essex County Council, London, England, has been here on a four-weeks' trip, inquiring into the manner and method of teaching adopted, and the subjects taken up by our experimental stations and colleges. Mr. Houston expresses himself as being favorably impressed with what he has seen and heard, and will have much to report to his educational council. He sailed on the steamship Lucania, Saturday, September 4.

Sales.

A great clearance sale of Palms, Ferns, etc., at Short Hills, N. J., is announced for October 4, 5, 6, 7. Cleary & Co. are the auctioneers.

Newport, R. I.

Messrs. Robert Christie and John R. Johnson were in Boston last week, visiting the plant exhibition of the Massachusetts Horticultural Society. The former exhibited a plant of his new Canna, Senator Wetmore.

Mr. James Garthley, gardener for H. H. Rogers, Fairhaven, Mass., accompanied by his wife, spent some days here last week.

It will please all the friends of the Club to know that after paying its bills in full, and Florists' and Gardeners' Club and Associates were left with a balance on hand.

New Orleans, La.

Park Superintendent Jules Fonta of Audubon Park has just returned from a pleasant and profitable trip to California, where he went in the interest of the Audubon Park Commissioners. Mr. Fonta said that he had traveled considerably over portions of Europe and the United States, but had never before been as far west as California. He thought that this last trip had taught him more than any other he had ever taken for the same purpose.

Mr. Fonta left the city July 2 in company with Mr. Panter, gardener for Mrs. T. G. Richardson.

New York.

The work of laying out a Colonial garden surrounding the old Van Cortlandt Mansion in Van Cortlandt Park was begun August 11 by Samuel Parsons, Jr., Superintendent of Parks. Five thousand dollars was appropriated for this work by the Park Department, and according to the plan prepared, the garden will have numerous narrow paths, with artistic designs, bordered with low boxwood hedges. The flower beds will be in various shapes and forms and planted with old-fashioned flowers. One of the larger beds will be in the form of a flag and have red, white, and blue flowers.

The interest shown by the Park Board in this work is very gratifying to the Colonial Dames of the State of New York, in whose custody the old mansion was placed some months ago and who on May 27, 1879, celebrated the 250th anniversary of the landing of Gov. Peter Stuyvesant on the Island of Manhattan by opening the mansion as a public museum.

Although the smallest free museum in the city, it is by far one of the most interesting, especially to the lovers of Colonial relics.

St. Paul, Minn.

We recently visited the private garden and conservatories of J. J. Hill of this city. These are in charge of L. G. Venke. He grows a general line of plants and cut flowers and has one house of grapes which are well set with fruit and nearly ripe. He has a fine collection of Orchids—one of the best in the city. A large Allamanda attracted attention from its immense number of blossoms and the surface covered by the plant. It is evidently several years old and is trained against the wall.—VERITAS.

Boston.

The annual plant show of the Massachusetts Horticultural Society on September 1 and 2 was fully up to the high standard established by its predecessors, both halls being filled to overflowing with exhibits of a high order. The upper hall was devoted to potted plants and the lower hall to cut flowers.

Among the plants, which were not large as a rule, were some especially fine specimens. The crowded condition of the hall at these exhibitions and the difficulty of getting large plants in the hall have combined to influence exhibitors to bring their small or medium-sized products.

Among the largest plants were the palms entered for the prize calling for a pair in pots or tubs not more than 24 inches in diameter, the first prize for which was awarded to James Wheeler, gardener to Joseph H. White, Esq., on *Phoenix rupicola*. The first prize for pair in 14-inch pots was awarded to Kenneth Finlayson, gardener to Dr. C. G. Weld, on *Acanthophoenix crinita* and *Licuala grandis*. The largest prize and one in which much interest centered was for a collection containing foliage plants of all descriptions not to exceed 40 plants in pots or tubs and the first prize was awarded to William Donald, gardener to J. S. Bailey, on an especially nice lot of stock. Noticeable in this exhibit were the following: Palms, *Kentia Forsteriana*, *K. Belmoreana*, *Areca lutescens*, and *Rhapis humilis*; *Marnata*, *Makoyana*, *Illustris*, *Veltchii*, *Vanden Heckel*, and *roseo-lineata*. A number of choice ferns including *davallias* and *adiantum*s, among which were two very fine *Farleyense*, and an unusually good specimen of *Alcascia Sandariana*, which was also awarded the Society's medal. The first prize for six greenhouse plants was awarded to N. T. Kidder, Esq. (William Martin, gardener) on *Livistona rotundifolia*, *Sphaerogyne latifolia*, *Clerodendron Balfouri*, *Alcascia macrorhiza variegata*, *Dieffenbachia Bausei*, and *Cyanophyllum magnificum*, all good specimens. The first prize for single specimen flowering greenhouse plant was awarded to C. H. Souther (Sandford, gardener), on a fine specimen of *Anthurium Brownii*. The first prizes on six fuchias, for collection of flowering plants grouped for effect, ornamental foliage plant; six ferns, no *adiantum*s, and for five varieties of *adiantum*s named, all went to James Wheeler. William Martin received first prize on six named varieties of *caladium*s. The first prizes on four *lycopods*, six named *dracaenas*, and six named *crotons* were all given to Kenneth Finlayson. D. F. Roy, gardener to E. S. Converse, Esq., received first on six pots of *Begonia rex*, six varieties, and the first on collection of *Begonia rex hybrida* was awarded to George B. Green, gardener to J. M. Little, Esq. The first on collection of not less than ten named varieties of *cannas* in pots or tubs went to John Jeffries (Anderson, gardener). First prize on specimen cycad to James Little, Esq.

The cut flower show was also superb, the largest quantity and finest quality of dahlias in all their types being shown that has ever been seen here. The chief exhibitors in this class being John Parker, Lothrop & Higgins, H. F. Burt, L. W. Snow, William C. Winter, and John Endicott & Co., among whom the honors were divided. Kenneth Finlayson took first on tropæolums, and John L. Gardner, Esq. (William Thatcher, gardener), received first on French and African margolds. E. Sheppard & Son were first on double zinnias. Oakes Ames, Esq. (Carl Blomberg, gardener), and L. W. Goodale of Dwight, Mass., made extensive exhibits of aquatics. Henry A. Dreer, Inc., sent on his new Nymphaeas Gurneyana and Doogueana; they came by mail, and unfortunately did not arrive in very good shape; the last mentioned, which bears the name of the superintendent of Boston's public grounds, is a magnificent lily of chaste and delicate coloring, flowers five and one-half to six inches in diameter, beautifully cup-shaped, and of a pleasing shell-pink color with sepals of royal pink, a symmetrical distinct flower and a valuable acquisition to the hardy nymphaeas.

Where Shall Our Future Supply of Bulbs Come From?*

This is a very easy question to ask, a very easy one to answer offhand, but to give you the necessary data and reasons for the conclusions at which I have arrived at is somewhat difficult in the time allotted for this purpose. I judge that this question refers principally to Dutch, French, Bermuda, and other foreign-grown bulbs, and to such we will confine our attention.

Our Holland friends tell us what is known as the Dutch hyacinth cannot be grown here, as we have not the soil or climate. If there is a file of the reports of the New York Horticultural Society in existence I believe you will find therein a report of a display of cut bloom of hyacinths made by the late Isaac Buchanan. These flowers were raised from bulbs which Mr. Buchanan grew on his place at Astoria, L. I. He bought some bulbs in the Fall, cut them as the Dutch do for multiplying, grew the stock on until they had made large bulbs, then forced them into bloom, and took the first prize over a number of exhibits grown from imported stock. If they will not grow here, why will they continue to thrive in private gardens where they are left for a long time? I know of one bed that was left undisturbed for over ten years, and I have never seen finer spikes of bloom outside than were produced there. This was in a very heavy soil, and the claim is made that the hyacinths require a light soil to make the best stock. I have seen as fine tulips grown here as come from Holland, the bulbs were clean and of perfect shape and produced as good flowers the following season as newly imported stock.

The narcissus does even better here than the tulip, multiplies very rapidly, and is in every way equal to the foreign stock. There are several sections of this country that can produce the freesia in unlimited quantities and of the best quality. Now as to the Roman hyacinth, both white and colored. Mrs. Sayers, wife of the chairman of the committee on appropriations at Washington, told Mr. William R. Smith not to send her any more Romans, as they had become a weed in her garden which is in Texas; and still we are told that we cannot grow Romans. Several years ago 20,000 blue Romans were received in New York in a damaged condition, having been delayed on the steamer. When the cases were opened the bulbs were found to have started and were unfit for sale; they were shipped to Southern Pines, a high elevation known as the Thorndal belt in North Carolina and planted; the following season those bulbs were sold for forcing purposes, and they did so well that the parties who grew them asked the next year for bulbs from the same source, without knowing they had been grown one year

*C. H. Allen, before Society of American Florists.

Potash.

An absolute necessity for every crop.

Free

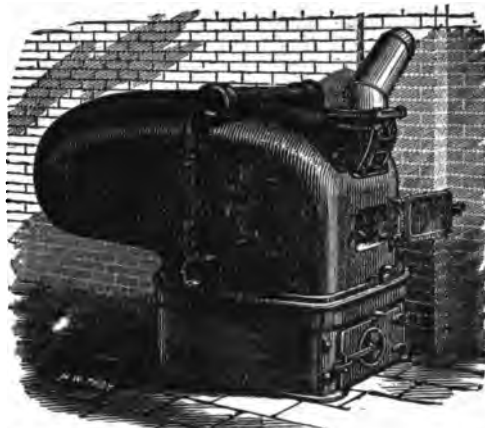
An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write.

GLASS FOR GREENHOUSES, GRAP- GLASS
ERIES, CONSERVATORIES,
HOTHOUSES AND HOTBEDS.
VANHORNE, GRIFFEN & CO.,
Importers of French Glass. 40 to 48 VESTRY STREET,
 Cor. GREENWICH ST. NEW YORK.
 Mention American Gardening when you write.

GREENHOUSE HEATING AND VENTILATING,
 Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

FIVE PATTERNS OF BOILERS
 NINETEEN SIZES
 Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron
 Frame Construction erected complete
 or the Structural Iron Work ship-
 ped ready for erection.

Iron Frame Benches with the
 "Perfect Drainage Bench Tile"
 or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.

Catalogues

Will be issued in greater abundance this Fall than ever; every live firm issues one or more, wholesale or retail.

Are You Planning Yours?

We would be pleased to furnish you with an estimate as to the expenses of printing same.

Our facilities are unexcelled; our staff familiar with the work; our presses of the finest; our prices reasonable and our product good.

Printing of Every Description.

Cards, Billheads, Letterheads, Envelopes, Circulars, Price Lists, Pamphlets, &c., at lowest prices and best workmanship.

Trade Marks, &c., Our Specialty.

We furnish illustrations of plants, flowers or designs, which may be copyrighted for your exclusive use, to serve as trade marks, symbols, &c., for use on all forms of printed matter.

A. T. De La Mare Ptg. and Pub. Co.
 LIMITED.

RHINELANDER BUILDING, (P. O. BOX 1697) NEW YORK.

Telephone, 2154 Cortlandt.

in this country. It has been proven that lily of the valley can be grown in this country profitably, for several of our large forcers have gone into it on a large scale for their own use, they having imported small pipes to grow on. This importation would be unnecessary after a few years, as the stock will increase sufficiently for planting. Why have we not grown these bulbs? Simply because we have believed the foreigner when he has told us that we had neither the soil nor climate suitable for the purpose, merely a case of bluff; for they know full well that we have any soil or any climate or any combination of soil and climate for the growing of any bulb that the florist of this country needs for his business. It is partly due to the fact that when many horticulturists come to this country, they bring pre-conceived ideas with them. There are thousands of acres of land here suitable for growing hyacinths. North Carolina has in her uplands the identical soil of Holland and a superior climate. The narcissus and tulip can be grown in nearly every state.

Some time ago the question was brought up before the New York Florists' Club, Can the Lillium Harrisii be grown at a profit in this country? The same question has recently been brought out in one of our trade papers. I judge from the answers of those replying that they believe they can be. But where? That is the question for some plucky fellow to find out. My friend, Mr. William R. Smith, informs me that Secretary Wilson has had this subject brought to his attention, and that he has taken great interest in the matter and will push it. As the secretary is a full-fledged agriculturist, you can rest assured that if he can put several hundred thousand dollars into the hands of the land workers of this country, he is going to do it, for that is the platform on which he stands.

It is claimed that Harrisii culture has been tried in California but without success. By whom was it tried? Was it one who thoroughly understood the nature of this lily, differing as it does from all others? Or was it simply given to some persons who thought they were perfectly capable to handle any bulb given them? Was the trial made in only one section of the state, or was it made as it should have been in different parts and under different conditions of soil and climate?

Is it not a fact that two or more growers receiving bulbs from the same case for forcing obtain vastly different results? I know of one instance where a case was divided between two men; the crop with one was of the best, while the plants of the other were all diseased and worthless; thus it may be in case of trials. One man thoroughly understanding the requirements of the Harrisii will produce excellent results; his neighbor will make a

failure of it. It is also claimed that foreign cheap labor is a prime factor against our growing bulbs. A Frenchman told us twenty-five years ago that we could not compete with them in the gladiolus growing, their labor was so much less than ours. How many gladioli are imported to-day? It would surprise many of you if you knew how many are being exported annually. It is not so much that their labor is cheaper, as the fact that they plant their crops much closer and thus obtain double the amount from a given space.

Many florists who have tried growing a few of these bulbs have given it up in disgust. Why? They had not the facilities for handling the stock. The man who grows an acre of any bulb can do it much cheaper proportionately, than one who grows but one short row; for in handling crops in large blocks the work becomes systematized. The market gardener who works but a few acres often produces more than the ordinary farmer does from a hundred because he manures heavily and obtains two, and in some cases, four crops, and this can be done in some lines of bulb culture. I know of one case where a farmer began in a small way at trucking, and to-day he employs men on seventy acres, obtaining two crops every season, while his neighbors are going along in the same old rut (with a few exceptions).

I thoroughly believe that if the matter of bulb growing in this country is handled as it should be, by those who fully understand the nature of bulbs, it will only be a few years when the foreign bulb growers will receive their letters of recall from this land; but you must remember that they will not give up the business without a struggle; they will do everything in their power to hinder the establishing of this as they have every other industry, knowing only too well that if

Deafness Cannot be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing; and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surface.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENY & CO., Toledo, O.

Sold by Druggists, 75c.

an American undertakes the producing of any article in which there is a show of profit that he is bound to succeed. Some say that at the present prices it would not pay to grow stock that we import. I will ask you to use a little time to figure out what you can get from an acre of lily of the valley, planting the pipe one inch apart in rows ten inches apart; free-las the same and the other stock, having more space according to their size. I believe that you will find the amount far beyond your present ideas.

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticultural Landscape Gardener. Plans and estimates furnished.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 600 original designs for residence, gardens, parks, etc., ready for inspection. Consultations solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 126, New York City.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the ad., and each initial, or a number, counts as one word. No cuts or display type allowed.

L. C. BOBBING, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolia, Rhododendron, Anemone, etc. Branch of the Horticultural Company, New York, Holland.

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 712 Wharton St., Philadelphia. Three shipping points, can save you freight.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

CALIFORNIA Privet make the finest ornamental hedge, and are perfectly hardy. Fine lawn plants grown at seashore, two years old, \$1 per hundred. Cash with order. References, First National Bank, Asbury Park, N. J., State Bank, Newark, N. J., Atlantic Coast Nursery, James H. Cornell, Proprietor. Office, 238 Washington St., Newark, N. J.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

WANTED—A position as gardener and florist in either private or commercial place. English married, small family. Several years' experience in both America and Europe. Best of references. Address G. P. Mahood, Box 330, Elmhurst, Ill.

NOW READY.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$2.00. 25 per cent. off to subscribers to American Gardening and Florists' Exchange.

This work contains nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work.

On heavy enamelled paper. Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8 Duane Street, P. O. Box 1697, New York City.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Care in Potting Bulbs.

A good, well-composted soil is the first requisite, after obtaining good bulbs. Innumerable directions are given for preparing such soils, and, if one has no access to loam, field or compost heap, the florist will supply every need with the exact soil medium needed. But, even to put the bulbs into the pots properly requires some skill and judgment. With the hard bulbs which throw a large bunch of fibrous roots, the chief mistake made is in making the soil too firm below the bulb, through thrusting the latter deep into the soil by main force. This gives the roots less chance to take hold than they might otherwise have, and makes sure that the bulb shall be thrown out of the soil when the mass of roots demands room. It is better to pot firmly about and above the bulb, but very loosely below it.

Satisfaction from Bulbs.

Horticultural writers make it a business to say that there is nothing else equal to bulbs for giving winter bloom. Yet, the fact remains that hundreds are disappointed just along this line. This is partly due to poor bulbs, partly to inability to follow directions, and largely to time of potting and choice of sorts. Late potting deliberately invites failure and dissatisfaction. A haphazard collection of sorts is likely to be more than half failure, and the more varied the collection the greater the failure. Only a few of the smaller bulbs and the novelties should be tried each season. The old reliables are not so interesting, perhaps, but in them lies the most of beauty and of satisfaction. Lilies, the better Hyacinths, the Narcissi, the Alliums, and the Frezias are best choice for the average grower.

The Lesser Bulbous Families.

The list of bulbs for winter planting has grown to be a long one, and question is often made as to the reason for the neglect of many of the lesser sorts. One active reason is that many persons are so fond of Lilies and Hyacinths that these receive first consideration always, and often there is no money left to buy the others. It is not that there is less beauty in the less-known families; indeed, to some eyes, the fantastic beauty of a Calochortus may be far greater than the well-known charms of the Hyacinth. But, somehow, the Hyacinth is a must-have, the other only a may-have. There is a world of pleasure in growing these lesser bulbs a few at a time, and for variety's sake. But Crocuses, Scillas, Bordians, Babianas, and most of the little-grown bulbs often prove more or less failures, while the Triteleias, pretty and long blooming as they are, do not make show enough to attract much attention. It is well worth while to try a few of the neglected ones, if only for the sake of knowledge.

Farfugium and Begonia M. Aurea.

The Begonia manicata aurea is often contrasted with the old "Leopard plant," because they are of similar general appearance. Both are beyond praise, when at their best; both are frequently seen in condition to belie any praise. Poorly grown, either is a source of pain to the most careless beholder. The Farfugium often suffers from too strong sun heat, and, while most flower lovers know perhaps that the Begonias dislike strong sunshine, this particular sort has been seen during the present season undergoing torture of this sort at the hands of its friends.

Russelia Juncea.

He shows hardihood, indeed, who dares to say of any one plant that there is nothing else so beautiful for some especial purpose. Even of the most beautiful specimen of the acknowledged queen of flowers one might not make such a statement without contradiction. Yet it is of that novel plant, Russelia juncea, that the sweeping statement is made that

there is nothing so beautiful for large vases. Judging from the behavior of a single plant, in one set of conditions, one might say that no plant was less worthy of such strong praise. Such judgment is a mere straw, however, and, unfortunately, it is from the reports of such "tests" that a novelty usually gets its early reputation.

Lycopodiums.

These pretty plants, so little known to the rank and file, deserve wider trial by those who can depend on themselves not to neglect their plants. They are excellent for filling and bordering in decorative work, and very useful for jardinières. Like Palms, they must never be allowed to become dry at the root, as a single experience of this sort is fatal to their beauty. A shaded position with plenty of moisture meets their needs, and best of all, they do not despise a north window. Their lively green and the peculiar style of their foliage also commend them as giving pleasing variety to any collection. Some show a surface like shot silk, some are fern-like; some are entirely of a golden tinge, while others show white tips to all the growth. Plants so beautiful deserve something better than neglect.

Scoring One's Own Fowls.

It is the suburbanite, of all men, who is sure, sooner or later, to reach the point where none but the pure-bred fowls will satisfy his poultry-loving soul. Values and scores at once become the all-important things. Shall he—can he score his own fowls? If this means "Can he score them to sell?" he may find help in the discussions lately so hot in the accredited poultry authorities. It is not often that a single man is favored with so much scoring by opposers, and so much free advertising as has fallen to one man during the past season, because he tacked high scores to his birds without mentioning to possible customers that the scores were his own. That he may have been innocent of blame cannot change these facts.

An Honest Private Score.

A certain free lance among poultry writers asserts, dogmatically, that every breeder making a specialty of a single breed is intelligent enough to give honest and correct score cards with the fowls he sells. This is a safe statement enough in one of its aspects, if any one could discern the connection between intelligence and honesty. But no man with ordinary human nature in his breast can be relied on to give a correct score card for his own birds, even though he be honest above the average. It is too sure to be, as an expert breeder confessed a short time ago, in a private talk: "I found that my birds, scored carefully by myself, nearly always lost a point or two at the hands of an unbiased judge at the shows. I could not help giving them the benefit of the doubt every time." Breeders need to score their birds, especially if commercially inclined, but they need experts to verify those scores when it becomes a money affair to some buyer.

The Point of View.

Money in poultry? The battle rages around the question as to whether or not it exists. The Western man, whose feed is cheap, and who gets the lowest of prices for the products is the one who does the most complaining; who makes the most cynical remarks. The South often takes up the same strain, while we of the North often hear that Southern poultry kills our trade. Just lately, another form of the problem has come to the surface. A Florida fruit and poultry raiser shows up the difficulties in his way, affirming that feed and freights are so enormously high that eggs pay no profit, even though sold at 25 to 40 cents a dozen. Chicks pay some profit, he admits, but affect the question but little, on account of the limited market. The strangest part of all, however, to those who like to throw discredit on poultry, is that the same man who denies a profit from the more valuable products, as usually considered, states that he finds the manure alone of so much value as to warrant a continual increase of his flock. Nothing could show more clearly that in every location there

is some compensation to balance great drawbacks, and that one must be informed of all the facts before he is competent to form any opinion whatever. A wrong point of view produces always a false conclusion.

So Many Chickens.

"What a lot of chickens there are everywhere," was the remark of a city visitor in a farming neighborhood. And it is true, that on nearly every farm the flocks have been increased. But even yet suburbanites cannot be sure of fresh eggs without producing them at home.

MYRA V. NORRIS.

PEACH TREES, \$3 PER 100.

All kinds of Trees and Plants **CHAP.** Cat. **FREE.** RELIANCE NURSERY CO., Box 1410, Geneva, N.Y. Mention American Gardening when you write.

IRON AND STEEL ROOFING

is cheaper than shingles, because the first cost is no greater and the lasting qualities are double. If kept properly painted it will last indefinitely. A Good corrugated Steel Roof at 2 1/2¢ per square foot. For testimonials, circulars and estimate address THE BERLIN IRON BRIDGE CO., EAST BERLIN - CONN.

Mention American Gardening when you write.

Dwyer's SUMMER and AUTUMN LIST

Of Pot Grown and Laver STRAWBERRY Plants, CELERY, VEGETABLE Plants, FRUIT Trees and ALL NURSERY STOCK will be mailed free to all who apply for it.

T. J. DWYER, Cornwall, N.Y. Box 178.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

The true Aroma, Flavor, Lusciousness and Healthfulness of the

STRAWBERRY

Is known only to the gardener who planting the very best varieties, allows them to ripen to perfection under his own tender care. We grow the Large, Superb, Highly Flavored, Highly Colored Table Varieties, and will deliver plants anywhere on the continent fresh as when dug.

Practical Treatise Telling How to Grow Them to perfection and how to Turn a Pretty Penny with your surplus berries, free to buyers.

Illustrated Catalogue and copy of the Strawberry Specialist, a monthly Journal devoted to strawberry culture, free to all. 14th year.

CONTINENTAL PLANT CO.,

STRAWBERRY SPECIALISTS,

KITTRELL, N. O.

O. W. BLACKNALL,

Pres. and Gen'l Manager.

Mention American Gardening when you write.

WHOLESALE MARKETS.

New York.

The approach of the holiday last week found the market filling up rapidly with stock of every description, much of which was of a very inferior grade. This overcrowding of stock on Friday and Saturday reduced prices considerably, for in no way as the demand commensurate with the supply. A few special marks on Saturday morning early shot up ahead of quotations, especially on peaches. But the spell was brief, stock afterwards falling to extremely low figures, and later in the day, in order to clear out, any kind of an offer had to be accepted. Those who held back carried stock over with the result that on Tuesday, this with new stock, was on hand to make a still greater slump. For Tuesday all day trade was at a very low ebb and much stagnated after the holiday of Monday.

Plums are selling low and so far preservers have the best of the market, being able to buy at practically their own price.

Potatoes are a little more irregular with a tendency to fall in value.

Apples—Duchess of Oldenburg, hand-picked, d.-h. barrel, \$2@2.50; Gravenstein, hand-picked, per d.-h. barrel, \$1.75@2.50; Holland Pippin, hand-picked, d.-h. barrel, \$1.50@2; Fall Pippin, hand-picked, per d.-h. barrel, \$1.50@2; Twenty-ounce, hand-picked, per d.-h. barrel, \$1.75@2.25; Codling, hand-picked, per d.-h. barrel, \$1.75@2.25; Blush, hand-picked, per d.-h. barrel, \$2@2.50; mixed varieties, poor to good, per barrel, 75c. @ \$1.50; Missouri, mixed varieties, ordinary, 75c. @ \$1.25; Virginia, fall varieties, per barrel, \$1.50@2.50; crab apples, small, choice, per barrel, \$2@3; large, per barrel, \$1.25@1.75.

Peaches—Maryland and Delaware, per carrier, 75c. @ \$1.25; extra, per basket, 70@80c.; prime to choice, per basket, 40@60c.; common to fair, per basket, 25@35c.; Pennsylvania, per 20-pound handle basket, 80@50c.; Jersey, extra, selected, per basket, 60@70c.; selected, choice, per basket, 40@50c.; fair to good, per basket, 20@35c.; culls, per basket, 15@20c.

Pears—Bartlett, large, clean, per barrel, \$1.75@2; poor to fair, per barrel, 75c. @ \$1.25; latersorts, fair to good, per barrel, \$1@1.50; common kinds, per barrel, 50c. @ \$1.

Grapes—Delaware, up river, per 24-pound case, 60c. @ \$1; Niagara, up river, per 24-pound case, 30@75c.; Moore's Early, up river, 24-pound case, 40@50c.; Worden, up river, 24-pound case, 40@50c.; Concord, up river, per 24-pound case, 40@55c.; Champion, up river, per 24-pound case, 80@40c.; black varieties, up river, per 8-pound basket, 10@12c.; Jersey, per 8-pound basket, 10c.; Jersey, per 5-pound basket, 5@6c.

Plums—Damson, per quart, 2@3c.; table varieties, state, 8 to 10-pound basket, 16@20c.; common blue, state, 8 to 10-pound basket, 12@16c.; Gage and Reine Claude, state, 8 to 10-pound basket, 18@20c.; common green, state, 8 to 10-pound basket, 12@16c.; up river, one-half bushel crates, 50@60c.; Quackenbos, per barrel, \$1.50@2; Purple Gage, per barrel, \$1.50@2; egg, per barrel, \$1.50@2.50; Reine Claude and Green Gage, per barrel, \$1.50@2.50; Damson, per barrel, \$2@2.50.

Watermelons—Nanticoke, extra large, per 100, \$16@18; Jersey, large and fine, per 100, \$12@15; Virginia, large, per 100, \$10; small to medium, per 100, \$4@8.

Muskmelons—Hackensack, Nutmeg, per barrel, \$1@1.25; Monmouth County, Nutmeg, per barrel, 50@75c.; Jenny Lind, per barrel, 75c. @ \$1.50; south Jersey Gem and J. Lind, ordinary, 50c. @ \$1; Maryland and Delaware, per bushel basket, 40@60c.; per one-half barrel basket, 50@75c.

Celery—Choice, large, per dozen, 30@35c.; fair to prime, per dozen, 20@25c.; small and poor, per dozen, 8@15c.

Corn—Hackensack, per 100, 75c. @ \$1.25; other Jersey, per 100, 50@75c.

Cabbages—Jersey and Long Island, per 100, \$2@3.

Cucumbers—Jersey, per bushel box, 25@50c.; Long Island, per 100, 50c. @ \$1; hothouse, per 100, \$1.50@1.75; pickles, state, per 1,000, \$1@2.50; pickles, Long Island, per 1,000, \$1@2; pickles, Jersey, per 1,000, \$1@1.75.

Egg plants—Jersey, per barrel, 75c. Green peas—State, per bag, 75c. @ \$1.25.

Lima beans—Jersey, Potato, per bag, 75c. @ \$1.25; near-by, flat, per bag, 50@75c.; south Jersey, flat, per bag, 50@60c.; Maryland and Delaware, Potato, one-half barrel basket, 75c. @ \$1; Maryland and Delaware, flat, one-half barrel basket, 50c.

Onions—Jersey, white, per barrel, \$2@3; other kinds, per barrel, \$1.25@2; Orange County, red, per bag, \$1.25@2; Orange County, yellow, per bag, \$1.25@1.75; Orange County, white, per bag, \$1@2; Long Island, yellow, per barrel, \$1.50@2; state and Pennsylvania, yellow, per barrel, 1.75@2; Ohio, yellow, per barrel, \$1.75@2; Eastern, white, per barrel, \$2.50@3; Eastern red, per barrel, \$2@2.25.

Peppers—Jersey, per barrel, 50@60c. Squash—Hubbard, per barrel, \$1@1.25; marrow, per barrel crate, 75c. @ \$1.

String beans—Long Island, per bag, 40@50c.

Tomatoes—Choice, round lots, per box, 60@75c.; ordinary, per box, 30@40c.

Turnips—Russia, per barrel, 75c.

Potatoes—Long Island, in bulk, per barrel, \$2@2.25; Jersey, per bag, bag included, \$1.75@1.90; choice, round, in bulk, per barrel, \$1.87@2; average prime, in bulk, per barrel, \$1.75; poor to fair, in bulk, per barrel, \$1.87@1.50; yellow sweets, Virginia, per barrel, \$1.25@1.37.

Philadelphia.

All kinds of both fruit and vegetables continue in good supply, buyers are rather scarce and low prices prevail as a consequence.

The quality of peaches has improved over that of the past few weeks, but it is still below the average of past years.

Grapes are becoming very plentiful, and selling very slowly. Sales are so poor that quotations are useless.

Apples—Oldenburg, hand-picked, per barrel, \$1.75@2; Gravenstein, hand-picked, per barrel, \$1.50@2.25; Maiden's Blush, hand-picked, per barrel, \$1.50@1.75; Jersey mixed, per barrel, \$1@1.25.

Pears—Bartlett, choice, per barrel, \$3@3.50; fair to good, \$2@2.50; Clapp's, per barrel, \$1.25@2.

Peaches—Pennsylvania, Cumberland valley district, per carrier (six baskets) \$1.25@1.75; per handle basket, 40@50c.; regular basket, 40@85c.; per bushel crate, 85c. @ \$1. White fruit selling best. The foregoing constitutes the bulk of stock now in this market. There are some Maryland and some from upper Jersey, but above prices cover all.

Plums—Green Gage, 10-pound baskets, 15@20c.; seconds, 10@12c.; table varieties, 10-pound basket, 18@25c.

Watermelons—Choice, per 100, \$10@15; seconds, \$7.50@9.

Muskmelons—Jenny Lind, per barrel, 75c. @ \$1; mixed, per barrel 40@60c. Gem, per barrel, 60@80c.; the quality of all melons is poor and sales slow.

Beets—Jersey, near by, per 100 bunches, \$1@1.25.

Celery—Choice, per dozen, 25@40c.; fair to good, 15@20c.

Corn—Jersey, per 100, 75c. @ \$1.25.

A Builder's Experience.

A USEFUL LIFE RENEWED

IN AN REMARKABLE MANNER.

Udney Y. Wilson Was Near Death's Door. Doctors Failed to Help Him—A Nemo Remedy Succeeded in Saving His Life.

From the Evening News, Detroit, Mich.

Udney Y. Wilson, contractor and builder, living in Detroit, Mich., at 87 High Street, West, said, regarding Dr. Williams' Pink Pills for Pale People: "For years I have been out of doors in all kinds of bad weather, looking after my building contracts. I have worked many days in the rain and cold to complete some building. About two years ago I noticed I could not get around as I should, and commenced to have a severe pain in my back. I tried the usual remedies without getting any relief, and for nearly a year I suffered intensely. I kept up as long as I could, as I had several contracts for buildings that had to be completed.

"At night I could not sleep. My physician said it was my kidneys, and every day I went outdoors they would keep me awake nearly all the following night. Instead of getting better I became worse, and worried a great deal about my work. The doctor said I must quit work and go to bed, or he would not be responsible for my life.

"All the medicines I took only helped me temporarily. Some days I would feel better and go out a day, only to be again confined to my bed for weeks at a time. One day my wife suggested that I try Dr. Williams' Pink Pills for Pale People, and I laughed at the idea.

"Finally when I got into such a condition that I would take almost anything in the hope of relief, I tried the pills. They helped me from the start, but I would not acknowledge it and said it was the other medicines that had just commenced to work. I disliked to own

up that Dr. Williams' Pink Pills helped me, as I had no confidence in them. When I could not carry on the imposition any farther, I told my wife that the pills were helping me. I took three boxes before I was entirely cured, and we now keep them in the house all the time.

"I am not prepared to say that Dr. Williams' Pink Pills for Pale People will cure everything, but I know they will cure kidney troubles and general muscular weakness, as they cured me.

"I now recommend them to every one in my neighborhood, where I formerly made sport of all proprietary remedies."

U. Y. WILSON.

Subscribed and sworn to before me, a Notary Public, this fourth day of March, 1897.

ROBERT E. HULL, JR., Notary Public.

Wayne County, Michigan.

Dr. Williams' Pink Pills for Pale People contain, in a condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are an unfailing specific for such diseases as locomotor ataxia, partial paralysis, St. Vitus' dance, sciatica, neuralgia, rheumatism, nervous headache, the after effect of la grippe, palpitation of the heart, pale and sallow complexions, all forms of weakness either in male or female. Pink Pills are sold by all dealers, or will be sent postpaid on receipt of price. 50 cents a box, or six boxes for \$2.50 (they are never sold in bulk or by the 100), by addressing Dr. Williams' Medicine Company, Schenectady, N. Y.

Cabbages—Per 100, \$2@2.50.
 Cucumbers, Jersey, per barrel, 50c.@
 \$1; pickling, per 1,000, \$1@1.75.
 Carrots—Per five-eighths basket, 50@
 75c.
 Egg plant—Jersey, per barrel, 50@75c.
 Lima beans—Per basket, 60@80c.
 Onions—Jersey, white, \$2@3; New
 York state, Yellow Globe, per barrel,
 \$1.75@2; Pennsylvania, yel. \$1.50@2.
 Peppers—Jersey, per barrel, 50@75c.;
 per basket, 25@30c.
 Squash—Marrow, barrel crate, 75c.@
 \$1.25; Hubbard, per barrel, \$1@1.30;
 White Bush, per barrel crate, 75c.@1.25.
 String beans—Per basket, 30@50c.
 Tomatoes—Choice, 40@50c., per five-
 eighths basket; fair to good, 25@30c.
 Potatoes—Jersey, Rural Blush, per
 barrel, \$2@2.25; per five-eighths basket,
 40@45c.
 Sweet potatoes—Per five-eighths bas-
 ket, 35@50c.

Boston.

Peaches are now arriving from
 New Jersey, Maryland, Connecticut, Penn-
 sylvania, and Michigan. The car from
 Michigan being the first from there this
 year. Prices very little changed from
 those ruling last week. In the six-basket
 carriers fancy fruit \$1.75@2. In the 20-
 pound basket 65@90c.; while the so-called
 Delaware peach basket brings 75c.@
 \$1.20.

This city has not recuperated from the
 glut of apples here last week; and there
 are yet quite a few cars in transit; a
 range of general Western stock would be
 \$1@2, with some fancy Gravensteins \$3,
 and other choice red fruit \$2.25@2.75.

Pears in large supply; choice Bartlett's
 being sold \$1.75@2 a barrel; all other
 varieties meet a low price; whenever cus-
 tomers can be found willing to make a
 bid.

Large heavy-weight watermelons only
 fair demand 14@15c.; small sizes not
 wanted, even at low figures. Cantal-
 oupes, home stock, in excellent demand,
 there being so many varieties prices range
 all the way from \$1@4 a barrel;
 choice Emerald Gems bringing \$4, with
 black Japs \$2.50@3.50, white Japs
 about \$1.50, and muskmelons not over
 \$1. Montreal stock nearly done and
 prices even firmer than those of last
 week. This week there will arrive a car-
 load of those fancy Rocky Ford Nutmeg
 melons, grown in Colorado; the samples
 so far seen are of excellent quality, and
 the trades jump over each other in their
 haste to make purchases; some Balti-
 more black Japs packed in 60-quart berry
 crates bring about \$2.50.

Green corn very plenty, consumption
 large; excellent demand.

Quite a large call for home-grown to-
 matoes, with prices running 50c.@\$1 a
 bushel; fancy solid red stock bringing
 the latter price.

Egg plants dull, scarcely anybody ask-
 ing for them.

Peppers are quiet at around \$1 per bar-
 rel.

If customers are looking for mush-
 rooms, they still bring \$1 a pound.

New Brunswick blueberries 5@8c. a
 quart.

Celery very steady, limited demand.

Fine Marrow squash finds ready sale at
 \$1.50 a barrel; home-grown stock is of
 excellent quality.

Potatoes very firm; at the railroad
 selling 65@75c. a bushel; some barrelled
 stock from Long Island bringing \$2.25@
 2.50 a barrel; sweet potatoes firmer,
 quick demand \$1.75 a barrel.

Cucumbers did not grow this year like
 other seasons; for table use about three-
 fourths of a cent a piece, if for pickles,
 \$1.50@2 per bushel.

Cabbage, as good demand as usual at
 this season, 3@5c. a head; limited de-
 mand for cauliflower.

Onions are easier, \$1.75 if in large-sized
 barrel; while Ohio stock being in small
 barrel brings but \$1.50.

Carrots 2@2½c. a bunch.

Pineapples and peas gone by; mint
 40c. a dozen bunches; parsley 75c. a
 bushel; Lima or Selva beans, \$2 a
 bushel.

Plums arrive in large quantities and
 take a range of prices of 10@20c. in 10-

ARMSTRONG & McKEIVY
 Pittsburgh.
 BEYMER-BAUMAN
 Pittsburgh.
 DAVIS-CHAMBERS
 Pittsburgh.
 FARNSTOCK
 Pittsburgh.
 ANCHOR } Cincinnati.
 BOKSTEIN }
 ATLANTIC }
 BRADLEY }
 BROOKLYN } New York.
 JEWETT }
 ULSTER }
 UNION }
 SOUTHERN } Chicago.
 SHIPMAN }
 COLLIER }
 MISSOURI } St. Louis.
 RED SEAL }
 SOUTHERN }

JOHN T. LEWIS & BROOKS
 Philadelphia.
 MOKLEY
 Cleveland.
 SALEM
 Salem, Mass.
 CORNELL
 Buffalo.
 KENTUCKY
 Louisville.

WHAT has been your ex-
 perience? That the "just-
 as-good," "sold-for-less-money"
 kinds are the most expensive?
 That the best, or standard, in all
 lines is the cheapest? The best
 in paints is Pure White Lead and
 Linseed Oil. (See list of the
 genuine brands.)

FREE By using National Lead Co.'s Pure White Lead Tinting Col-
 ors, any desired shade is readily obtained. Pamphlet giving
 valuable information and card showing samples of colors free;
 also cards showing pictures of twelve houses of different designs painted in
 various styles or combinations of shades forwarded upon application.

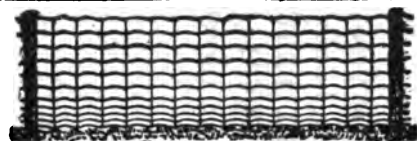
National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

pound basket, with some fancy large eat-
 ing stock like Magnum Bonum, 25c.;
 they will bring better prices little later;
 too many of our good people still in the
 country, and not ready for preserving.

There is quite a large call for grapes;
 pony Delawares bringing 18c., Wordens
 15c., Moore's Early bring about same as
 Wordens; if in the 10-pound basket
 Moore's and Wordens 18@20c.; Dela-
 wares about 25c.

A carload of very fine Connecticut
 peaches here Tuesday, mostly white
 stock, in the five-eighths basket, bring-
 ing 80c.@\$1.



SEE OUR FENCE AT THE FAIRS.

Our exhibit of native wild animals will be
 found at nearly all State Fairs and will well
 repay a call. Don't fail to bring the children.
 What they learn about Nature and Page
 Fence will prove of value in years to come.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

"JADOO" FIBRE.

Concentrated "Jadoo" Liquid.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it
 increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and . . . **THE AMERICAN JADOO CO.**
 Testimonials, Address

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write.

Diplomas and Certificates



FOR

HORTICULTURAL SOCIETIES,
 FAIRS, INSTITUTES, : :
 GARDENERS' CLUBS, ETC.

These should be selected well in advance of the date needed, and sec-
 retaries of above should send now for our set of samples, all of which
 have been especially designed by first-class artists and engravers for
 the purpose. Owing to the wide demand for these samples and their
 expensiveness, we will mail the set of five, postpaid, for \$1.00; money
 refunded on return of samples, or placed to credit of order, as directed.
 One single sample sent free on application if the writer will explain the
 exact purpose for which it is wanted.

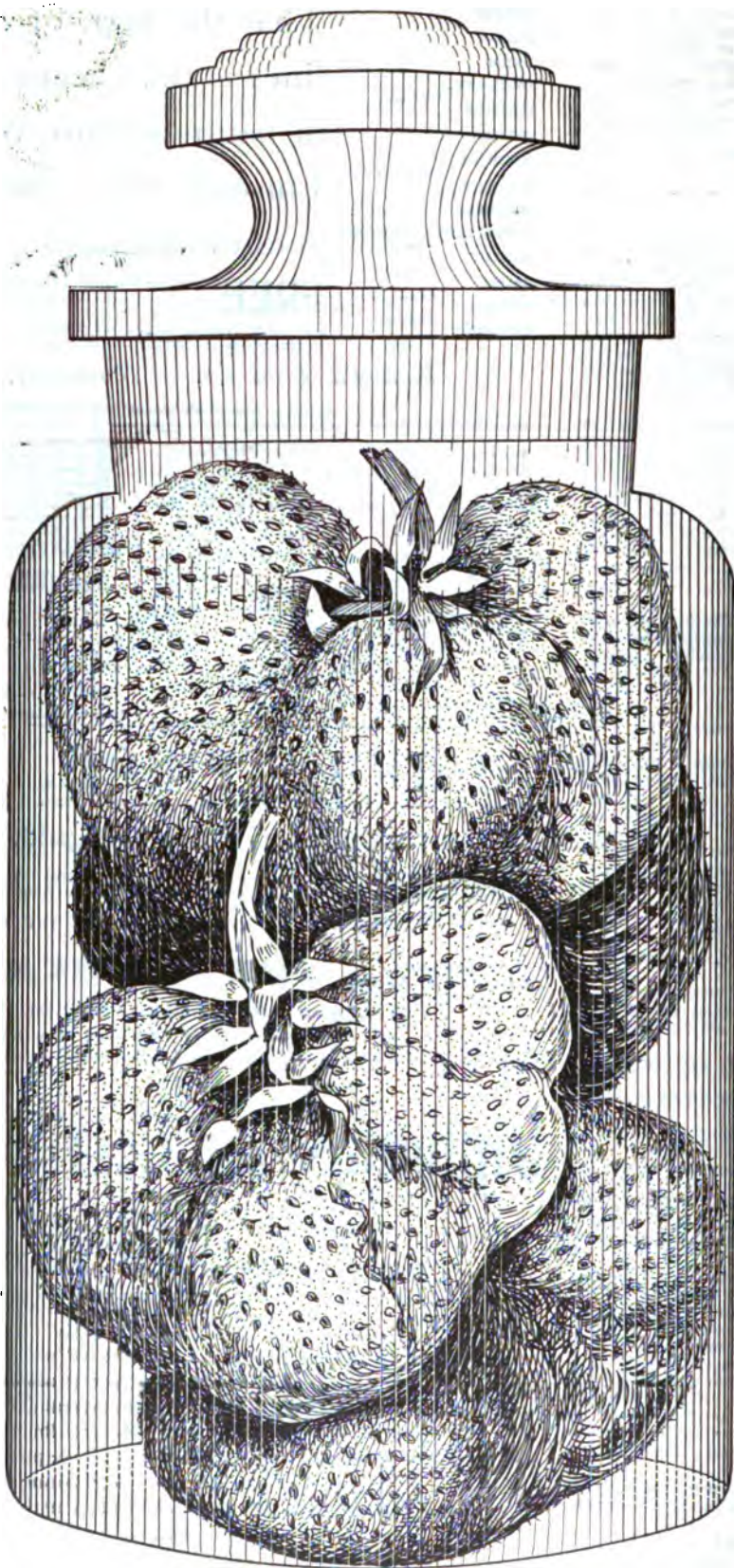
A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.

HEADQUARTERS FOR ALL PRINTED SUPPLIES

THE HENRY

The Most Wonderful Strawberry of the Age.

MESSRS. STEVENS, SIMPSON & CO., Commission Merchants, 232 West Street, New York City, state they handle the HENRY Strawberry, and have realized for it the highest price obtainable for any outdoor stock coming into New York market. Mr. Simpson further states that, in his opinion, as grown, packed and shipped by Mr. Henry Jerolaman, it is the BEST HOME MARKET BERRY in existence. For SIZE, COLOR, and SWEETNESS, and, in its KEEPING QUALITIES, IT HAS NO EQUAL; these many points in its favor rendering it easy for the grower to realize considerably more per quart than the regular market value of Strawberries generally.



MR. JEROLAMAN says, and his statement is corroborated by others, that the HENRY is beyond all doubt not only the strongest plant, but the largest, best, hardest and sweetest Strawberry ever yet produced; its color, dark crimson; it is perfect (staminate), very large, round, and no coxcombs grow on it. . . . It will out-produce any Strawberry plants that I have ever known, four-year old plants giving very large and just as fine berries as plants one year old. . . . The plants as yet have shown no disease. . . . It is the first berry ripe and the last.

Read about it on Preceding Page.

READ THIS FIRST

The publication of the below article in a recent issue of **AMERICAN GARDENING**, has brought Mr. Jerolaman hundreds of letters from every part of the country.

Strawberries Henry and Mary.

We have grown almost all varieties of berries, but have only found two really large fruited ones. The one is Mary, originated by the late H. Alley of this village, the other is called, here on Boyden Farm, Henry. We grow tens of thousands of quarts from each variety every year, and they are without doubt the largest and best of all grown in the whole world. I have had this season thousands of quarts of Mary, where from five to ten berries would make a heaping wooden quart, and I have preserved several in glass jars, with formalin, so that all who doubt can come here and see for themselves. Some of these berries in the jars measure thirteen inches around. I am the present owner of the Seth Boyden farm. Seth Boyden originated the first large strawberries, perhaps, in the world (Agriculturist and others); he died in 1870. I then bought his farm, and have continued to grow strawberries from that time to this, and will say that I am positive the plant called Henry is, beyond all doubt, not only the strongest plant, but the largest, best, hardiest, and sweetest strawberry ever yet produced; color dark crimson; it is perfect (staminate), very large, round, and no coxcombs grow on it. I have grown it for the past four years for market in a small way, and this season nearly one-half of all that I grew was Henry; it will out-produce any strawberry plant that I have ever known, four-year-old plants giving very large, and just as fine berries as plants one year old. The plants as yet have shown no disease, while all other varieties, such as Great American, Jersey Queen, and nearly all varieties except those soft berries not good for market (Sharpless, Bubach, and others), have shown disease in the plant. The Mary this season could not stand the hot sun, and nearly one-half of all the plants burnt and dried up while full of berries. Mary will not bear the second season, but must be set every year, while of Henry, not a single plant has died, either old or young; it is the first berry ripe and the last. I am picking large berries from the Henry to-day, July 15.—HENRY JEROLAMAN, N. J.

Mr. Jerolaman will not answer any further correspondence except through the columns of **AMERICAN GARDENING**.

Now Read
The Advertisement

YOUR FORTUNE IN STRAWBERRIES!

The Strawberry King and his Remarkably Successful Career: How a Poor Boy Became Wealthy.

THROUGH one of those strange dispensations which often mock in real life the wildest imagination of the novelist, the publishers of **AMERICAN GARDENING** have become possessed of the story of the life and cultural methods of **Henry Jerolaman**, undoubtedly the **STRAWBERRY KING OF THE UNITED STATES**. We have prevailed upon Mr. Jerolaman to write the history of his life and a full description of his cultural methods, exclusively for the readers of **AMERICAN GARDENING**. Further than this and at our urgent solicitation we have prevailed upon him to make a contract to supply us **One hundred thousand plants of the HENRY STRAWBERRY**, to be used solely as premiums to subscribers to **AMERICAN GARDENING**. The Henry Strawberry has positively never before been advertised.

THE CONTRACT

Publishers American Gardening.

Gentlemen,

I hereby agree to furnish you within the next twelve months in quantities as ordered, One Hundred Thousand plants (100,000) or any portion thereof, of the Henry Strawberry, to be used solely as premiums for subscribers to American Gardening and not to be sold.

Witness

Thos. D. Cothurny.

(Signed)

Henry Jerolaman.

The Best Berry of the Age.

Four Berries of the Henry, grown by Mr. Jerolaman, rounded a wooden quart measure. Individual berries were three-and-a-half inches through each way. Mr. Jerolaman's description of this wonderful berry in a recent issue of **AMERICAN GARDENING** has brought him hundreds of inquiries from the cream of the professional growers.

A GOLD MINE AT YOUR OWN DOOR,

"He who hesitates is lost." It is not likely that such an offer or such an opportunity will occur again in years. More than one strawberry grower in every town, village, and hamlet can come into a good thing through practising the cultural methods and getting some of the plants which have made Mr. Jerolaman not only wealthy and well-known, but so wonderfully successful, by at once

Taking Advantage of Our Offer:

For \$1.00 (check or money order preferred) we will forward you, by mail, postpaid.

FIVE PLANTS ..Of the.. **HENRY STRAWBERRY**
Unequaled

And **AMERICAN GARDENING** One Year.

Present Subscribers are entitled to this Offer on renewal; if their subscription has not expired, it will be dated ahead.

Plants to be shipped this Fall or in the Spring, as you prefer.

Mr. Jerolaman's story will be found in the first issues mailed you and his cultural methods will be published in time to be of service for Fall planting.

OFFER EXTRAORDINARY

For every new subscription you send us at \$1.00, we will forward you, postpaid, as a premium, Five Plants of **HENRY STRAWBERRY**; at the same time we will also send Five Plants to the party subscribing through you. Thus a club of 10 new subscribers entitles you to 50 plants of this wonderful Strawberry, as well as each individual subscriber to 5 Plants. This is a BIG OFFER to all who want to become larger holders of this wonderful Berry, never before advertised. Time is short, get to work to-day.

Address **Publishers AMERICAN GARDENING, P. O. Box 1897, New York.**

Trial Subscriptions

For \$1.00 we will send **AMERICAN GARDENING** on three months' trial (13 weeks) to four separate addresses, and as a premium, **Five Henry Strawberry Plants** to the one getting up the club. **HUSTLE.**

INCUBATORS. Self-regulating. Catalogue free
G. S. SINGER, Cardington, O.
Mention American Gardening when you write

NEW CREATIONS IN FLOWERS.

If you want to know about them send
10 cts. for Mrs. Theodosia B. Shepherd's

**New Catalogue of Rare and Beautiful
Flowers.**

Many New Begonias, New Cosmos,
Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.
Mention American Gardening when you write.

50 FOR FIFTY CENTS 50

We will send you prepaid to
any part of the United States
50 6 2 yr. old CHERRY CURRANT ROOTS 50
50 6 ERIE BLACKBERRY ROOTS 50
50 4 HOUGHTON GOOSEBERRY ROOTS 50
The finest rooted plants you ever bought. 50
Address **LEROY N. BROWN & SON,** 50
Woodland Fruit and Plant Farm 50
Clyde, Ohio, U. S. A. 50
Mention American Gardening when you write.



Steel Wheels

Staggered Oval Spokes.

BUY A SET TO FIT YOUR NEW OR

CHEAPEST AND

way to get a low wagon

wheel, any width tire.

ELECTRIC WHEEL CO., Quincy,

Mention American Gardening when you write.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.
CYPRESS
SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.
GREENHOUSE
AND OTHER BUILDING MATERIAL.
Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.
THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

PRICE LIST FOR

Exhibition Stationery

1000 Entry Forms -	\$2.75
Two Exhibitor's Books -	2.00
Two Class Books -	2.50
Six Judge's Books -	3.00
500 Entry Cards -	3.50
500 Pastors (assorted) -	1.00

Total - \$14.75

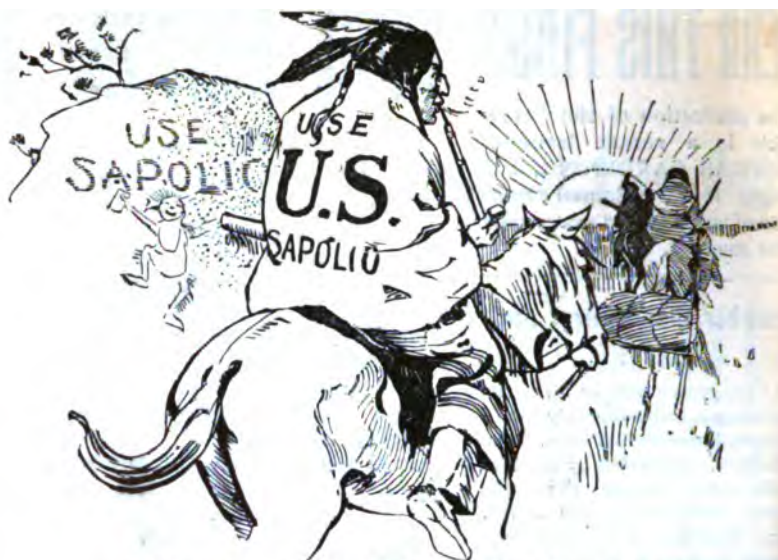
Secretaries of Horticultural, Agricultural,
or any other form of competitive show, are
invited to write us for full particulars.

It is freely conceded that the system we
have adopted saves time, temper, trouble,
worry and expense.

The clerical work of every exhibition, large
or small, should be run on business lines, and
you will find this system the best, the easiest,
least expensive, and most satisfactory. Ad-
dress correspondence

A. T. DE LA MARE PTG. & PUB. CO. Ltd.

P. O. Box 1697, New York.



If we could teach the
Indians **USE SAPOLIO**
could quickly civilize them

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All
our pots from 7 in. and upwards have our Patent Im-
terior Bottom, which is a great advantage, as it secures
perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

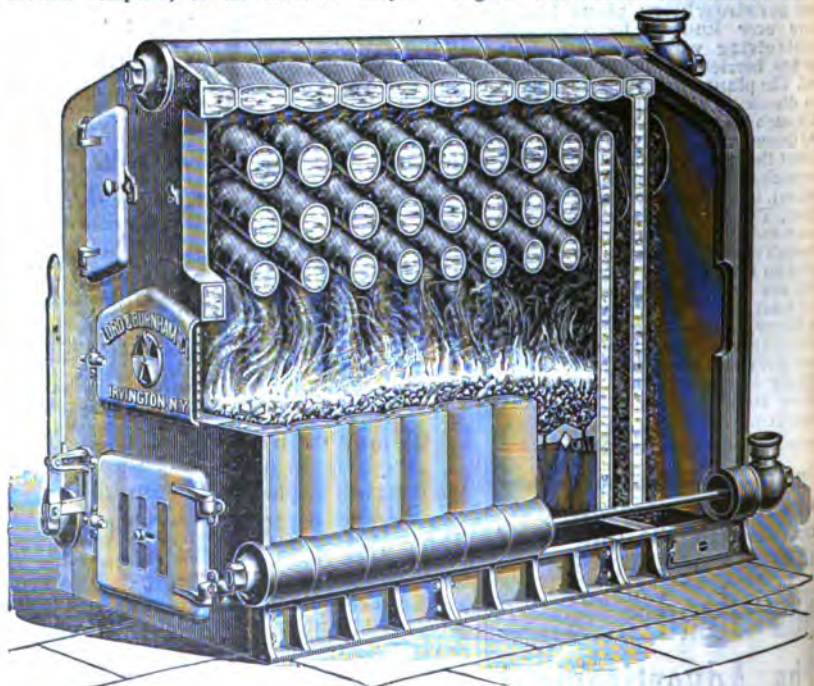
Mention American Gardening when you write.

LORD & BURNHAM CO.,

Horticultural Architects and Builders and Manufacturers of Heating and
Ventilating Apparatus.

(Established 1856.)

Plans and estimates furnished on application for Heating and Ventilating Apparatus
erected complete, or for material only. Highest Awards at the World's Fair.



NEW SECTIONAL HOT WATER HEATER.

Specially adapted to large ranges. Will heat up to 16,500 feet of glass. Highest
economy. Moderate cost. Also heaters for smaller work. Send six cents postage to
New York office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

When Writing Mention Florists' Exchange

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII No 143.
COMBINED SERIES VOL. LI.

NEW YORK, SEPTEMBER 18, 1897

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Am. Pomological Soc'ty Meeting..... 646	Crimson Clover and Poultry..... 658	Home Plot..... 658	Readers' Notes..... 651	Sweet Peas, Cupid..... 650
Apples, Picking..... 645	Cuttings, Rooting..... 651	House Plants and Malaria..... 652	Riverton, Excursion to..... 655	Vegetable Garden..... 649
Asparagus Rust..... 649	Exhibitions Reported..... 654-5	Nectarines and Peaches Late..... 649	Root Galls..... 647	Window Gardening..... 658
Big Berries for All..... 651	Fertilizers and Fruitfulness..... 646	Market Reports: N. Y., Boston and Phila..... 656-657	Roses Under Glass..... 653	Illustrations.
Boilers, Some New..... 648	Fruit Garden, The..... 645	Pansies, Transplanting..... 653	Roses, Some Notes on..... 658	Boiler, Hitchings, New..... 648-9
Chrysanthemums..... 648	Fruits, New..... 647	Poison Ivy..... 651	Scales, San José..... 646	Sweet Pea, Cupid, Bed of..... 645
Chrysanthemum Rust, The..... 650	Grapes..... 645	Private Gardeners..... 654	Societies, Meeting of..... 654	Sweet Pea, Cupid, Plant of..... 647
Corn, The Late E..... 651	Grapes for Forcing..... 649		Strawberry, Pedigree in Strawberries, Late Planting of..... 650	



FIG. 182.—A RED OF PINK CUPID SWEET PEA AS SEEN IN JEFFERSON CO., N. Y.

The Fruit Garden.

Grapes.—With us Early Ohio is a very good black grape, after the Concord style, and perhaps has too much of the foxy flavor to suit some tastes, still it is very acceptable as being one of the first to ripen—seven to ten days before Moore's Early—the berries adhering firmly to the stem.

Moore's Early, a much better quality grape, is ripe here about September 7. The best black is Worden, ripe about the third week in September. This, although a slender grower will well repay for liberal treatment in the line of fertilizing. A fine berried variety is Eaton, ripening just before Concord, the vine is a poor grower.

A favorite red grape is Brighton, ripe

a little before Worden, and with or directly after Delaware, and a far better grower; its only fault, if it may be called one, is that the berries do not color evenly, which fortunately does not affect their sweetness.

Lindley is a close second to Brighton, excepting that it does not set enough berries to make a shapely bunch. Moyer is too small in every way.

Salem, a peculiarly flavored grape, makes grand bunches when the vines are young, and gives best results when grown on the renewal system.

Moore's Diamond is very satisfactory, and is, I think, our best white, looking at it from every point of view. Vines hardy as Concord and comparatively free from mildew; a second early, but bunches

will hang for a very long time on the vines.

Of course we have to grow Concord, Hartford, Delaware, and Catawba also, as the names are familiar to the older members of the consumers, who to-day order Concord and get Concord and others for the same article.

Cultivation should be stopped among young trees, except to keep down weeds, giving the wood a chance to ripen.

The Picking of Apples will soon be in order, and where the crop is not extensive the work should be detailed to two pickers who will make better work if the blame for poor work cannot be shifted over onto some one else.

JAMES HOLLOWAY, N. Y.

Twenty-Fifth Session of the American Pomological Society.

[Special report for AMERICAN GARDENING.]

(Concluded from page 632.)

Relation of the Society to the National Division of Pomology.

Col. G. B. Brackett, Iowa, the recently appointed Chief of the Division, urged the utmost harmony between the two as the work of both is along similar lines. The Division seeks to obtain information regarding new varieties and improved methods from all parts of the world, and by means of its bulletins and circulars disseminates this knowledge to the fruit growers. It is equipped by government appropriations, and should be beneficial directly to the public; on the other hand, the Society derives a meagre income from its membership fees, and its work is necessarily more circumscribed. The Society in the past has done valuable work, but pomology has grown beyond the means of the Society. The Division is provided with ample means, and directed by practical men it can do much good. During the past year it has prepared and printed the fruit list for the Society. All fears that the Division will endeavor to absorb the Society are groundless, as the Division is willing to give full credit to the members of the Society who aid it in its work.

Prof. H. E. Van Deman of Virginia, claimed to have been the originator of the Division, having suggested the idea to Secretary Norman J. Colman, and as the first chief of the Division, mapped out the line of work that should be followed. In the past many pomologists have, unrequited, from love of the cause, spent their lives for the benefit of pomology, but public work should be done at public expense, and when at the head of the Division he had arranged for the co-operation of the department in preparing and printing the fruit report of the Society at government expense.

C. L. Watrous of Iowa spoke of the benefits that were also given to pomology by the botanical, entomological, and mycological divisions of the Department.

What Shall We Seek Abroad?

This question was answered by W. A. Taylor, assistant in the Division of Pomology, who stated that although the list of edible fruits and nuts about to be issued by the Society showed 1,112 varieties, belonging to 57 species, many of the foreign countries have undeveloped species that will be well adapted to cultivation in some place in our country, either as fruit trees or as stocks upon which to grow other kinds. He then gave a long list that seemed promising, including a number of palms, pineapples, eugenias, chestnuts, bananas, myrtles, plums, cherries, oranges, lemons, and various species of Ribes, Rubus, and Vitis.

Prof. Van Deman stated that in addition to the large number of native species and the many foreign species that had been introduced, there were many others that we should secure. He called particular attention to the many hardy and promising fruits found in Armenia, and which could be introduced to advantage.

Prof. Berckmans and Prof. Craig of Ontario reported that they had tested peaches, plums, and apricots from Armenia, which had been carefully selected as most promising, but none of them had any value here.

At this point the Secretary of Agriculture, Hon. James Wilson, appeared in the hall, and on being presented to the Society, pledged himself to do all in his power to benefit the pomological interests of the country. He was well aware that there were many things that the individual fruit grower could not do for himself and government aid is necessary and proper. The government is now trying to secure refrigerator service that will carry our fruit, butter, and eggs from the gulf ports to all parts of the world. They have already arranged for the careful transfer of perishable products at New York to refrigerators in the trans-Atlantic steamers, so that dairy products can be shipped to London. He had just returned from the West and had in Colorado inspected the orchards about Grand

Junction. In addition to a climate adapted to the growing of the peach and other tender fruits, they are blessed with a soil composed of the aggregated washing of the finest particles from the surrounding mountains, which has been going on for ages, and they have been able to lead out the water from the rivers and thus convert what was previously a desert into an earthly paradise for pomologists. In many parts of the West the land can be had for nothing, the water of the rivers is free, but by carrying the water upon the land the latter becomes worth \$100 per acre, and when planted to orchards, will readily sell for \$1,000 per acre, and yet they ask the fruit growers of the East to allow themselves to be taxed to supply water for irrigating, with which this immense profit can be made, and also enable them to grow fruit with which they will compete with the Eastern fruit grower in the markets. In conclusion he promised the Society the hearty co-operation of the Department of Agriculture.

The Present Status of Spraying Apple Orchards.

Fifteen years ago, said Professor W. J. Green of Ohio, orchardists began first to spray for the apple worms, then came the use of fungicides for the apple scab, and finally came the use of a combined insecticide and fungicide. As long ago as 1891 spraying was generally thought to be profitable, but since that time many have abandoned spraying. In 1895 the unsprayed fruit was as fair as the sprayed, and in 1896 an abundant crop was obtained without spraying, and the prices were so low that in 1897 little spraying was done.

Not only will spraying preserve the apples from scab, but the June drop is reduced, as it prevents the attack of the scab on the blossoms and young fruit. In years when rain prevails at the time of blooming, there will often be no crop of fruit on unsprayed trees, while the sprayed trees will have a full crop. The loss of a crop from lack of spraying will in such a season often amount to thousands of dollars, as they would sell for a high price. The present year the trees of most varieties bloomed profusely, but few fruits set where the trees were not sprayed, while sprayed trees have a full crop. The unsprayed trees are almost defoliated by the scab and are in poor condition to develop fruit buds for next year. Even though they may bloom, they will be so weak that they cannot bear a good crop.

The apple worm cannot always be killed by spraying, and many orchardists are of the opinion that it does not pay to spray for it. Many have the same idea regarding the canker worm, but by spraying in time and thoroughly, it is not difficult to control. Comparison of sprayed orchards with unsprayed will show that it has paid from 500 to 1,000 per cent. Even though little effect can be seen, the benefits from a single year will often repay the cost of spraying for ten years. Those who make apple growing a business spray their trees and find it profitable.

Prof. Alwood had good results from spraying the trees in the early spring with concentrated lye diluted to 8 degrees Baumé, and then sprayed three times with Bordeaux mixture and Paris green, and had averaged from 30 to 50 per cent. of a crop, when unsprayed trees gave but 2 per cent.

L. A. Goodman made use of geared machines, but found it necessary to use large air chambers holding 20 to 30 gallons, so that he could stop between the trees and spray them thoroughly.

San Jose Scale.

Needed state and national legislation for the suppression of the San Jose scale was discussed by Prof. Alwood of Virginia. This insect was thrust upon us at the East, through the introduction of new varieties of fruit trees from California. Had the danger been at once recognized, the injury would have been much less. It has now become so scattered in some states that it can only be eradicated by concerted action of the growers and the state and the national government. Because of the life history of the insect, it

is difficult to destroy, while its obscure nature aids it in escaping detection. It is so persistent that unless it is destroyed by some effectual application, a plant once attacked will almost certainly be killed by it. Only such remedies are effectual as will destroy it by contact, or that will smother it. The use of hydrocyanic gas is quite effectual upon nursery trees, but is not reliable for orchard use. Its insect and fungous enemies will aid in holding it in check, but will not be able to destroy it until the trees have been ruined and the insects scattered. The rapidity with which it propagates is another reason why it is so dangerous. Howard and Marlatt found by experiment at Washington, that the progeny of a single female scale would number in a single season 8,416,080,000, if all lived to maturity.

This insect is so likely to be distributed on nursery stock that state and national legislation is necessary. The law should clearly define the authority which should be vested in a board, with power to appoint a responsible inspector, who should have the right to go upon any premises to inspect suspected trees, and the power to quarantine within the state. It should also outline the full machinery for carrying out the law and of enforcing penalties, against selling or giving away infected stock. The state authorities cannot take cognizance of stock in transit from one state to another, as that would interfere with interstate commerce, while the national law would not take cognizance of cases actually existing in a state. Both classes of laws are then necessary, and with them it will be possible to secure the rigid inspection of orchards and nursery stock, so that the insect can be eradicated where it has established itself, and be prevented from spreading to uninfested sections.

A paper covering somewhat the same ground, entitled "Insect Legislation: Can it be Beneficial and Practical without being Detrimental?" was read by Prof. F. M. Webster, of Wooster, O.

Many of the more restrictive state laws have been found unconstitutional, as they interfere with interstate commerce, and for this reason state laws cannot be entirely effectual unless we have a strong national law. We need a national law to control stock subject to interstate commerce rules, and a rigid state law that will take cognizance of cases occurring in orchards and nurseries, and they should be so prepared that they would be uniform in different parts of the country.

Fertilizers and Fruitfulness.

Dr. R. C. Kedsie, of the Michigan Agricultural College, read a paper on "Fertilizers and Fruitfulness." The early botanists and chemists considered the gases as of the utmost importance in supplying food to plants, while the elements found in the ash were thought to be of no account, but now potash, phosphorus, lime, sulphur, and magnesium are considered the philosopher's stone. The union of theory and practice has done much to aid our fruit growers to seek their orchards as to secure paying crops of fruit, but many even now do not understand the importance of the mineral elements. Of the 70 known elements, nine are found in the ash of the plant and come from the soil; but not all of these even have to be applied to enable the plants to secure a supply—four are generally found in sufficient abundance in the soil. Of the five remaining two are of supreme importance, as occurring in small quantities in the soil and required in large quantities by the plants, they are quickly exhausted from the soil. These elements are potash and phosphorus, and so supreme is their importance that with nitrogen they constitute the "Tripod of Pomology." Other elements are in such abundance that they need not be considered in selecting commercial fertilizers.

Yard manure is a complete fertilizer and is the best we have for all purposes. It is especially rich in nitrogen which is of great importance in promoting the growth of plants. On the other hand, too much of it produces a rank growth of leaf and stem, with a dark green color. If with it potash and phosphoric acid are

combined in proper proportions, the growth becomes firmer.

Potash is required for the formation of starch, and many of the carbon and nitrogen compounds cannot be formed without its presence. An abundance of potash secures short-jointed shoots.

Phosphorous stands close to life and is required for all living processes. The more highly organized the plant, the more abundant must the phosphorous be.

Potash and phosphorous are the leading constituents of the ash of young plants, and later on they aid in hastening the ripening of the wood, and promote the formation of flowers and fruit. They may cause fruitfulness in two ways, by promoting the formation of flowers, and by giving potency to the pollen.

When there is a check to the growth of a plant or animal, indicating that its end is nigh, reproduction is most rapid. Thus the ringing or girdling of a tree by retaining the sap in the top aids in developing fruit buds. The pollen or the male element varies in its potency in the fecundation of flowers as shown by Waite*, in his experiments with the pear. He showed that the Bartlett is self-sterile, but that it has sufficient potency to fertilize other varieties. Pollen is very rich in

Root Galls.

Prof. A. D. Selby, of the Ohio Experiment Station, attempted to solve "The Root Gall Problem." This complaint affects our fruits over wide areas. The growths are morbid and tumor-like, such as might be expected under the action of some irritant upon the cells. They consist of swelling on the roots and stems that can often be readily separated from them. They are found on the apple, pear, plum, peach, raspberry, blackberry, and Carolina poplar. When on the roots or at the collar they are sometimes found on the stem. At first while fresh they are soft, but become quite hard on drying, and the exterior becomes hard and warty. From the fact that they are most often found on the roots, or at the collar, they are commonly called "crown galls" or "root galls," but the word gall is apt to be misleading, as it is also commonly applied to swellings about an egg or larva of an insect. The cause is as yet an open question. Professors Woodworth and Toumey think it contagious, while E. F. Smith, of Washington, thinks it may be due to some irritant. Careful microscopical examination does not reveal bacteria or fungi present, that could cause the swelling, while the cutting off of the galls from the collar and sterilizing the wound,

hopelessly confused, as many of them have been grown from seed for a long period, and in this way various "races" have been established. Thus with Yellow Transparent could be grouped Nally and Charlottenthaler, while there are many forms resembling Duchess of Oldenburg, including Pointed Pipka. In the Anis family there are at least ten types, among which are several that are quite hardy and valuable at the north. The Aport or Alexander family is of little value, as they drop badly, do not ship well, and are of poor quality. In the Switzer family is Switzer, which is very handsome and better than Oldenburg in quality. Many of the Russian varieties are summer sorts, free bearers, and hence, short-lived.

Several promising seedlings have been produced which are long keepers. The Russian varieties are most promising north of the 45th parallel and as parents of hardy sorts.

Election of Officers.

When the time came for the election of officers, President Berckmans declined re-election, and as stated in last issue, C. L. Watrous, of Des Moines, Ia., was chosen to succeed him; George W. Campbell, of Delaware, O., was made first vice-president; W. A. Taylor, Washington, D. C.,



FIG. 183.—SINGLE PLANT OF PINK CUPID SWEET PEA. (See page 650.)

nitrogen, as analyses show an average of about 16 per cent. of crude protein in the pollen of pines, and of 28 per cent. in that of the flbert. The production of such an amount of rich material must be very exhausting.

There are many interesting problems to be worked out regarding the potency of pollen that will affect the feeding of the plants. Among them are: Whether the pollen of the same species varies in its potency at different times, or whether it always has the same relative potency, and whether the pollen from weak plants will be as potent as that from strong ones.

Pollination secures the setting of the fruit and the amount of pollen used modifies its form and size. Thus Waite not only found that by crossing he was able to secure far more fruits, but their size was also increased, and the same results were obtained by Munson, of Maine, with the tomato. If the potency of the pollen be low, the development of the fruit will be slight. No pollen, no fruit. We should then provide our plants with a ration of food so balanced that it will promote a firm growth and provide for the development of a large amount of pollen of a high degree of potency. Then and not till then can we secure large crops of handsome fruit.

*Bulletin 6, Division of Veg. Path. Dept. of Agriculture, The Pollination of Pear Flowers.

or the severing of the galls upon the smaller roots does not prevent their reappearance.

It was found in one case that when apparently healthy trees were planted in a raspberry plantation where eel-worms or nematodes were present, that galls were found the next year, and this would indicate that the nematodes may have caused the development of the galls, but this does not explain why the galls form on the stem, or why they reappear when they have been cut off.

A nursery tree bearing galls is worse than worthless, as it will not come to fruiting, nor will an older plant continue bearing if attacked, while it is likely to spread the disease. The trouble seems to spread, and is more serious than any insect or disease now known. Affected nursery trees are the chief source of contagion to new orchards or new land, and should not be sold. The presence of the disease can be readily detected at digging time, and all affected trees should be collected and burned. Trees in close proximity to diseased trees are also likely to become infected and should not be used.

Russian Apples.

Prof. Craig, of the Ontario Experiment Station, had on exhibition a number of plates of Russian apples, illustrating the different families. He stated that the nomenclature of the Russian apples is

secretary; and L. R. Taft, Agricultural College, Mich., treasurer. Mr. Berckmans had served the Society as president for ten years, having succeeded the lamented Marshall P. Wilder, and resolutions were adopted expressing the regret of the Society that he had declined re-election.

Next Meeting, Fees, Etc.

Invitations were received to hold the next meeting at Niagara Falls, N. Y., St. Louis and Kansas City, Mo., Omaha, Neb., and Boston, Mass.

The membership fee of the Society was reduced from \$4 to \$2. The question of holding annual instead of biennial sessions was left with the executive committee.

New Fruits and Awards.

Wilder silver medals were awarded to George W. Campbell for the Campbell Early grape, and to H. G. M'Pike, Alton, Ill., for the M'Pike grape, a seedling of Worden, with large, bluish-black berries, a thin skin and tender pulp, sweet, and of good quality, foliage very strong and healthy; season with Worden. Said to be very hardy and productive.

There was also on exhibition the collection of Russian apples referred to above, and specimens of the Diamond peach, and the Hunt plum, a seedling from Iowa, supposed to be a hybrid between a European and some native species. (This was

commented upon on page 618, September 4.)

Jonathan Periam, of Chicago, also exhibited a number of the newer Cannas including Italia, Burbank, Yellow Crozy, Kanst, and others; and E. H. Cushman, of Euclid, had on exhibition a number of seedling Gladioli, including the May.

Some New Boilers.

In continuation of our previously published remarks upon recent improvements in boiler construction, we present, by the courtesy of the manufacturers, a few details on the latest production of the well-known Messrs. Hitchings. The boiler that has made the firm's name famous is now, to a large extent, superseded by the present model of very recent introduction, and known to the trade as "No. 57." The boiler is equally serviceable under either the open circulation or the high-

width 49½ inches, length 76½ inches, weight, 4700 pounds, height to center of flow sockets is 59½ inches, to center of return sockets 23½ inches. The sizes and positions of flow and return sockets may be varied to suit special requirements. The boiler is provided with grates suitable for the consumption either of egg or pea coal as may be preferred.

In order to give some idea of the actual work accomplished by this boiler, we will refer to the establishment of Mr. F. Boulton, Sea Cliff, L. I., who has enlarged his violet-growing plant by the addition of three new houses, which are planted to 6,000 Marie Louise. The houses are built in the most approved modern style and are very conveniently fitted in every way. They are of the following dimensions: The center house is 22x150 feet, and the two side houses 10x150 feet. The heating of these houses is done by Hitchings & Co.'s new pattern sectional No. 57 boiler, and in addition to these new

Chrysanthemums.

Plants are now needing attention on every hand. Side shoots and suckers seem to spring up in a night, and as quickly as they are removed, others appear to take their places. Constant attention is necessary to keep the energies of the plant concentrated on the bud. Begin at one end and by the time you get through you can begin over again.

All Buds Must be Taken as soon as possible, nothing that is not needed should be left on the plants for even a day if possible. September so far has been a bright sunny month, which will be a great help in ripening the wood, and the good effects of this will be seen when the flowers expand.

Feeding.—Sulphate of ammonia is my favorite chemical manure, and used very carefully, it gives splendid results. It

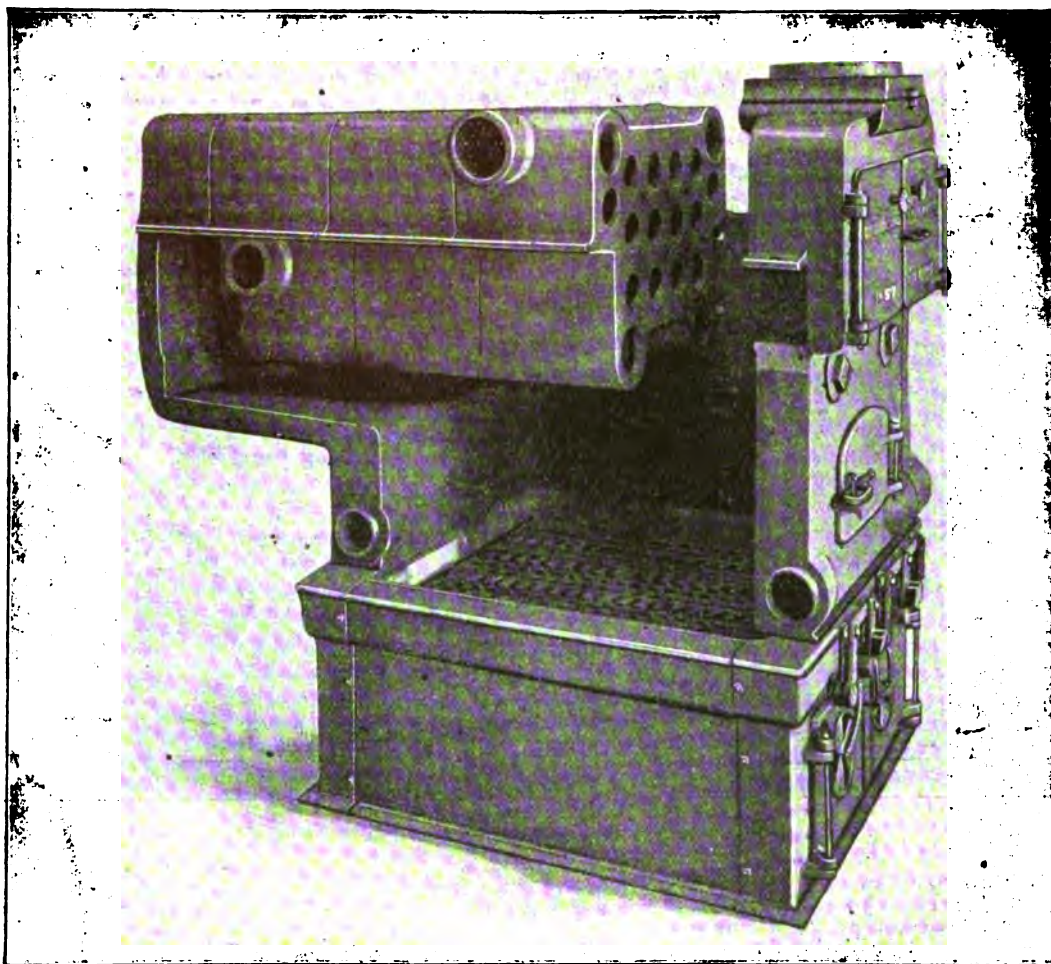


FIG. 184.—INTERIOR OF THE BOILER SHOWN ON OPPOSITE PAGE.

pressure system, each boiler being tested under a high pressure before leaving the factory. These boilers, the firm says, have been in use during the past two years under heavy service, and have proved themselves equal in efficiency and in economy of fuel to the widely known "Corrugated Firebox" boilers, and have the especial advantage of being "sectional," which admits of their being easily handled.

The boiler has nine water sections, each section subjected to a hydrostatic pressure of 100 pounds to the square inch, the joints are of the same material as the boiler (best cast-iron of high tensile strength), accurately fitted and are absolutely indestructible. The grate has 8½ square feet of surface; the fire-box is deep, with adjacent chambers assuring perfect combustion. The draught is regulated by a graduated cold-air damper to suit various chimneys and the work to be done.

The length of No. 57 boiler is 62 inches,

houses, this boiler will, in moderate weather, heat a large proportion of the entire establishment, and is connected so as to relieve other boilers.

Other houses already planted with violets are: One, 12x100 feet, filled with the Princess of Wales; three others, 10x40 feet, with the same variety; one house, 14x50 feet, contains Lady Hume Campbell; another house, 30x80 feet, is filled with Swanley White, Farquhar, and Lady Campbell, while five other houses, 12x60 feet, are filled with Marie Louise, and about 400 feet of cold frames with California, thus making 20,000 plants in all.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

deepens the color of the flower and brightens up the whole plant. It can be used stronger when plants are accustomed to it, but half an ounce to three gallons of water is enough to start with.

Golden Wedding should be isolated from other varieties, if possible, so that it will not get so much syringing. It is the worst variety for mildew that we have, and this must be kept down with sulphur if the foliage is to be kept good.

Insects.—Black fly seems to become numerous again as the year advances. This must be kept out of the buds from the first. Fumigate lightly and often, in the evening putting air on again last thing.

Grasshoppers are troublesome in this section just now, eating out the points just below the bud. The best time to catch them is in the early morning, as they seem paralyzed till the sun warms up the temperature. C. TOTTY, N. J.

The Vegetable Garden.

Asparagus Rust is now making its presence known by the premature decay and brown appearance of the tops. When affected, care should be taken to check the disease, or serious results will follow another year. The simplest and easiest method to do this is to have the tops on the ground after cutting them down, then on a dry day setting fire to them. The whole beds should be carefully burned over to kill the spores, if there are not enough tops to do this, any rubbish, such as old hay, straw, dry leaves, should be lightly spread over the beds and fired.

Potatoes should now be all dug out of the ground, and placed in a cool cellar or outside pit. The crop is rotting badly this year, and to prevent this as much as possible, look over the tubers on stormy

Some Late Nectarines and Peaches.

Victoria Nectarine.—The value of this variety evidently cannot be overestimated; its charming color, great size, and late ripening makes it one of the most valuable fruits of its kind. Another strong point in its favor is its bearing qualities. Several trees seen this season have had enormous crops of perfect fruits. A recently noticed tree was in the fruit houses on the Osborne estate at Mamaroneck, N. Y., to which Mr. George Winslade, the superintendent, pointed with pardonable pride; it is bearing abundantly, but fruit is barely ripe as yet.

Stanwick Seedling is another good late nectarine. A tree of this is also bearing profusely at this time with fruit just

Hot House Grapes.

Will you kindly inform me through your next issue what one-half dozen grapes you would recommend for growing under glass, hothouse kinds? W. R. M., Canada.

—In selecting six kinds of grapes for indoor purposes we should certainly take the following: Black Hamburgh, Muscat of Alexandria, Buckland Sweetwater, Gros Colmar, Alicante, and Madresfield Court. The last-named is one of the handsomest of late black grapes despite its tendency to crack. But this can be overcome by growing a little dryer. Buckland Sweetwater is not always certain, so that we would make the list five rather than six. The selection covers the whole season and they ripen in the order named.

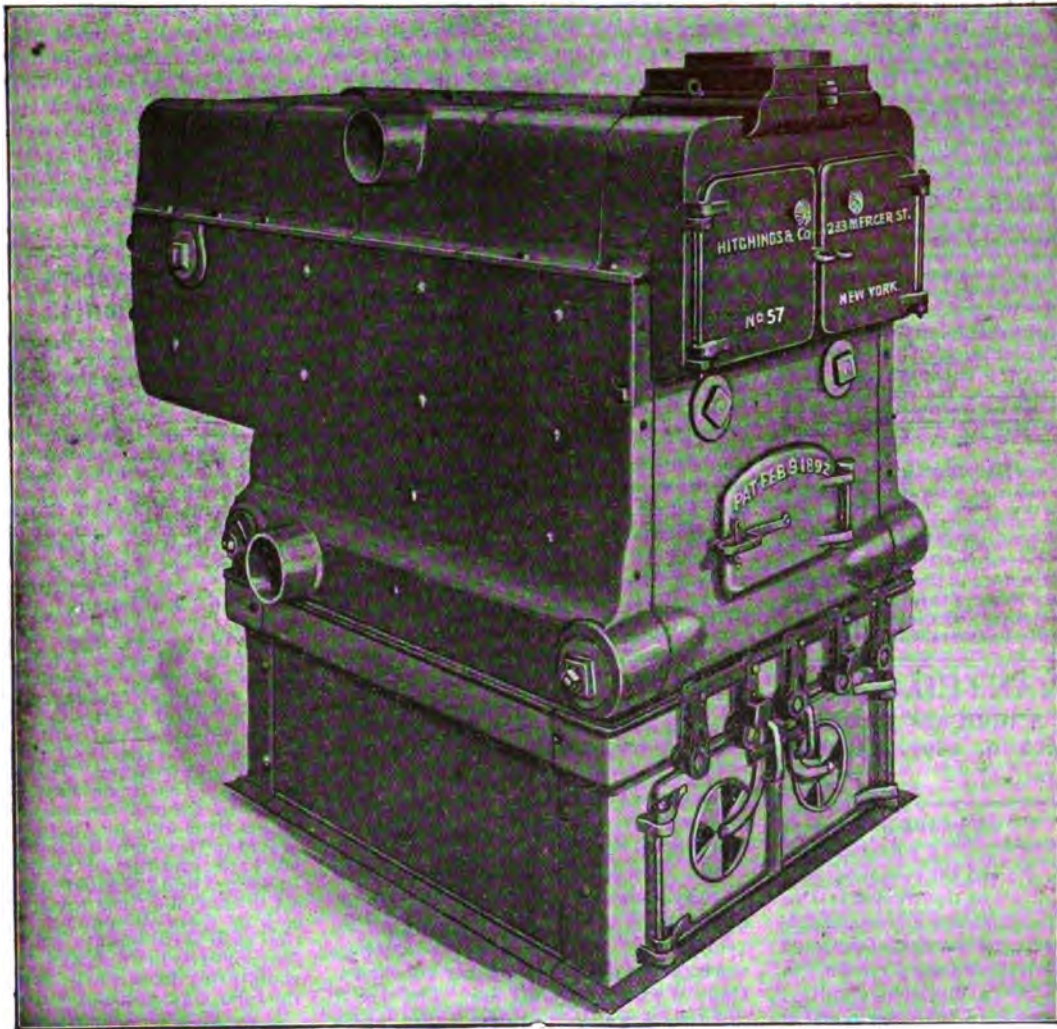


FIG 185.—HITCHING'S NEW SECTIONAL TUBULAR BOILER.—(See opposite page.)

days, picking out any that are rotten or wet.

Onions should be turned over every few days, and any which show signs of growing should be picked out and used up first. Onions keep best if placed on a shallow bench in a cool airy room.

Tomatoes.—Pick off all ripe fruits, also all those that are rotting, and destroy the latter. W. M. EDWARDS, Conn.

Beans Diseased.

(To J. McK.)—The bean pods submitted are badly attacked by mildew.

Fruits for Name

(To H. J.)—The plums are Satsuma, one of the Japanese kinds.

(To H. M. L.)—The apple sent is Gravenstein, an old and well-known variety in the North.

ripening. Among late peaches Prince of Wales is the most showy, making, as it does, a large high-colored, well-proportioned fruit.

Early peaches and nectarines have been a great success in the houses on the Osborne estate this season and they embrace all the best varieties.

Killed by Poison Ivy.

Mrs. Mary King, aged 69 years, died on September 7, at her home in Chester, N. Y., from the effects of ivy poisoning. She came in contact with a poison ivy vine early in July, and her whole system seemed affected by the poison.

"Are College Professors Contented?" will be discussed by Professor Bliss Perry, in the October Scribner's.

Cucumber Forcing.

I write for information about raising cucumbers. Can they be raised in spring about March in a hothouse 10x17 feet heated by a stove?—J. M., Mass.

—Such a house so heated can be made to produce cucumbers readily with the usual precautions against red spider, etc.

Home Grounds—How to Lay Out.

This supplement contains a half-tone drawing (6½x10½ ins.) of an estate of about six acres; this plan, together with the accompanying explanatory text, presents in a nutshell all the salient points of landscape gardening.

With the aid of this plan, and by careful study of its suggestions one can lay out an estate of one acre or fifty acres, for we give the cardinal principles which govern the art so clearly that all can understand.

Printed on heavy paper and forwarded, securely packed in a cartoon, on receipt of price, 25 cents, or given as a premium for one new subscription.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 13, 1894.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 3154 Cortlandt. P. O. Box 1697.

REGISTERED CABLE ADDRESS
Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per page line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

WANTED.

Copies of AMERICAN GARDENING for March 6, 1897. Address the Publishers.

Concerning the Cupid Sweet Peas.

WHEN first it was announced that a new race of dwarf Sweet Pea had sprung into existence a considerable amount of excitement was manifested throughout horticultural circles in Europe as well as in our own country. The possible value of this new arrival was largely discussed in the columns of AMERICAN GARDENING, at the time, and it must be allowed the evidence produced was of a very conflicting nature.

In the year following the introduction of the original White Cupid Sweet Pea, the appearance of another dwarf pink flowers began to be spoken of, and the introducers, Messrs. W. A. Burpee & Co. of Philadelphia early this season distributed among horticulturists a few seeds of the pink variety for trial. It has been noticed that while the Cupid Sweet Peas have not been so well favored in this country, the European gardeners have reported most favorably upon them, and it has been argued that though the plant did well on the Pacific Coast it would not hold up on the Atlantic seaboard. In view of recent experiences of our own, it is well to ask. Why this suggestion? It would seem that those who

have reported adversely upon these novelties have been judging from a wrong standpoint—that of the cut flower grower, as is evidenced by the communication which appeared in our issue of July 17 last (page 502). Again, there have doubtless been errors of cultivation or treatment.

The demands of the decorative horticulturist are for many other plants than those which furnish flowers for cutting, and each one has its place; the evergreen shrub for perpetual greenery and life in winter; the grass plants to make a lawn as a setting for the flower beds; the ornamental foliaged plants to give color to a formal design; each has its use, and while each subject affords a mine of pleasure and satisfaction in its proper place, disappointment is sure to follow its improper application, and herein do so many mentors of horticultural opinion and taste fall into error.

That the Cupid Sweet Peas have suffered by just such conditions is apparent. The plants are essentially bedders—flowering bedders—and we are convinced by a recent experience in Jefferson County, N. Y., that properly used in its own sphere, the dwarf Sweet Pea is to be placed in rank with other first-class plants of that type. No one grumbles at the Portulaca, yet it is but a flowering bedder, and how valuable in quiet suggestion are these Cupid Sweet Peas can only be realized by an actual inspection of such a showing as is represented in our frontispiece illustration in this issue, which is an actual photograph of the pink Cupid bed referred to in the foregoing remarks.

The effect produced by thus massing in an area, 50x40 feet, was astonishing to one who had before seen but a few isolated plants. Not only was the color fine (it is that of Blanche Ferry Sweet Pea, from which the pink Cupid has sported), but there was added the shading and blending of the hues of rosy pink as the sun's rays glinted across a sheet of blooms in all positions, some full on, some sideways, there was moreover the ever welcome fragrance of the Sweet Pea wafted on the breeze.

And this matter of fragrance is not by any means a minor detail, though occasionally in our modern rush for "development," we are liable to sacrifice that prime quality to other considerations of size, form, and color. For was it not the fragrance that first called man's attention to the original Lathyrus odoratus? the name itself tells us so; and is not the Violet's chief charm in its odor?

A German contemporary has in a recent issue attacked the pink and white Cupid Sweet Peas and after reproducing certain discourteous allusions of a native seed firm, to "strictly American pompous recommendations" goes on to relate the same author's remarks that the plant is a "dwarf garden vetch," which it certainly is not. It further "to complete the different expressions of opinion" quotes from AMERICAN GARDENING the sentences referred to in the first part of this note, and leaves the reader to infer that it was the expression of the paper itself. We object to that, and the Handelsblatt of Berlin will oblige by accepting with our compliments the present expression of opinion of the merits of the Cupid Sweet Peas.

The owner of the bed of pink Cupids which is shown on page 645, informed us that the seed was sown 2½ inches deep in hills 2 feet 6 inches apart, and the whole then treated as a hoed crop. The soil was a heavy cold clay loam, and had received a surface dressing of lime, but this application can hardly have had much influence on the plants which were perfectly at home, flowering profusely—we counted 121 stalks in blossom on one plant and an average of three flowers to the stem. The health and vigor of the plants were fully demonstrated by the hundreds of seed pods from flowers already overpast, and though still carrying so freely there were buds innumerable yet to expand. The height of the plant was six to eight inches, and the spread generally two feet, while occasionally one would run to 30 inches and even more, while the individual blooms measured across the standard 1¼ inches.

The claim that Cupid seed had a low figure of germination has not been borne out by our experience and observation. Given the proper conditions, the Cupids are all right.

Henry Strawberry Premium Plants.

The greatest success has attended our offer of this enormous berry; evidently our readers know when a good thing is offered! All those to whom plants are due will get first-class plants in good order, but there has been some delay this past week because Mr. Jerolaman very properly would not ship plants during the late exceptionally hot weather, and our readers will appreciate the care. He also desires us to state they need not be in a hurry to set out plants.

"I never set out plants in hot or dry weather, for it is certain death to them, and the best-paying crop for the labor expended on it was set during the month of October, 1896. The space was 75 feet by 150 feet, strict measure 11,250 square feet, only a trifle over one-quarter acre, yet from this space I sold nearly \$400 worth of berries this last June and July. I have set out plants during eight months in the year, and always wait for wet or cool weather. The plants that I set out in October and November or until the ground freezes are full-grown plants from July or August runners. Removal in these months injures the plants but little, and they never wilt nor wither. Indeed, I find the most profit in plants set in these months, for there is then no care of them all summer and fall, as is the case with plants set out in April, May, or early in June, and moreover there is no profit from early set plants until the following season."—H. JEROLAMAN.

Obituary.

Jesse Kersey Sharpless, the originator of the Sharpless Strawberry, died at his home in Catawissa, Pa., on September 10. The deceased was in his 80th year, having been born September 3, 1818. The berry which bears his name is one of the best known of all the host of strawberries, and was raised from mixed seed of Jacunda, Charles Downing, Wilson and Col. Cheney. The originator practically lost control of the plant before the merits of the variety were realized, and he is reported as having realized on it about two thousand dollars.

F. E. McAllister, the seedsman, formerly of Dey st. and lately of Cortlandt st., New York City, died September 14. He started in the seed business in 1845, in Fulton st., subsequently in 1886 removing to Dey st. Mr. McAllister did a general business in seeds, supplies and implements, and claims to have been the first man to import English holly and mistletoe for decorative purposes.

BIG BERRIES FOR ALL.

Being the Cultural Methods of Henry Jerolaman, the N. J. Strawberry King, Preceded by an Autobiography.

Continued from page 619.

During my last year's stay on the farm, our father made a proposition to my elder brother (Nicholas), and myself, to the effect that if we would, with the bog hoe, clean off in winter a certain piece of bog meadow (that had been thoroughly drained during the past summer), burn the bogs, plow, and cultivate the land, he would give us all the corn we could grow on it the first, or next, season. After consulting with my brother who was always willing to do as I said (he always drove the oxen, I the horses), we agreed to take the land and during the winter at odd times cleared it, plowed it in spring, and grew upon it the next summer a first-class crop of corn.

This bottom land was very rich, and I will say here I believe such the best kind of soil on which to grow a heavy or first-class crop of strawberries; if sour, then the only thing needed is about 50 bushels of air-slacked lime to the acre, costing about 6 cents per bushel, or about \$3 per acre, and after plants are set a top dressing on each side of the plants with about 10 two-horse loads of well-rotted stable manure to the acre. If I or any one cannot grow on such land thus prepared at least \$800 per acre at 10 cents per quart, why call me anything you like (provided always that there is a near-by market).

After selling our corn in fall we realized \$60, \$30 each, after paying all expenses. I only remember positively this amount; that I never shall forget; but as to area of land cultivated, I think it was about two acres, certainly not more.

It was always the custom for father in fall to give each of us a good suit—Sunday suit of clothes we called it, made of the best satinett procured at Woodhouse's fallen mill in the valley, but on this occasion when we asked father for the suit of clothes his reply was, "Why, where is your corn money? What have you done with that? Get your own clothes if you want any."

I saw at once that father knew too much for us boys, we had always been under the impression until then that we knew more than father (most boys do). I have a son who thinks he knows more than twice as much as I do, and the only time I believe he thinks differently is when he comes to me in order to borrow money. I suppose it is all right, as the American people are going forward not backward.

It was with sadness and anger that I told my brother our corn money was "a goner," or in other words, if we did not want to play angel, we would have to buy some clothes with the corn money. This made us form a committee of one, I being spokesman, to inform father that we would leave him and earn our own living.

I distinctly remember getting in a safe position before I informed father of our intention, but he knew we were in earnest, and kindly told both of us that if we would stay another year, he would move to Mendham, as he had bought the hilltop (Fairchild's Boarding School), as it was then called (with some money left to him by my grandmother). After moving to Mendham we went to school in the brick academy at that place. I did the best I could, studied all the time I could get, and crammed my little head as full as I could—too full, perhaps, for it must have overflowed, for I was always forgetting anything useful, but can remember to this day anything that was useless. Moral: let your children study only such books as will be useful to them in their occupation. Oh, how well I remember how my head would ache on a hot day, and at such times I almost always wanted to die, as I believe all lazy folks do when compelled to work. Many a child lies in its grave through overstudy.

If you have noticed I have as yet not said one word about my pedigree, I never liked to recall it myself and never cared for one, and suppose others are like me in

that, but I will state that on my mother's side I am pure English, on my father's side Dutch all the way through. This, I think, is a good strong combination, and perhaps sustained me in my studies. In botany I would be called a hybrid, and I think it a good thing—I know it is in strawberries. The Henry plant is a hybrid, being crossed with two of the best, largest, and hardiest plants known, and if I had the power to originate a new and hardy species of the human race, I think I would get an Eskimo and cross with the Dutch. But it matters not whether I am high bred or low bred, I know I am capable of teaching those who wish to grow strawberries and will do so, in AMERICAN GARDENING.

We resided, I think, about three years in Mendham, and all our family attended the Presbyterian Church. (This church stands upon an eminence that overlooks a vast extent of country, and is perhaps the only church building in all this world that points out to us a living example, although it covers but a small space of earth), for upon either side of its roof it sheds its storm waters in every storm into two distinct and great valleys, Passaic on one side, Raritan on the other, plainly telling us that we can also distribute our good or bad examples to a vast extent of country if we wish. I propose to distribute strawberry culture on my side.

My mother being English and a little proud, bought her seat up next to the pulpit, and as we took a little after our mother in pride, we always went with her to sit in her seat where we could look over all the congregation. Father being all Dutch, bought his seat under the gallery, near the outer doors, where he could sit and smoke during service. I only mention this fact to prove that my father was really Dutch all through. Although my father smoked, he never drank any kind of intoxicating liquor, and on that side we all took after him, but as to smoking, we did not follow, and not one of us has ever smoked or used tobacco in any form.

In my next I will tell you all how I came to buy my present place and to grow strawberries, and will say here that to grow a first-class crop (what I mean by first-class is the cost of preparing your land and giving it all the fertilizers it needs for that crop) of strawberries will cost much less than any other crop that is grown; that is, wheat, rye, oats, corn, potatoes, and I will not except a hay crop, with much less labor, no lifting or lugging, digging, threshing, and carting of heavy loads through bad roads to market.

I have compared the cost; let us compare the profit. I will state truth, not fiction, as can always be proven by books or otherwise. Some years ago, Mr. E. E. Bergen, at the head of the largest commission house in Commerce street, Newark, N. J., came to me and wanted a load of strawberries to send to Boston; he waited here until it was picked, some two hours; it was all picked from a single bed of strawberries not over 30 feet wide by about 350 feet long, and I remember well he had a one-horse truck or wagon, and did not get a very large load—not over 1500 or 1600 quarts, I think.

I put all my men to picking as soon as he came and gave me the price he would pay, and he waited only about two hours for it, yet he paid me about \$300 for that load. Mr. Bergen is still living and keeping the commission house in Commerce street, and he will tell you just the amount he did pay for the single load, for I have no doubt he put it on his books at that time. I have been looking over my books, but cannot find it, as I have no recollection of the year, and as it was cash I may have never put it down. Can any farmer or fruit grower show a profit like that from a single picking from so small a space?

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

The Late E. Corning.—I regret to hear on my arrival here that Erasmus Corning, of Albany, N. Y., has passed away. His vast collection of Orchids has been the talk of European orchidists for many years. He often was found in the London auction rooms during his stay in England, buying all the novelties of merit, some of them unique, and we have seen in the collection a plant of the rare and valuable *Cypripedium Stonei* platytenium which Mr. Gray, the gardener, said was the "Simon pure," secured by Mr. Corning in England at a fabulous price. Unfortunately, the plant was small, did not respond to the careful treatment afforded it, and eventually succumbed. The *Cattleyas* and *Laelias* and *Cypripediums* were well grown, and only the very finest varieties were added. Mr. Corning's love for cool Orchids became so strong that, as you briefly noted in your issue of September 4, he despatched a collector direct to the South for a consignment, and although hundreds of plants were received and two houses filled to overflowing with grand plants, their possession did not deter him from purchasing any distinct or rare form elsewhere. The *Phalenopsis* were his especial favorites and the finest collection of varieties could be seen at his place. In fact, it is doubtful if there was a finer lot in existence; they grew with such remarkable freedom. Unfortunately, during the past year this vast collection of plants has been dispersed together with the valuable collection of Palms and Ferns.—A. DIMMOCK.

Rooting Cuttings.—If one has no facilities for using bottom heat, the most successful way of rooting cuttings that I have ever found is to take two flower pots, say 4 and 6 inches across the top. Stop the hole in the bottom of the smaller one with a cork and fill it with water. Put in the larger one a layer of clean sand (having first covered the hole with something that will prevent the sand running through) and place the smaller pot upon it so that the tops of the two will be on the same level. Fill the space between them with sand, and in this insert the cuttings close to the inner pot. Place them in a sunny window and keep the smaller pot always filled with water. The inner pot can be at any time lifted without disturbing the cuttings and the root growth examined.—W. H. W., Mass.

Poison Ivy.—I have been very much interested in articles on Poison Ivy (*Rhus toxicodendron*), published in American Gardening and other papers, and it seems to me there ought to be some way we could oblige our road masters to at least clear it from our village streets. I have not seen published my mother's remedy for the poisoning, so take the liberty of sending it to you, thinking it may prove as great a godsend to some one that is easily poisoned by the Ivy, as it has been to one of my own family. It is the broad leaf Plantain, *Plantago major*; make a strong tea of the leaves. Take two tablespoonfuls several times a day; also bathe affected parts with the tea.

One member of our family could never go near the Ivy without being affected, twice being dangerously poisoned. After we learned about using Plantain as an antidote, never was she again seriously poisoned, and also learned from experience that if she took a sponge bath of the tea and used it internally for 24 hours after she had been near or through Poison Ivy, that she would not feel any effects of poisoning at all.—M. F. JAGGER.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send a stamp for our new catalogue.

Strawberry Growing & Pedigree

To the Editor of American Gardening.

Permit me to "heartily" return my compliments of thanks to Mr. R. M. Kellogg on behalf of the many readers of AMERICAN GARDENING, including myself, who may be a little fastidious about "fake" advertising through the press in the columns of the general reading matter, for writing one article on the strawberry subject without getting in any "pedigree." Although this was the real matter in question, as may be seen by referring to my article, and though the index refers to the article as "Strawberry Plants, Pedigree," the word "pedigree" is not mentioned in it, nor is any reference made to the matter, unless it is intended that "cranky plants" should be synonymous with "pedigree" plants. In fact, Mr. Kellogg switched off onto another track, and if we will accept his definition of "crank," gave us a good article with many practical hints, which every strawberry grower should well consider.

I see that he has given us an article in the last week's AMERICAN GARDENING about how to treat asparagus for July and August cutting. It hit my case exactly, as I was looking after just such information. I am little better than a beginner in the growing of asparagus, and was working out the problem mostly by experience; and so far seem to have proven the truth of Mr. Kellogg's statements. I was very much pleased that he did not say that it would be necessary to get "pedigree" plants in order to grow asparagus most successfully. This seems to give us reason now to hope, that for the future that gentleman will give us good clean literature, free from that objectionable matter referred to above.

It may seem to some that I have expressed my opinions a little too freely in regard to this matter; but if such be the case, I have not been governed by prejudice nor by a desire to injure any one; but by an over-zealous intention to advance the cause of pomology to whose interest, most especially the berry department, I am most enthusiastically wedded.

E. W. WOOSTER, Me.

To the Editor of American Gardening.

This is a point that is jeered and made fun of by most growers. Mr. Kellogg seems to have the courage of conviction, and probably has knowledge of some facts of which others are not aware. Without a doubt "pedigree" is as important in plants as in animals. Improving strawberries is of such a recent date, and has been conducted on such chance systems that the success in securing choice (?) varieties has blinded many otherwise intelligent propagators of new kinds. The ideal berry and plant will never be produced by chance. Nature has only given us the basis, and man must work out the results by the same methods, as all improved breeds of animals or fruits have been produced. This can only be done by selection of parental predispositions. A strain of a certain variety can be wonderfully improved by judicious "selection" of the parent plants as has been well proven. But it is the same variety showing its weak points, as well as the strong in a more intensified manner. The judicious selection consists of choosing plants that show the weak points the least. Soils and management affect results to a large degree.

All permanent improvement must come through seedlings, and here is where pedigree will count. No intelligent person would breed from a scrub even if it came from the best of parents.

A certain standard must be chosen, and the berries that come the nearest to that standard will be the ones to breed from. Here is where the distillate varieties can be used to the best advantage; it requires careful consideration and good judgment, with a knowledge of the prepotency of the different plants to be used. That we are on the high road to success is evident by the interest manifested by different writers on the subject. All that is needed is a better knowledge of the nature and habits of the plants and fruits in relation to their reproduction of the species. Then pedigree will occupy the

important position to which it is really entitled.

Since writing the foregoing, I see in your issue of September 4, Mr. Kellogg claims to be a "crank;" his definition of a "crank" is well put. It seems as if the strawberry cranks and the intensive cranks were the only ones that were making money during the hard times. Evidently, it pays to be cranky, and now another "crank" appears in the Henry berry! Keep the cranks turning, Mr. Editor, and perhaps the ideal berry will be produced before long—as well as the ideal growers of it.—HENRY SNYDER, Md.

House Plants and Malaria. Is the Soil in the Pot a Source of Danger?

The following interesting details are taken from the report of a medical society's meeting as given in The Medical Record, the medical journals sometimes discuss even more improbable things: "Just after the Christmas holidays, Dr. Taylor was called at Sag Harbor to a woman 82 years old, who had some paroxysms of fever with gastric disturbance, and at her suggestion that it might be malaria, he examined the blood and found the malaria plasmodium. This was remarkable in view of the facts that the ground was covered deeply with snow, the patient had not been from home for four years, the well water could not have been contaminated, and all ponds were frozen. Soon a daughter had similar symptoms. There were some potted plants in the house, and he was unable to make any definite impression upon the disease until these had been removed. At the same season a third case developed in another house in which a trap-door led into a cellar whose walls were covered continuously with low forms of plant life. In still another house, some weeks later, in the same town, malaria with the plasmodium of tertiary fever developed in a child, and no apparent cause could be found except the potted plants in the room occupied by the patient. When these were removed he was able to cure the disease.

"He then went to some florists in localities where there were no marshes, and where they were not likely to be infected by the water supply, inquired into their histories, and made blood examinations. He found in four different localities that the blood of these people contained the malarial plasmodium. These florists were not ill, but they were hardly ever quite well, complaining of digestive trouble, headache, and indefinite symptoms. They could be straightened up temporarily by big doses of quinine.

"Dr. Taylor gave his personal experience when in Charleston. He took precautions about the drinking water to avoid any possible ill, and when he rode out, returned early before the mists rose from the marshes. During this time he kept well, but subsequently, not having time to ride until rather late in the evening, he contracted pernicious intermittent fever. He could then find the malarial plasmodium in his blood. A German writer had spoken of a similar fever developing in the mountainous regions of Russia, at the time of the melting of the snow. This was in harmony with what he had seen in Colorado. But at Sag Harbor the snow was not melting, and the region was not mountainous. There was no bad water to explain the malaria, and the presence of the malarial body in the blood. These facts would seem to point to something emanating from the plants, or rather from the earth itself, as one of the surest means of infection. Yet the water theory should also be borne in mind.

"Dr. R. C. Newton had little doubt that the potted plants were the cause of the malarial infection as mentioned. He could give some experience which would seem to confirm that view. He had a friend who was a florist, and while generally in good health, he had to guard against taking 'colds,' which he could cure by quinine.

"It was possible malaria might develop from plants in the room by reason of soil brought from New Jersey or Long Island."

Grape Vines Small Fruits
Established 44 Years.
Extra fine stock of **CURRENTS**, including the new and unrivalled **WILDER**. Lowest rates. Quality extra. Warranted true. T. S. MURKIN CO., Portland, Me.
Mention American Gardening when you write.

ARCHDEACON & CO.
Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs.

&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION.

NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

ESSEX
FLOWER
FOOD.

It's a trying time for delicate plants when they are transferred from the fresh air, dew and the natural stimulants of the soil to the window garden of the house. At this season of the year an application of Essex Flower Food will stimulate the plant to quick foliage and early flowering. Don't starve your plants.

Ask your dealer for the ten cent package that feeds 10 plants one year—if he does not have it send eight a cent stamps to the
RUSSIA CEMENT CO.,
Gloucester, Mass.,
and get a full size package by return mail.

Mention American Gardening when you write.

PRICE LIST FOR Exhibition Stationery

1000 Entry Forms -	\$2.75
Two Exhibitor's Books -	2.00
Two Class Books -	2.50
Six Judge's Books -	3.00
500 Entry Cards -	3.50
500 Pastors (assorted) -	1.00
Total -	\$14.75

Secretaries of Horticultural, Agricultural, or any other form of competitive show, are invited to write us for full particulars.

It is freely conceded that the system we have adopted saves time, temper, trouble, worry and expense.

The clerical work of every exhibition, large or small, should be run on business lines, and you will find this system the best, the easiest, least expensive, and most satisfactory. Address correspondence

A. T. DE LA MARE PTG. & PUB. CO. LTD.

P. O. Box 1607, New York.

Roses Under Glass.

As interest in the cut flower line is beginning to pick up considerably, many will begin to get anxious about cutting their roses; at the same time the future and large demand at Christmas is something else to be calculated upon. I have always advocated early planting, that is, from the first to the middle of June, for the reason that plants planted at that date are strong enough to produce some flowers about now without injury to future crops; also by cutting early the crops will be off by the second or third week in October. To get a crop off by this time will be just about right to have one in at Christmas, providing we get anything like reasonable weather.

I don't wish to convey the impression that now is the time for all roses to flower, or that every bud that is formed should be left to develop. On the contrary, we must be very particular as to the size and strength of each individual plant, and then only let those that are in our judgment strong enough, produce a flower or two. At the same time the quantity, of stem and foliage cut with each bud should have careful consideration.

It ought to be superfluous for me to mention that none other than a good practical man should be allowed to cut, especially just now, and the same is equally true in regard to disbudding. To allow an incompetent person to perform this work, cutting indiscriminately and letting nearly all the buds develop, will most assuredly result in financial loss during midwinter.

To get along with as few flowers as possible early, and being careful not to have any surplus that will be consigned to the rubbish heap, will during the holidays repay us over and over again for our foresight and trouble.

Green fly will now be found to be more troublesome, and at the same time tobacco smoke will be more injurious. It does not necessarily have to burn the foliage or take the color out of the flowers to work injury. My experience is that at this season—when we have to be so careful with syringing, seeing to it that the foliage is well dried off before evening, especially in the case of those varieties most susceptible to black spot—if syringing is done the next morning after fumigating (which it most generally is to clean off the flies that are only partially destroyed), the foliage has a saturated appearance, even the edges of the leaves and stems being covered with little globules of water, and it is next to impossible to have them dried off by nightfall. Under such conditions we are most liable to get a virulent dose of black spot and other kindred fungous diseases, that will cause no end of trouble and loss. We should always bear in mind that roses in perfect health will not have much water adhering to them after syringing. H. H.

Transplanting Pansies.

I have some Pansies that are just coming up. Shall I transplant them as soon as they are large enough, they are now in drills? Would you please inform me how to keep them over winter. I am a subscriber to your valuable paper, and get a lot of valuable information from it. —J. P. L., Mass.

—Yes, they need transplanting at once into prepared soil which needs to be tolerably rich and well broken up. The usual method is to use a frame of the ordinary size so that after the plants have established themselves and cold weather sets in, they can be covered with sash as occasion may require. Later these same sash need to be covered with wood shutters, straw, or other mats. Reference to this matter has been frequently made in back numbers of AMERICAN GARDENING. If needed for planting in a cool greenhouse, they can be placed in their quarters at any time now, but they need to be grown as cool as possible, and a watch for aphids must be kept. By treating them this way, they come into flower very early, and blooms can be obtained nearly all the winter.

ARMSTRONG & McKELVY
Pittsburgh.
BEYMER-BAYMAN
Pittsburgh.
DAVE-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR } Cincinnati.
ROCKSTEIN
ATLANTIC
BRADLEY
BROOKLYN } New York.
JEWETT
ULSTER
UNION
SOUTHERN } Chicago.
SHIPMAN
COLLIER
MINNOURI } St. Louis.
RED SEAL
SOUTHERN
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALEM
Salem, Mass.
CORNELL
Buffalo.
KENTUCKY
Louisville.

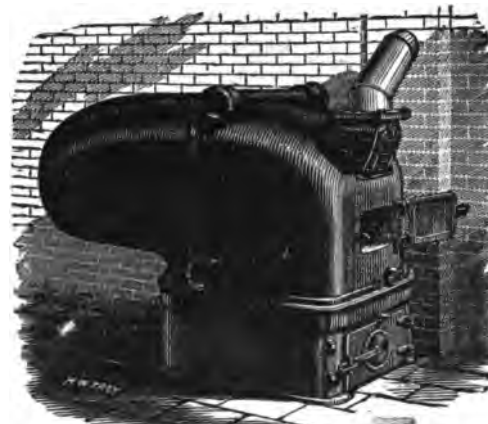
YOU will find that painting properly done with Pure White Lead and Pure Linseed Oil is a good investment—more than the cost will be added to the attractiveness and value of your property. Make sure that the brand is right. (See list of brands which are genuine.) Avoid the “just-as-good,” “sold-for-less-money” sorts.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

GREENHOUSE HEATING AND VENTILATING, Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

**FIVE PATTERNS OF BOILERS
NINETEEN SIZES**

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

Iron Frame Benches with the
“Perfect Drainage Bench Tile”
or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.

Diplomas and Certificates



HORTICULTURAL SOCIETIES,
FOR FAIRS, INSTITUTES, : :
GARDENERS' CLUBS, ETC.

These should be selected well in advance of the date needed, and secretaries of above should send now for our set of samples, all of which have been especially designed by first-class artists and engravers for the purpose. Owing to the wide demand for these samples and their expensiveness, we will mail the set of five, postpaid, for \$1.00; money refunded on return of samples, or placed to credit of order, as directed. One single sample sent free on application if the writer will explain the exact purpose for which it is wanted.

A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.

HEADQUARTERS FOR ALL PRINTED SUPPLIES

W. & D's.
CELEBRATED SURE CROP.
MUSHROOM SPAWN.
8 LBS. FOR \$1.00.
 Lillum Harriett, Roman Hyacinths, Freesias,
 Paper White Narcissus, Callas,
 Etc., Etc.
 Special PRICES on application.
WEEBER & DON,
 Seed Merchants and Growers,
 114 Chambers St., N. Y. CITY.

Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and
 dealers in Cut Flowers
 50 West 30th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Com-
 mission. Best market prices guaranteed.

Mention American Gardening when you write.

INCUBATORS. Self-regulating. Catalogue free
 G. S. SINGER, Cardington, O.

Mention American Gardening when you write.

PEACH TREES, \$3 PER 100.

All kinds of Trees and Plants CHEAP. Cat. FREE.
 RELIANCE NURSERY CO., Box 1410, Geneva, N.Y.

Mention American Gardening when you write.

...GREAT...
Horticultural Exposition
 FLOWERS, FRUITS, VEGETABLES.
AMERICAN INSTITUTE FAIR
MADISON SQUARE GARDEN,
NEW YORK.
SEPT. 27th TO OCT. 23d.

\$5000 in Cash Prizes, also Medals, Cups,
 Diplomas and Certificates.

For particulars and schedules apply to the Super-
 intendents:

JAMES W. WITHERS,
 P. O. Box 1697, New York City.

PROF. VAN DEMAN, Parkside, Va.

C. L. ALLEN, Floral Park, New York.
 or the President,

DR. F. M. HEXAMER,
 52 Lafayette Place, New York.

Mention American Gardening when you write.

The true Aroma, Flavor, Luscious-
 ness and Healthfulness of the

STRAWBERRY

Is known only to the gardener who planting
 the very best varieties, allows them to ripen to
 perfection under his own tender care. We
 grow the **Large, Superb, Highly**
Flavored, Highly Colored Table
Varieties, and will deliver plants anywhere
 on the continent fresh as when dug.

Practical Treatise Telling How
to Grow Them to perfection and how to
Turn a Pretty Penny with your sur-
 plus berries, free to buyers.

Illustrated Catalogue and copy of
 the **Strawberry Specialist**, a monthly
 journal devoted to strawberry culture, free to
 all. 14th year.

CONTINENTAL PLANT CO.,

STRAWBERRY SPECIALISTS,

O. W. BLACKNALL, KITTRELL, N. C.

Pres. and Gen'l Manager.

Mention American Gardening when you write.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

Charles J. Dawson until lately in charge of the greenhouses at the Bussey Institution has accepted a position in the Boston Park Department, under Mr. Pettigrew.

Jackson Dawson, of the Arnold Arboretum, Cambridge, Mass., has returned from his European trip.

Sale of Orchids.

W. Elliott & Sons, 54 Dey street, New York, will sell by auction, Friday, September 24, at their salesrooms, the valuable collection of Orchids, the property of J. E. Brown, Esq., Bellport, L. I. Some of the more rare *Cypripediums* will be offered, also well-grown *Cattleyas* and *Dendrobiums*.

American Institute Show.

We have been requested to give place to the following notice of amendments and rulings as regards the schedule for the forthcoming display at Madison Square Garden, New York City, September 20 to November 4:

"In the amateur classes for Dahlias, strike out the words *not less than six blooms of each*, this leaves the number of blooms unlimited.

"The word *amateur* is to be interpreted as including all persons except commercial growers."

Red Bank, N. J.

On September 1 and 2, the Monmouth County Horticultural Society held the first regular exhibition since its organization, and a highly creditable display, filling more than two floors of the town hall, was the result. For quality and artistic effect as regards decorative plants, the honors were about even between N. Butterbach gardener to Hon. C. N. Bliss; H. A. Kittel, gardener to James Loeb, and James Dowlen, gardener to Gen. H. L. Terrell; fine specimen *Caladiums* and *Coleus* of the last-named won a well-merited award in keen competitions. Mr. Butterbach, was a large exhibitor and a number of his best specimens had been grown entirely in Jadoo, *Phrynum* variegatum thus treated was indeed superb. A rustic effect of rockery and ferns built by Mr. Butterbach was a masterpiece of taste, and a close inspection displayed many a subtle touch of an artist's hand.

Mr. Kittel had in his several exhibits decorative plants of great beauty, and his group staged in competition was remarkable also for the excellent way in which it had been put up; the most was made of the material at hand, and each plant had its individuality displayed. *Crotons*, *Palms*, and *Ferns* in variety and grandly grown were used to such advantage that to this display was awarded the extra prize of a silver cup offered by the New York Gardeners' Society for the best horticultural exhibit from a private gardener. Mr. Dowlen was second in this class with a smaller group which would have been improved by being more open. T. B. Harvey, gardener to Dr. H. E. Owen, also showed several fine *Palms*; W. Kennedy, gardener to J. Wagner, Esq., had good *Coleus*, receiving second place in a very close race with J. Dowlen; his collection included a handsome bright red *Coleus* named Monmouth Beauty.

The cut flowers were of average merit, and competition did not run close. The Lovett Co., Little Silver, N. J., made grand displays of *Cannas* and general herbaceous stock, but especially must the firm be credited for the very large lot of *Geraniums* in pots.

Fruits and vegetables formed a most interesting feature of the show and generally in the vegetable classes it was a close run for the first honors. For cucumbers Messrs. Butterbach and Dowlen divided honors; the former had English,

the latter out door fruits, each of merit. Oliver McIntosh won first for tomatoes out of five good dishes. George Standen led for onions. T. B. Harvey for string beans, green. W. Kennedy had the best carrots, and other prizes went to the aforementioned exhibitors.

The judges were Leonard Barron and A. Don of New York, and C. A. Baird of Manalapan, N. J.

New York.

The New York Gardeners' Society held its annual dinner on Saturday last, when 68 sat down to the tables. The exhibits staged were quite numerous and varied. William Anderson, gardener to J. M. Constable, Esq., Mamaroneck, N. Y., sent a fine collection of Dahlias, among which was a beautiful fluted and fringed variety, white, tinted purple, with a purple eye; Charles Zeller's Sons, Flatbush, N. Y., had a collection of Dahlias, and also had A. Welsing, Brooklyn, N. Y. W. P. Peacock, Atco, N. J., staged in all 68, and E. Granz, Hicksville, L. I., had 50 varieties. G. B. Winslade, Mamaroneck, had a fine display of fruits, flowers, and vegetables, his tomatoes and onions being especially good. R. Angus, gardener for Major Hopkins, Tarrytown, N. Y., sent a grand piece of *Cattleya labiata*, having eleven flowers. H. A. Spavins, Mount Kisco, had a fine collection of *Cannas*, among them several promising seedlings of Paul Marquant and Flamingo, his Mrs. J. B. Dutcher being especially good. Rawson's Sunflower and *Salvia Bonfire*, together with several varieties of Dahlias, were also noticeable in this collection.

C. W. Ward, Cottage Gardens, Queens, N. Y., exhibited *Cannas*, *Geraniums*, and Dahlias.

Among the *Cannas* were noted President McKinley, an improved Charles Henderson, Souv. d'Antoine Croxy, Eldorado, yellow; Count de Bouchard, yellow-spotted; Papa, salmon-scarlet; Chicago, scarlet, and Alex Billard, crimson.

In the collection of Dahlias, *Nymphaea*, pink, white center; William Agnew, vermilion-scarlet; Arabella, sulphur-yellow, edged pink; A. D. Livona, silvery pink; Seedling No. 12, white; Snowclad, white pompon; Mrs. E. C. Monroe, yellow caste; and Henry Patrick, white, showed up well.

The best of the *Geraniums* shown were Alphonse Riccard, vermilion-scarlet; Madame Bruant, Mirande type, and Madame Jaullin, peach-pink.

John Lewis Childs, Floral Park, exhibited *Tritomas*, *Gladioli*, and fine spikes of *Lilium lancifolium rubrum*. W. A. Manda, South Orange, N. J., had a good collection of fancy-leaved *Caladiums*, and a vase each of *Cannas*, Robert Christie and Manda's Ideals, both fine scarlets.

Henry A. Dreer, Inc., Philadelphia, staged a collection of *Nymphaeas*, among them O'Marana, Deaniana, Smithiana, Sturtevantii delicatissima, Kewensis, rubra rosea, and a seedling, creamy white, of good substance.

A. Wengert, gardener to J. B. Bliss, Esq., had a grand exhibit of vegetables, his rhubarb, King of the Garden, and Challenger beans, Daniel O'Rourke peas, and tomatoes of several varieties being beautiful specimens.

John Young, wholesale commission florist, New York, sent a vase of excellent Lily of the Valley.

R. Laurie, gardener to Cornelius Vanderbilt, Esq., Newport, R. I., sent sprays of *Acidanthera bicolor*, and flowers of a free-blooming seedling *Tritoma*, of a beautiful orange color. James Hill, Newport, exhibited a *Bromella* which excited a good deal of interest.

A. Grierson, gardener to Hicks-Arnold, Esq., staged *Gladioli*, *Physalis Franchetti*, *Clematis Panticulata*, *Caryopteris matricanthes*, *Anemone japonica*, Lady Ardeloun, and *Crocus aurea imperialis*. R. Breth, gardener to J. B. Colgate, Esq., Yonkers, N. Y., was on hand with blooms of *Dipladenias*, *Bougainvillea glabra* and *Ixora Williamsii*, also fronds of *Gonolobium appendiculatum*.

Lager & Hurrell, Summit, N. J., had an elegant piece of *Cattleya chrysotoxa*.

C. Aldred, Tydesley, England, sent a splendid collection of vegetables per S.S.

Campania, the courtesy being highly appreciated by the Gardeners' Society.

—At the regular meeting of the New York Florists' Club on Monday, September 13, Mr. C. H. Allen of Floral Park, N. Y., made a remarkable display of new Cannas. In the collection he had Italia, Austria, Burbank, Chicago, Papa, Flamingo, and a number of seedlings; among these last was an apricot colored flower which attracted attention. Two gems worthy of being ranked together were Mrs. Fairman Rogers, which is undoubtedly the best of all scarlet Cannas of the Crozy type, and Columbus. This is the first time we have seen this novelty, but certainly the first impression is good; it is in color a yellow ground, striped and laced with red. The head is compact and clean, the foliage is a rich light green, and the habit of the plant is quite dwarf.

Millbrook, N. Y.

The Millbrook Horticultural Society held its fourth autumn exhibition in the Memorial Hall September 8 and 9. The display of flowers, fruits, and vegetables was very good, the exhibits of the latter especially so. The Dutchess County Horticultural Society also held its regular monthly meeting here, and a paper was read by Mr. Thomas Harrison, gardener to ex-Gov. Morton, entitled "Fruits for the Family Table." This was well received and discussed.

The prize offered by the Dutchess County Society for best collection of fruits and vegetables grown by professional gardeners brought out a strong competition between four local gardeners. The exhibits of all four competitors were uniformly good, and the prizes were awarded for the larger displays rather than for any superiority in quality. The prizes were awarded as follows: First, Samuel Thorne, Esq. (gardener, I. L. Powell); second, C. F. Dietrich, Esq. (gardener, W. C. Russell); third, John Wing, Esq. (gardener, Gustav Thormen). An extra prize was also given to Oakleigh Thorne, Esq. (Charles Rapp, gardener), as his exhibit was of as high quality as the others, though smaller.

The displays made by amateurs were also very good in cut flowers and potted plants; there were also some excellent arrangements of cut flowers in vases, etc.

Mr. Miller, superintendent for John Lewis Childs, of Floral Park, N. Y., sent a splendid exhibit of named Gladioli, Dahlias, Tritomas, Lilies, etc.

Toronto.

The annual plant exhibit at the Toronto Industrial Exhibition both in quantity and quality was considerably ahead of last year's, nearly all the plants shown being of very good quality. The prize list was not a long one, but was fairly liberal; and, were a better building provided for the plant display, the competition would have been still keener than it was.

The anthuriums were all foliage varieties, the first and second prize lots were all good plants, first prize going to Exhibition Park. The hanging baskets were very large and showy, both entries being nearly equal as to quality, Joseph Graham being first.

In the class for stove and greenhouse flowering plants, there were five entries, and many good plants were staged in the first prize lot (Exhibition Park); there were some good anthuriums, allamandas, clerodendrons, etc. In the second prize lot (Manton Bros.) there were nice plants of Swainsona and Erica hyemalis; and among the others there were stephanotis, fuchsias, Bougainvillea glabra, B. g. Sanderiana, and some nice pans of speciosum lilies.

In fancy caladiums the most of the plants were not quite up to the usual standard. The first prize lot (William Houston), however, were very fine, and though small, were well colored and choice.

There were five entries for twelve cultivated ferns; the first two lots were good and hard to judge a handsome plant of Asplenium nidus in one lot, and a very fine davallia in the other being especially noticeable.

In the class for six adiantums the plants were hardly as good as usual. In the class for 24 ferns in 6-inch pots there were some very nice plants, all being good useful stock.

In the class for 50 ferns in 3-inch pots the exhibit was not nearly so good as usual, though some of them were very pretty little plants.

For 75 foliage plants, distinct varieties, there were four entries, all from our public institutions, and nearly all the plants shown were good and well staged.

In 12 foliage plants in pots not over 10 inches, some very pretty plants were shown, the table on which they were staged being one of the best in the building.

In coleus, there was one very good exhibit; the other two were not up to the mark.

The class for flowering begonias was poorly filled, there being but one really good plant among the lot. In rex begonias there was only one entry, but all the plants in it were very fine. The tuberous begonias, also, were not up to the usual standard, although the first prize lot, all singles, was clean and healthy.

The single and double geraniums were away below par; there was not one good specimen in the whole lot.

In the class for new and rare plants there were some new dracaenas, new caladiums, some tillandsias, and a few other little things that have done duty often before.

The specimen plants in bloom trained on trellises made a fine exhibit; there were two allamandas, one Plumbago capensis, one Euphorbia splendens.

The classes for palms and cycads were all first-class, and in good variety. For the best table of plants most tastefully arranged, there were three entries, all good and arranged in different styles.

The orchids were a rather poor lot, but that is nearly always the case at this time of the year here, when there is so very little demand for choice cut flowers.

As an extra entry Sir C. Gzowski exhibited a fine plant of Cycas revoluta coming into flower; this plant has seldom been seen in bloom in Canada and caused quite a sensation among our visitors. B. Gore has had charge of the plant for about two years, and is very proud of it.

Riverton, N. J.

On August 31, as was briefly stated at the time the annual excursion of gardeners to Dreer's nurseries at Riverton, N. J., took place, as near as can be ascertained there were about 1,500 people present. The steamer Columbia left Chestnut street wharf, Philadelphia, at 10:20 A. M. On arrival at the nurseries the first evidence of hospitality was the presentation of a package of cigars to each man as he passed in the gates.

The first objective point was an inspection of the stock contained in the 5½ acres of greenhouses; this was a great treat to all, as everything was in such perfect condition, giving evidence of the excellent management and thorough system of Mr. J. D. Elsele, the well-known superintendent. Palms in all the popular species, and in all stages of growth, from the seed beds to the large decorative sizes, were seen by the hundreds of thousands. Ferns of every salable kind would count up in the millions, perfect in growth and hardiness, and many marveled at seeing such nice plants in such small pots. Araucarias were plunged in ashes outside under slatted roofs; too much praise cannot be given this firm for its untiring energy in trying to make this industry a home one. A few years ago propagation of these plants was attempted, now several thousands are rooted annually.

Now, the crowd is surging towards the Canna field which was one mass of bloom. There are in all 200 varieties to be seen here; the older and standard varieties for stock, as well as all the new varieties possible to be obtained for trial purposes; among these latter one of the most noticeable was Allemanina, a large flower on the Italian order, of an almost indescribable color, the nearest description being a madder-brown, deeply bor-

dered by a clear lemon-yellow. Near to this was a grand variety, Depute Ravarin, a beautiful deep reflex garnet, of extreme richness, with a very erect spike; this is undeniably one of the best of the 1897 Crozy set. Another one, Pres. Max Michelli, was noticeable for its bright flowers and semi-bronze foliage; La France, a bronze-leaved variety, an excellent thing for effective planting. Pandora, another on the Italia style, a grand flower on the terra-cotta order. Another useful variety was marked No. 38, a dwarf grower, bronze foliage with bright red flowers. Aurore, orange-salmon, very distinct, with large flowers, will undoubtedly prove a useful one. Besides these, all the new French and Italian varieties were seen, but they are too numerous to mention.

The next chief point of interest was the water garden, under the charge of William Tricker; this was very interesting. A large basin containing the tender Nymphaeas was much admired. The ponds of the hardy sorts contained many recent introductions. The Nelumbiums in the background made a complete picture.

Passing on to the trial grounds, some spikes of white flowers were seen in the distance; these proved to be the new Gladiolus, White Lady, pure white, a perfect flower with an excellent spike of superior form; the gardeners were all deeply interested in the extensive trials of vegetables and flowers.

In the packing sheds, tables had been erected on which were displayed all the principal varieties of Cannas, Dahlias, Petunias, etc., and a remarkably interesting display of tomatoes on dishes, thus affording easy comparison.

Newark, N. J.

The New Jersey State Fair held at Waverly Park during the first week of the month was a great success; the agricultural and horticultural department was never better patronized than upon this occasion. The entries were unusually numerous and the exhibits in fruit and vegetables of a high order of excellence. Such a display of pears as was seen there rarely falls to the lot of any one at state fairs. The total number of entries in the department was 3,000, being 700 in excess of last season, and the space allotted was entirely inadequate, consequently apples and vegetables were actually staged in heaps!

Grapes, pears, and peaches alone made 1,600 entries, and considering the season, the display of grapes was a surprise to all. The champion prize for 50 kinds was carried off by C. C. Corby, Montclair, with Mr. Copley, Staten Island, second. For 25 kinds, Henry Jerolaman was first. This last-named exhibitor was also most successful in the single plates. For 50 plates of pears in that number of varieties, Ellwanger & Barry, Rochester, N. Y., was first; while for 25 plates the competition lay between that firm and Henry Jerolaman, the latter being victorious with a handsome lot of large, even-sized, highly-colored, perfect fruit.

The floral section was chiefly represented by florists or trade growers, who turned out this season in greater numbers than usual. Henry Decker, East Orange, was the principal prize-taker in plants. The Elizabeth Nursery Company secured the first prize for a group of hardy shrubs and conifers.

Deafness Cannot be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

WHOLESALE MARKETS.

New York.

The cut flower market is so much overstocked that the demand is only equal to about one-quarter of the supply; this, together with the hot spell, makes the entire business of but little value to growers or dealers.

Fruits and vegetables are but slightly better fixed than flowers, the market is very much overloaded and entirely at the mercy of pedlars and preservers; consequently prices are uncertain and low.

Pears are in very large supply and demand the most attention of dealers. The great bulk of Bartlett's are poor in quality and realize only 75c. to \$1.75 per barrel; large clean good-colored fruits are worth \$2.50 to \$3, but only few of such quality are even seen. Seckle is abundant and makes from \$2 to \$3; Beurré Clairgeau and Beurré d'Anjon rarely exceed \$1 to \$1.25 per barrel.

Apples—Duchess of Oldenburg, hand-picked, d.-h. barrel, \$2@2.50; Gravenstein, hand-picked, per d.-h. barrel, \$1.75@2.50; Holland Pippin, hand-picked, d.-h. barrel, \$1.50@2.25; Fall Pippin, hand-picked, per d.-h. barrel, \$1.50@2.25; Twenty-ounce, hand-picked, per d.-h. barrel, \$1.75@2.25; Codling, hand-picked, per d.-h. barrel, \$2@2.25; Blush, hand-picked, per d.-h. barrel, \$1.75@2.50; mixed varieties, fair to good, per barrel, \$1.25@1.50; poor to fair, per barrel, 75c.@\$1.25; Missouri mixed varieties, ordinary, 75c.@\$1.25; Virginia, fall varieties, per barrel, \$1.25@2.25; Crab apples, small, choice, per barrel, \$2@3; large, per barrel, \$1.25@1.75.

Peaches—Maryland and Delaware, per carrier, 75c.@1.50; extra, per basket, 60@75c.; prime to choice, per basket, 40@55c.; common to fair per basket, 15@30c.; Pennsylvania and western Maryland, 20-pound handle basket, 25@50c.; Jersey, extra, selected, per basket, 60@65c.; selected, choice, per basket, 40@50c.; fair to good, per basket, 25@35c.; culls, per basket, 15@20c.; up-river, per carrier, 35c.@\$1.

Pears—Bartlett, large, clean, per barrel, \$2@2.50; poor to fair, per barrel, 50c.@\$1.50; Seckle, prime, per barrel, \$2@2.75; later sorts, fair to good, per barrel, \$1@1.50; common kinds, per barrel, 50c.@\$1.

Grapes—Delaware, up-river, per 24-pound case, 50@75c.; Niagara, up-river, per 24-pound case, 50@75c.; Moores' Early, up-river, 24-pound case, 35@45c.; Wordens, up-river, 24-pound case, 35@45c.; Concord, up-river, per 24-pound case, 35@45c.; black varieties, up-river, per 8-pound basket, 9@11c.; Jersey, per 8-pound basket, 9@11c.; black varieties, Jersey, per 5-pound basket, 5@6c.

Plums—Quackenbos, state, per 8 to 10-pound basket, 20@25c.; purple egg, state, per 8 to 10-pound basket, 15@20; Gage and Reine Claude, state, 8 to 10-pound basket, 20@25c.; common green, state, 8 to 10-pound basket, 12@16c.; common blue, state, 8 to 10-pound basket, 12@16c.; Damson, per 8 to 10-pound basket, 20@25c.; per quart, 2@3c.; per barrel, \$2@2.50; up-river, one-half bushel crates, 50@60c.; per barrel, \$1.50@2.50.

Watermelons—Nanticoke, extra large, per 100, \$15@22; Jersey, large and fine, per 100, \$10@15; Virginia, large, per 100, \$10@12; small to medium, per 100, \$5@8.

Muskmelons—Hackensack, nutmeg, per barrel, \$1@1.50; Monmouth County, Nutmeg, per barrel, 75c.@\$1.25; Jenny Lind, per barrel, 75c.@\$1.75; south Jersey, Gem, and J. Lind, ordinary, 50c.@\$1; Maryland and Delaware, per bushel basket, 30@60c.; per one-half barrel basket, 75c.@\$1.75; Colorado, per 70-pound crate, \$2.50@3.

Beets—Local, per 100 bunches, \$1.

Cauliflowers—Per barrel, \$1@3.

Celery—Choice large, per dozen, 25@30c.; fair to prime, per dozen, 12@20c.; small and poor, per dozen, 5@10c.

Corn—Hackensack, per 100, 75c.@\$1.25; other Jersey, per 100, 50c.@\$1.

Cabbages—Jersey and Long Island, per 100, \$2@3.

Cucumbers—Jersey and Long Island,

Potash.

plies them with profit to himself.

Free

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

When Writing Mention Florists' Exchange

All farmers know its value. The wide-awake farmer recognizes the importance of fertilizers, and ap-

"JADOO" FIBRE.

A New Potting Material
A Perfect Substitute for Earth.

Concentrated "Jadoo" Liquid.

BOTH MEAT AND DRINK TO PLANTS.

Revives Drooping Plants, strengthens the weak and nourishes the strong; above all, it increases the size, causes greater profusion of bloom, and heightens the Color of all Flowers.

SIMPLY INVALUABLE IN POT CULTURE.

For Prices and . . . THE AMERICAN JADOO CO.
Testimonials, Address

813 Fairmount Avenue, PHILADELPHIA, PENN.

Mention American Gardening when you write

HENS AND EGGS

Undoubtedly there are many readers of AMERICAN GARDENING who keep hens who do not take a poultry paper; possibly some take the wrong one. Gardening,

fruit culture and poultry keeping dovetail together perfectly, each filling a season comparatively dull in the others.

Realizing the above facts, we have arranged with the publishers of POULTRY MONTHLY, to offer that journal in club with AMERICAN GARDENING, for the coming subscription season, both journals postpaid, one year, for the SMALL SUM OF \$1.25.

POULTRY MONTHLY Is now in its nineteenth year; it has always been recognized as the leading publication in its particular field. Sound and reliable in its teachings, and not the mouthpiece of cranks, cliques, or rings. Its correspondents are practical and successful men, in the harness to-day. The publishers of AMERICAN GARDENING recommend Poultry Monthly as being one of the very best poultry papers issued, and advise all interested to accept this Great Combination Offer.

A WONDERFUL OFFER!

American Gardening (Weekly), \$1.00 } Both \$1.25
Poultry Monthly, - - 1.00 } One Year, postpaid.

Present subscribers who are in arrears must pay up in full to become eligible to this offer.

Address AMERICAN GARDENING, P. O. Box 1697, New York City.

LORD & BURNHAM CO.,

Horticultural Architects and Builders Steam and Hot Water Heating Engineers.

(Established 1856.)

Plans and estimates furnished on application for Greenhouses, Conservatories, and all kinds of Horticultural Buildings, erected complete with our patent iron construction; or for material only, ready for erection.



Largest Builders of Greenhouse Structures. Plans and construction embrace latest improvements. Six highest awards at the World's Fair.
Send four cents postage to New York office for latest catalogue.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N.Y.

Mention American Gardening when you write.

per 100, 50c.@\$1; pickles, good to choice, per 1,000, \$1.25@2.50; pickles, common, per 1,000, 50c.@\$1.

Egg plants—Jersey, per barrel, 60c.@\$1.

Green peas—Long Island, per bag, \$1.25@1.75.

Lima beans—Jersey, Potato, per bag, 60c.@\$1; Jersey, flat, per bag, 40@60c.

Onions—Jersey, white, per barrel, \$1.50@2; Jersey, other kinds, per barrel, \$1.25@2; Orange County, red, per bag, \$1.25@1.75; Orange County, yellow, per bag, \$1.25@1.75; Orange County, white, per bag, \$1@2; Long Island, yellow, per barrel, \$1.50@2.

Peppers—Jersey, per barrel, 50@60c.

Parsley—Local, per 100 bunches, \$1.

Squash—Hubbard, per barrel, \$1@1.25;

Marrow, per barrel crate, 75c.@\$1; white, per barrel crate, \$1@1.25.

String beans—Long Island, per bag, 30@50c.

Tomatoes—Choice, round kinds, per box, 50@75c.; ordinary, per box, 25@40c.

Turnips—White, per 100 bunches, \$1@2; Russia, per barrel, 75@90c.

The potato market for high-grade stock is firm and seems likely to remain so. Long Island in bulk, per barrel, \$2@2.37; Jersey, per bag, bag included, \$1.75@1.90; choice, round, in bulk, per barrel, \$1.87@2.12; average prime, in bulk per barrel, \$1.62@1.75; poor to fair, in bulk, per barrel, \$1.25@1.50; Albany and Troy in bulk \$1.50@2.

Philadelphia.

This market has recovered somewhat from the declining tendency noted last week, and stock has therefore cleaned up better, although prices do not advance to any extent. The peach market has been very good, being well cleaned up every day and the quality continues improved over that of the past three or four weeks.

Apples—Oldenburg, hand-picked, per barrel, \$2@2.20; Gravenstein, hand-picked, per barrel, \$1.75@2.25; Holland Pippin, per barrel, \$1.50@2; Maiden's Blush, per barrel, \$1.50@1.75.

Pears—Bartlett, choice, per barrel, \$2.25@3; fair to good, per barrel, \$1.50@2; late varieties per barrel, \$1.25@1.75.

Peaches—Pennsylvania, Cumberland district, per carrier, \$1.50@2; per handle-basket, 30@50c.; regular basket, 50@80c.; fair to good, 30@40c.; Maryland, per carrier, \$1.25@1.50.

Plums—Damson, per quart, 2@4c.; table varieties, 10-pound baskets, 15@20c.; Gage, 10-pound basket, 15@20c.

Watermelons—Choice, per 100, \$15@20; Jersey choice, per 100, \$10@12.

Muskmelons—Jenny Lind, per barrel, 75c.@\$1.25; south Jersey, Gem, per barrel, 60c.@\$1; Maryland, one-half bbl. basket, 60@80c.

Celery—Choice, per dozen, 35@50c.; fair to good, 25@30c.

Corn—Jersey, 50@80c.; Pennsylvania choice, per 100, 75c.@\$1.

Cabbages—Jersey, per 100, \$2@3.50.

Cucumbers—Jersey, per basket, 25@35c.; per barrel, 75c.@\$1.25; pickling, per 100, \$1@1.50.

Egg plants—Jersey, per barrel, 75c.

Lima beans—Per 100 pounds, \$2.50@2.75.

Green peas—Per bushel, 50@80c.

Onions—Jersey, white, per barrel, \$2@3; New York state, yellow, per barrel, \$1.75@2; Pennsylvania, yellow, per barrel, \$1.80@2.

Peppers—Jersey, per barrel, 50@70c.; per basket, 20@30c.

Squash—Hubbard, per barrel, \$1@1.50.

Tomatoes—Choice, per basket, 40@60c.; fair to good, 25@30c.

A slight decline was noticed in potatoes; Jersey, per barrel, \$1.75@2; per bushel, 50@60c.; sweets, per basket, 25@30c.

Boston.

Apples are in a situation different from that of a week ago; good hard apples are in demand at around \$2; if they are all red or two-thirds red colored and can be called "fancy eating," they bring \$2.50@3 in a limited way, and for our readers' information, good hard apples in large barrels could be quoted as a wide range from \$2@3, according to their color and fitness for the table or kitchen.

Watermelons have changed their position; large-sized melons are in quick sale, those counting 40 and 50 to the wagon, bringing 80c. in large quantities; those counting 70 to the same wagon, 25c., while those counting 90 to the wagon bring about 20c.

Those Rocky Ford Nutmeg melons from Colorado gathered the dealers all in; they were put out at \$2 in crates, holding about half a barrel; another car coming this week, and will be placed at 25c. or 50c. higher figures. Their flavor is exquisite and every melon can be eaten.

Rhode Island Emerald Gem bringing \$2@2.25 a barrel, with other varieties ranging downward to the muskmelon at 75c.; the Osage and so-called Black Jap oftentimes vie with the Emerald Gem at the top prices.

Green corn is eaten by almost everybody at prices ranging 10@15c. per dozen.

Choice tomatoes are in as good demand, 50@75c. a bushel; medium stock not wanted at present.

Native egg plants coming, sales slow; warm weather was little too hot for peppers even at \$1 per barrel.

Celery takes a range of 50c.@\$1 per dozen, price depending largely upon whom the buyer may be. Those wanting

it pay \$1; those who don't care whether they have it or not pay 50c.

Marrow squash little easier, \$1@1.25 a barrel.

Onions are firmer, if in large barrels, \$2.25; if in small Ohio barrels, \$1.75.

Cucumbers three-quarters of a cent each; if small-sized suitable for pickling, \$1@3 a bushel; the small assorted, about two inches in length, bringing the higher figure.

String beans, fancy, small, used for pickling, \$1 a bushel; horticultural shell beans, \$1.50 a bushel; Selva beans \$2.50 a bushel; lima \$1.50@2.

Mint, 45c. a dozen bunches.

Cabbage having a good sale 3@5c. a head; cauliflower, light demand; carrots 75c.@\$1.25 a bushel; beets, 50c.; turnips, also at 50c.

Potatoes very firm at the railroad yards selling 75@90c. a bushel; if offered in barrels, \$2.75.

Sweet potatoes little easier, \$1.62; consumption very large.

Pears are unchanged, very hard to find our choice Bartletts; New York stock bringing \$1.50@2 a barrel, while some assorted home-grown would bring 75c.@\$1 a bushel; readers can estimate what other varieties would sell at.

New Jersey sending peaches freely; Maryland and Pennsylvania letting up; Connecticut steady; New York just breaking out. Best yellow stock from Connecticut bringing \$1.25 in five-eighths baskets; readers, however, must understand it was assorted stock; home-grown bringing 50c.@\$1 for fancy white or yellow; New York state in 12-quart basket, about 50c. Michigan in the 6-basket carriers about \$1; while the Blue Mountain stock in same package \$1.50@1.75.

Grapes, Pony Delawares, 15@18c. a basket; Worden's, Moore's Early, or Concord, 8@9c. Small baskets are the kind everybody wants this year.

Not so many plums coming, but there is a very limited sale; fancy blue stock might be quoted 20@25c., with no demand whatever for green.

Modern methods of packing and shipping tender fruit have made it possible to send it long distances without injury. Refrigerator cars, built exclusively for fruit, are used for what is to be shipped a long distance. These cars are iced twenty-four hours before being loaded and then run as close as possible to the orchard. The fruit is frequently carried by the pickers directly from the tree to the cars. The cars are iced then every twenty-four hours until the fruit is delivered at its destination.

Our publishers will supply any book wanted. Send your orders.

NOW READY.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$2.00. 25 per cent. off to subscribers to American Gardening and Florists' Exchange.

This work contains nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work.

On heavy enamelled paper. Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8 Duane Street, P. O. Box 1697, New York City.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Crimson Clover for Poultry.

One of the best plants for poultry pasture is Crimson clover. It contains even more of the precious nitrogen than the common Red clover. It is a cool-weather plant, and grows right along through the winter whenever the ground is not frozen. It should be sown as soon as possible, among any kind of garden truck, where potatoes or other crops have been harvested; and the seed can be lightly raked in. A pound of seed, costing 10 cents, will sow a patch large enough to furnish dollars' worth of green pasture, to which the hens will gladly help themselves, if permitted. We scatter a little turnip seed with it, sowing where the potatoes have been dug. Effort is being made to throw this crop into disrepute, through the claim that it is sometimes dangerous to stock; but the trouble, if genuine, belongs only to the blooming and seeding time, which the hens will not allow it to reach.

Second Crop Cabbage.

As the heads are cut from the cabbages in the kitchen garden, the large leaves remaining should be broken off, and fed to the fowls. They furnish an excellent article of food, which assists greatly in egg production. Upon the stumps which have been left, new shoots will start, and, in a few weeks, a new crop of green food will be ready on the same old stumps and with no additional labor. The stumps may then be pulled and given to the hens, a waste crop thus being made to save the somewhat expensive headed cabbage.

New Color Combinations in Geraniums.

Why, with the constant improvement in size and variations in color combinations in the favorite old plant—why need we—why do we see the same old sorts constantly in use? Some of the newer sorts are most admirable in form, immense in size, and incredibly full as to truss. "Old friends are best," says one. True, but trite; and fatal to advancement if all held to it absolutely. Keep the best of the old, indeed, but look back to the time when they, also, were novelties, and let them plead for, rather than against the new. Suppose we had all denied that beautiful novelty, Souv. de Mirande, a chance to prove her worth? Don't we want to try the new pink, white-centered, red-veined sort? That's Baron Scalibert. Do we want (some people don't) a kind with enormous trusses of extra large flowers in a new shade of rosy magenta? That's Pres. Victor Dubois. Do we want another "Miranda," but with scarlet in place of the carmine edge? That's Columbia. Do we want a combination of rose and heliotrope? That's Violet Queen.

Potting Garden Bulbs.

It can be done, and with satisfaction, but not in all cases. If the bulbs were growing in the garden beds for many years past, and have become crowded, the chances are that only a small proportion, even of those which have sufficient size, can be depended on for bloom. It is impossible, too, to tell just which ones these are. If the bulbs are taken up each year, as is the custom of some, the larger ones may be devoted to the pots with good prospect of success. If not moved for years, they may be taken up now, set as per directions for newly-bought stock, and grow one year, when they will furnish fair selected potting bulbs. If the smaller ones are not needed, some neighbor will be glad to grow them on to blooming size.

In the Sunniest Window.

Let those who would succeed with plants for winter bloom, study closely to adapt the plant to the situation. The yellow Oxalis, the Linums, Carnations, Roses, highly-colored "foliage" plants of nearly every sort, and the potted Lilies will not be satisfied with less than fullest measure of sunshine when the sunny

hours are at their shortest. Turning the pots daily is a good specific for the health of the roots, and this means for the health of the tops, the part which we, short-sightedly, call the plant.

The Unaccommodating North Window.

Thus we often term it, mentally, if not aloud, the while we almost envy our neighbor with the gloriously sunny south window, and even her with the "general-purpose" west or east exposure. But care in selection may give us a delightful home, even on the cold, north side, lying in sunless dullness and lack of color. Bloom and color may be had through the use of the Begonias. The Asparagus, scented Geraniums, Lycopodiums, Ferns and some of the climbers may be leaved on for greenery. But all the more in a north window, let the care-taker beware of crowding the occupants. With the gift of sunshine denied, let no plant suffer also for lack of light. If we ask beauty, let us not be so unreasonable as to deny the essential conditions.

Yellow, and Sunshine.

We sometimes call yellow blooms "transmuted sunshine," possibly because the term is a sort of shibboleth which has come to be familiar to our tongues. But, looking closely at yellow in plant or flower, shall we not find an intimate relation between this color and the sun-god? What plant can you recall, yellow in foliage or flower, which does not seem, to an extreme degree, dependent on the sun for its greatest beauty?

The Hybrid Teas.

When the French rosarian triumphantly named his masterpiece "La France," more than a score of years ago, it would have been very difficult, if not impossible, to imagine the glories of the new class which it introduced. The teas are, it would seem, unapproachable; the magnificent hybrid perpetuals meet the wants and satisfy the tastes of some even better. But what can one say that shall seem enough praise for the hybrid teas, which unite in one all that is best in the two older classes? Among the newest sorts, Souv. de Pres. Carnot may easily be placed first in popularity, both because it is a delightful Rose, and because it has had plenty of advertising. Lacking this last, Mme. Abel Chateau, Souv. de Mme. Eugene Verdier, Augustine Hale, and many another will have to prove its own worth by its behavior. Here and there an extra superb sort will enter the forcing class, but the greatest value of these new hybrids should eventually show itself in the outdoor rosery.


Variation in Styles of Roses.

It is especially the aim of raisers of flowers of sufficient beauty and variety to be worthy of shows of their own, to increase the variety as far as it may be done within the lines of beauty, and often to mere oddity. In Roses, the variation is far wider at the present time than most people could believe. It is the outdoor grown that show it most. The flat and the cup-shaped; the globular, the lacinated, and those with a broad frill of petals filled with shorter, finer ones in Hollyhock style; those with Tulp colorings, the selfs, and the striped make together, a very interesting display.

Fighting Insect Foes.

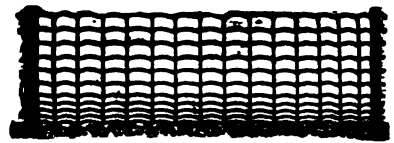
If the poultry house is so built that it can be tightly closed, probably there is no better way of ridding it of pests, than to fumigate, either with sulphur, or with some similar preparation. It is by no means so much trouble as people seem to believe it. There seems to be a very hazy lot of ideas as to where vermin breed. One wiseacre gives, in a poultry paper, minute directions for placing the roosts so as to be free from contact with the sides of the house, on legs which are to be set in cans of kerosene. The idea is not bad, nor is it new; but its supposed author affirms that, by its putting into use all blood-sucking vermin can be defied. Is it possible that he believes that all such pests come from without the roosts, that is, from other portions of the houses?

MYRA V. NORRIS.



OUR NURSERY STOCK
is grown on the banks of the Hudson River. It is First-class. Prices are Low. 50 acres of **FRUIT TREES**, Plants, Vines and Ornamental Stock to sell. 1897 Catalogue free.
T. J. DWYER, Cornwall, N. Y.

Mention American Gardening when you write



CIVIL SERVICE EXAMINATION
Called by county commissioners. Duty: "Fencing." With nine competitors. Page agent walks off with contract because of superior points of excellence named. Write in proof.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plan, superintendence, plants, labor, etc., supplied in work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. **Joel Forsyth Johnson**, P. O. Box 118, New York City.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at **TWO CENTS PER WORD** each insertion, payable in advance. The address will be charged as part of the ad., and each initial, or a number, counts as one word. No cuts or display type allowed.

RASPBERRY and Strawberry plants. **Chas. C. Nash**, Three Rivers, Michigan.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bala Clematis, Magnolia, Rhododendron, Azalea, etc. Branch of the Horticultural Company, Rekoop, Holland.

DIRECT from the grower, duty free. **Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue** is now out, prices very reasonable, anybody who has not received a copy should address **Hulsebosch Bros.**, Englewood, N. J.

LILY OF THE VALLEY PIPS.—The undersigned are open to undertake the purchase of Lily of the Valley Pips for a first-class firm and can supply the very best qualities by reason of their intimate connections with the most renowned cultivators of the "Mark" District. **Schmitze & Pfla**, Seed Merchants, Rathenow (Brandenburg).

CALIFORNIA Privet make the finest ornamental hedge, and are perfectly hardy. Fine lawn plants grown at seashore, two years old, \$1 per hundred. Cash with order. Reference, First National Bank, Asbury Park, N. J., State Bank, Newark, N. J. Atlantic Coast Nursery, James H. Cornell, Proprietor. Office, 605 4th Ave., Asbury Park, N. J.

Situations Wanted.

Advertisements will be inserted under this heading at **ONE CENT PER WORD** each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

WANTED a place; I can with confidence recommend my gardener to any lady or gentleman in want of such; he is in all trustworthy and a good gardener who knows his business. **J. K. Larrea**, Box 98, Marion, Mass.

POSITION wanted as gardener, by a German-American, 31 years of age, single, with a life-long experience in Germany and America; in business himself for 8 years, and for past two seasons had gardeners for the leading hotel in central New York. Understands the construction of greenhouses and landscape gardening; vegetables and mushrooms specialties; would like to work for Christian people; best of references. Address **Chas. Malone**, Box 5, Oswego Falls, N. Y.

When ordering goods subscribers will confer a favor on the publishers by stating they saw the advertisement in **AMERICAN GARDENING**. We admit only responsible business houses in our advertising columns. Avoid delay and disappointment by giving name and address legibly.

READ THIS FIRST

The publication of the below article in a recent issue of **AMERICAN GARDENING**, has brought Mr. Jerolaman hundreds of letters from every part of the country.

Strawberries Henry and Mary.

We have grown almost all varieties of berries, but have only found two really large fruited ones. The one is Mary, originated by the late H. Alley of this village, the other is called, here on Boyden Farm, Henry. We grow tens of thousands of quarts from each variety every year, and they are without doubt the largest and best of all grown in the whole world. I have had this season thousands of quarts of Mary, where from five to ten berries would make a heaping wooden quart, and I have preserved several in glass jars, with formalin, so that all who doubt can come here and see for themselves. Some of these berries in the jars measure thirteen inches around. I am the present owner of the Seth Boyden farm. Seth Boyden originated the first large strawberries, perhaps, in the world (Agriculturist and others); he died in 1870. I then bought his farm, and have continued to grow strawberries from that time to this, and will say that I am positive the plant called Henry is, beyond all doubt, not only the strongest plant, but the largest, best, hardiest, and sweetest strawberry ever yet produced; color dark crimson; it is perfect (staminate), very large, round, and no coxcombs grow on it. I have grown it for the past four years for market in a small way, and this season nearly one-half of all that I grew was Henry; it will out-produce any strawberry plant that I have ever known, four-year-old plants giving very large, and just as fine berries as plants one year old. The plants as yet have shown no disease, while all other varieties, such as Great American, Jersey Queen, and nearly all varieties except those soft berries not good for market (Sharpless, Bubach, and others), have shown disease in the plant. The Mary this season could not stand the hot sun, and nearly one-half of all the plants burnt and dried up while full of berries. Mary will not bear the second season, but must be set every year, while of Henry, not a single plant has died, either old or young; it is the first berry ripe and the last. I am picking large berries from the Henry to-day, July 15.—HENRY JEROLAMAN, N. J.

Mr. Jerolaman will not answer any further correspondence except through the columns of **AMERICAN GARDENING**.

Now Read
The Advertisement

YOUR FORTUNE IN STRAWBERRIES!

The Strawberry King and his Remarkably Successful Career: How a Poor Boy Became Wealthy.

THROUGH one of those strange dispensations which often mock in real life the wildest imagination of the novelist, the publishers of **AMERICAN GARDENING** have become possessed of the story of the life and cultural methods of **Henry Jerolaman**, undoubtedly the **STRAWBERRY KING OF THE UNITED STATES**. We have prevailed upon Mr. Jerolaman to write the history of his life and a full description of his cultural methods, exclusively for the readers of **AMERICAN GARDENING**. Further than this and at our urgent solicitation we have prevailed upon him to make a contract to supply us **One hundred thousand plants of the HENRY STRAWBERRY**, to be used solely as premiums to subscribers to **AMERICAN GARDENING**. The Henry Strawberry has positively never before been advertised.

THE CONTRACT

Publishers American Gardening.

Gentlemen,

I hereby agree to furnish you within the next twelve months in quantities as ordered, One Hundred Thousand plants (100,000) or any portion thereof, of the Henry Strawberry, to be used solely as premiums for subscribers to American Gardening and not to be sold.

Witness
Thos. S. Anthony.

(Signed)
Henry Jerolaman

The Best Berry of the Age.

Four Berries of the Henry, grown by Mr. Jerolaman, rounded a wooden quart measure. Individual berries were three-and-a-half inches through each way. Mr. Jerolaman's description of this wonderful berry in a recent issue of **AMERICAN GARDENING** has brought him hundreds of inquiries from the cream of the professional growers.

A GOLD MINE AT YOUR OWN DOOR.

"He who hesitates is lost." It is not likely that such an offer or such an opportunity will occur again in years. More than one strawberry grower in every town, village, and hamlet can come into a good thing through practising the cultural methods and getting some of the plants which have made Mr. Jerolaman not only wealthy and well-known, but so wonderfully successful, by at once

Taking Advantage of Our Offer:

For \$1.00 (check or money order preferred)
we will forward you, by mail, postpaid.

FIVE PLANTS ..Of the.. **HENRY STRAWBERRY**
Unequaled

And **AMERICAN GARDENING** One Year.

Present Subscribers are entitled to this Offer on renewal; if their subscription has not expired, it will be dated ahead.

Plants to be shipped this Fall or in the Spring, as you prefer.

OFFER EXTRAORDINARY For every new subscription you send us at \$1.00, we will forward you, postpaid, as a premium, **Five Plants of HENRY STRAWBERRY**; at the same time we will also send **Five Plants** to the party subscribing through you. Thus a club of 10 new subscribers entitles you to 50 plants of this wonderful Strawberry, as well as each individual subscriber to 5 Plants. This is a **BIG OFFER** to all who want to become larger holders of this wonderful Berry, never before advertised. **Time is short, get to work to-day.**

Address **Publishers AMERICAN GARDENING, P. O. Box 1897, New York.**

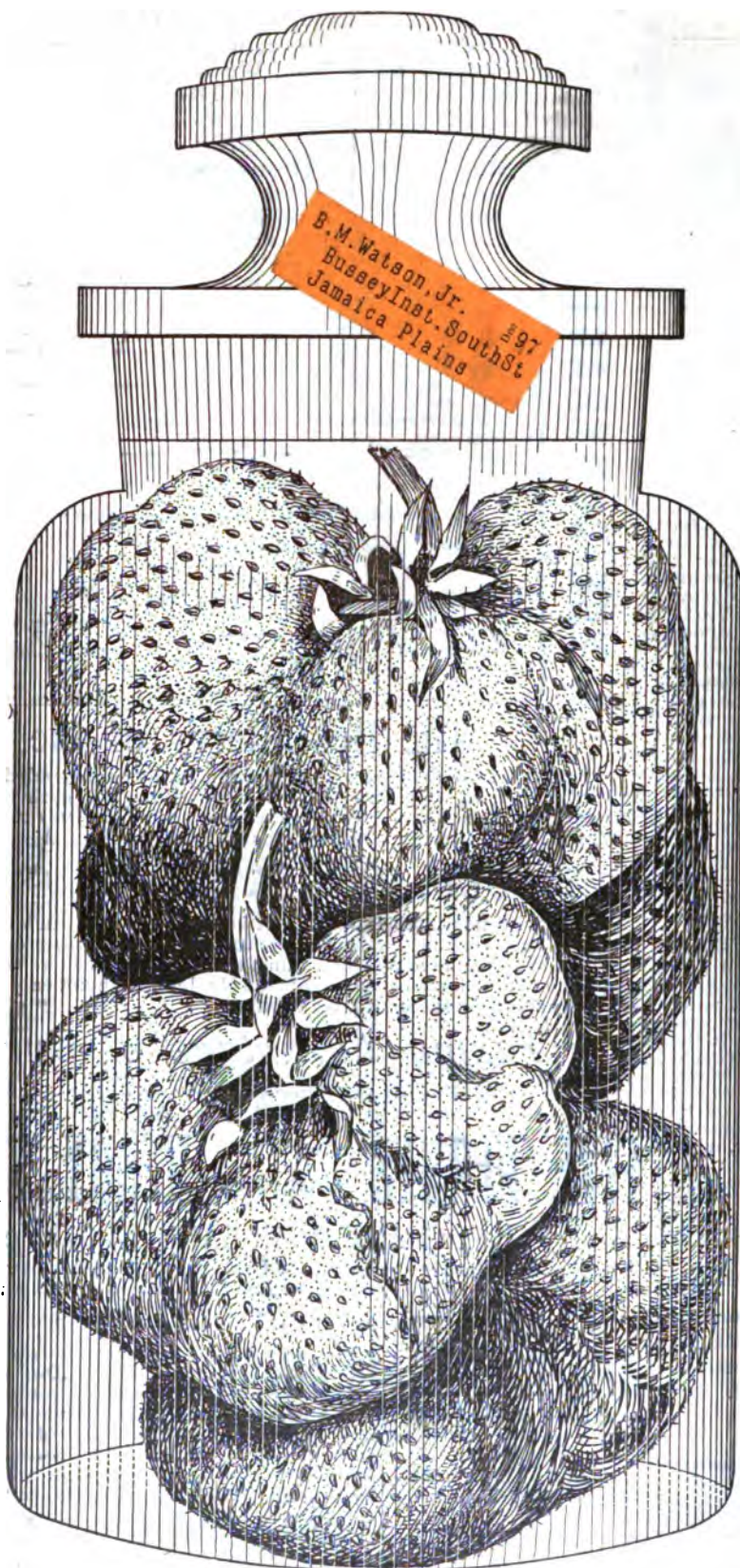
Trial Subscriptions

For \$1.00 we will send **AMERICAN GARDENING** on three months' trial (13 weeks) to four separate addresses, and as a premium, **Five Henry Strawberry Plants** to the one getting up the club. **HUSTLE.**

THE HENRY

The Most Wonderful Strawberry of the Age.

MESSRS. STEVENS, SIMPSON & CO., Commission Merchants, 232 West Street, New York City, state they handle the HENRY Strawberry, and have realized for it the highest price obtainable for any outdoor stock coming into New York market. Mr. Simpson further states that, in his opinion, as grown, packed and shipped by Mr. Henry Jerolaman, it is the BEST HOME MARKET BERRY in existence. For SIZE, COLOR, and SWEETNESS, and, in its KEEPING QUALITIES, IT HAS NO EQUAL; these many points in its favor rendering it easy for the grower to realize considerably more per quart than the regular market value of Strawberries generally.



MR. JEROLAMAN says, and his statement is corroborated by those who have seen the fruit: The HENRY is beyond all doubt not only the strongest plant, but the largest, best, hardiest and sweetest Strawberry ever yet produced; color, dark crimson; it is perfect (staminate), very large, round, and no cocombs grow on it. . . . It will out-produce any Strawberry plants that I have ever known, four-year old plants giving very large and just as fine berries as plants one year old. . . . The plants as yet have shown no disease. . . . It is the first berry ripe and the last.

➡ *Read Premium Offer on Preceding Page* ➡

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 144.
COMBINED SERIES VOL. LI.

NEW YORK, SEPTEMBER 25, 1897.

5 CENTS A COPY,
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Adaptation of Varieties..... 665	Cauliflowers..... 663	The..... 670	Plum, Juicy..... 665	Strawberry Culture..... 66
Apple crops, The..... 663	Chrysanthemums..... 665	Lifting Plants..... 670	Plums, Pollination of..... 671	Tomato Peach Blow and Others..... 664
World's..... 663	Corn, Cost of Growing..... 673	Market Reports: N. Y., Phila. and Boston..... 672-673	Poison Oak, etc..... 668	Vegetable Garden..... 663
Beaked Hazel, A Farm of the..... 666	Cyclamen, Types of..... 662	Mushrooms in a Cellar..... 662	Poultry Notes..... 670	Window Gardening..... 670
Big Berries for All..... 667	Diseases of Shade and Ornamental Trees..... 664	Nut Grass, To Rid of..... 668	Private Gardeners..... 668	
Black Walnut for Timber..... 663	Endive..... 663	Palms from Seed..... 670	Radishes..... 663	
Canas for Winter..... 670	Fall Planting..... 668	Pansy as a Bedding Plant..... 662	Readers' Notes and Comments..... 668	
	Fruit Garden..... 665	Pellionia pulchra..... 670	Rhododendrons, Injury to..... 665	
	Home Plot, All About			

New Types of the Persian Cyclamen.

Within the last few years there have been recorded in the European horticultural journals several instances of striking variation or modification in the flowers of the Persian Cyclamen. How it should come about that this plant should at this particular period manifest such restlessness is a matter of both curiosity and interest. It is probable that some disturbance in nutrition at some particular stage of growth may be held accountable; but even accepting that as an explanation of the appearance we are as far off from an understanding of the cause as we were at the beginning.

The Persian Cyclamen was first introduced into Europe in 1734 when a plant was offered at Lille, France, and was purchased by the Belgian monk Reyntkens for 65 francs, and it is from that one plant that have sprung all the host of varieties now offered by the seed and florist trade, for there is no record of hybridization with the Persian Cyclamen.

This capacity of a species to vary is not peculiar to the Cyclamen, other plants, especially the Chinese Primrose, having an equally marked tendency to variation, but this range of variation of a single species is a matter of great interest, and when such distinct types as the one shown in fig. 186 can be raised true from seed and in various colors, one's ideas of the limits of a species become confused, and the old question of "what is a species" crops up afresh.

The fringed Cyclamen which is offered for sale under the suggestive title of Papilio or Butterfly is perhaps the most beautiful

of the types now shown and it is curious to note that it has appeared spontaneously in two different places. This tendency for a variation to show itself at about the same time in widely separated places is another interesting biological problem that is often presented to the horticulturist.

The created form of flowers shown in fig. 187 is of English origin and has also appeared in France, reproducing itself true from seed.

A Belgian florist is the raiser of the double-flowered types represented in fig. 188, and it is claimed the flowers are produced freely. This form has passed into the hands of a leading seed house, so there is all likelihood of its being offered to the public within a short time.

In a recently-issued number of the Journal de la Société Nationale d'Horticulture de France we find a very interesting and useful paper on cultivation and mode of growth of the Cyclamen, by MM. Alex. Hébert and Georges Truffaut, from which we extract the following:

In its natural habitat the Cyclamen of Persia is met with in temperate regions, in mountainous and dry situations. Plants grow by preference in sandy-loams that contain a certain amount of humus, but they can not thrive if stagnant water exists in their vicinity. Normally, their blossoming takes



FIG. 186.—NEW TYPES OF CYCLAMEN—FRINGED.

place in the spring, and usually it occupies three years to mature the plants, but by improved methods of culture, the Cyclamen is made to produce its flowers in one year, which is of great advantage from a commercial point of view. But the authors say this rapid method of obtaining fine plants is no easy matter, as they are very capricious in their habits. In

order to learn something of the food requirements of the Cyclamen, and the best methods of developing the genus, the authors submitted sixteen plants of *C. persicum* (pure white) to chemical analysis. They had been grown in a cold-frame in a mixture of leaf-mould and sandy-loam, and had been watered during the period of active growth with a weak solution of cow-dung manure.

The following are the results:

WEIGHT OF PLANTS, DIFFERENT ORGANS, IN GRAINS.

In Fresh State. In Dry State.	
Flowers.....	7.06.....0.75
Leaves.....	22.68.....2.25
Stalks.....	89.62.....8.00
Tubers.....	28.06.....2.62
Whole plants.....	92.42.....8.62

COMPOSITION OF THE MIXED ASHES OF THE CYCLAMEN.

	Per cent.
Silica.....	17.20
Chlorine.....	7.96
Sulphuric acid.....	7.15
Phosphoric acid.....	0.22
Oxide of iron and alumina.....	10.60
Lime.....	4.86
Magnesia.....	8.82
Potash.....	28.80
Soda.....	12.82

These figures show that the Cyclamen in regard to its chemical composition approaches very near to the terrestrial Orchids. It contains a considerable proportion of water, more than 90 per cent., and relatively to other plants but little ash or mineral matter, and not much of the element nitrogen. The analysis of the ash shows that it is particularly poor in phosphoric acid, but rich in potash, and somewhat less rich in soda. They appear to be the poorest in phosphoric acid of any plants yet examined except Ferns, and very low in lime and magnesia.

From the data thus given it appears that the Cyclamen is not very exhausting in its effects upon the soil for either nitrogen or mineral ingredients.

The cause of failure in Cyclamen culture is put down by the authors to unsuitable soils, and that there is a danger in the composts used being too rich, which would favor a too rapid formation of vegetable tissues, and hence lead to leaf-growth instead of blooms.

The question of watering the authors consider as very important, chalky waters being thought to be particularly harmful.

The general conclusions are that: 1. Under the influence of forcing manures the Cyclamen increases in total weight of plant, but the foliage is encouraged at the expense of bloom production.

2. Successful culture can only be attained by a suitable selection of soil, which should be leaf-mould with a mixture of sandy loam.

3. Should the plants look sickly, they will be benefited by being watered near the roots with a liquid manure containing a quarter of an ounce each of nitrate of soda and iron sulphate to two gallons of water.

Our figures 187 and 188 are respectively from the *Gardeners' Chronicle* and *La Semaine Horticole*.

The peach growers' greatest enemy is not the yellows, nor the borer, nor rot, nor frost, nor fungus, nor even the commission man, said a speaker before the Ohio State Society. It is the cull peach, which saps the vitality of the tree, breaks down the market and generally breaks up the grower. Cull fruit of all kinds should not only be thinned for the tree's sake, but also for the sake of the market. When a consumer buys a basket or a bushel or two of culls of any kind, his appetite for that kind of fruit is usually satisfied for the season.

Potatoes are high-priced this year, partly because after the low figures realized in '96, many farmers grew something else. The reverse also holds good and because a crop realizes well this year the wide-awake grower will likely leave others to tumble over one another to sell next season.

The Pansy as a Bedding Plant.

In order to get strong and healthy pansy plants suitable for bedding, I have found that one must aim to produce medium-sized stocky plants; small ones do not make a display at once, and large ones are not easily moved, and certainly do not give satisfaction when shipped a distance. We grow here from 20,000 to 30,000 plants for ornamentation of our station grounds between Philadelphia and Pittsburgh and on some branches as well. We have consequently various climatic conditions and a goodly variety of soil to contend with.

Sowing.

The idea is to have something pretty early in the season. While the pansy is quite hardy nothing is gained by planting your beds before the wintry frosts are gone; if the ground is likely to freeze to a crust during night, the pansies had better be in the frames until such danger is over. We have found it safe to plant in mild localities by April 1, but in our mountain regions not before April 15.

By planting time one should have good strong plants just filled with their first flowers or buds, and to get this result, the seed is sown between August 15 and September 15 in a couple of batches; this gives one a succession, which is a convenience when ready to transplant them; the seedlings can then be handled in rotation before they overgrow and get too long and thin; it is with pansies as with chrysanthemums, when they are not transplanted when ready, they lose in vitality.

Never sow the seed too thick, no matter whether in drills or broadcast, good stout plants which have had enough room to develop have more roots and are easier and quicker handled.

I have found it most practicable to sow in drills four inches apart; one can more readily weed the frame when necessary.

Transplanting.

By November the plants will be ready to transplant into cold frames; this can be done any time during that month or December. Have the frames filled with rich fibrous soil to a depth of 8 to 12 inches; most any good soil will do, but in a light soil the plants will make the thickest bunch of roots and consequently carry better when shipped; but the plants can, if necessary, quite well remain in the seed bed until the sun gets strong in February. From 3 feet 4 inches each way is suitable space for the pansies while in frames.

Winter Covering.

I have never found covering a necessity to keep the cold out, no matter how cold the weather may get; simply avoid excessive moisture, such as will gather where a light is broken. The best covering is glass; if you use that your plants are always sure to be early enough, as they will grow even in Winter, when the weather is mild. We use here, in conjunction with sash, lids made of 1/2-inch worked lumber of the same size as the sash; these lids can be used as a substitute for glass over such stuff as pansies or geraniums, and as a cover over the glass to keep the cold out of the frames or when pestered with dogs traveling over the snowbound frames at night.

Ventilation.

During cold weather no attention need be paid to ventilation; it will take a great deal of sunshine to hurt pansies growing in a low frame; later on, however, when the sun gets strong, more care is needed, and you will want to ventilate freely to keep your plants stocky. You can regulate the earliness of your plants by the ventilation; if the Winter is warm and open, you had better ventilate well to hold them back and keep them robust. If pansies are sown much earlier than the 15th of August, they will, I believe, prove too early unless no glass at all is used, and boards or such employed in place thereof.

Lifting and Packing.

When your plants are ready for planting out-of-doors and you have grown them in light soil, they can most readily be lifted by forcing a fork under

a lot of them, and lifting the whole colony together, and then divide. Always water the plants a few hours before lifting them. When we lift pansies for shipment, they are packed tightly together in boxes, root down, without separate wrapping; we find they carry best in this manner, and are readily lifted out of the boxes on arrival at the destination.

We frequently pack two layers in one box, when we do, a lid or bottom is made to fit in the box right above the top of the lower layer, where it rests on four strips nailed to the sides of the box; this compartment is then filled as the lower one was, and if care is taken that no foliage or flowers extend over top of box, both layers will come out intact and fresh. The boxes are made of a uniform size, and can be packed one on top of the other in the cars without the least injury to contents.

Planting.

The plants are then planted in such beds as are found suitable for display at various points along our lines of railroad in well-prepared soil. The distance between plants for immediate display is between 6 and 8 inches; a greater distance is advisable only where the soil is very rich, and they can have good attention.

The care after planting is of the greatest importance to insure a beautiful and tidy bed all Summer from April to October. If you plant your pansies in stiff soil, water well and keep seed pods off; you can keep your bed pretty all season, but in light or sandy soil a pansy bed will not look presentable after the beginning of July if planted early, no matter how much care is taken, I find that it does not pay to try to keep pansies alive even that long in a sandy soil and consequently we remove them sooner and plant something else in place.

Varieties.

For a show at a distance and for hardiness and lasting qualities, I can particularly recommend Goldense, Lord Beaconsfield, Bronze, and Emperor William; these four varieties have proven most excellent under all conditions, and make a good show in a bed on account of the strong colors. For choice coloring and for effect, at short range, would recommend the Bugnot, Trimardeau, Marbled, Mahogany, Faust, and most any other good variety or strain such as recommended by our seedsmen. For a good distance effect the bed must be 10 to 12 feet, not less, and plant one strong color in center and a border not less than 12 to 16 inches wide of a supplementary or contrasting color around the bed; the yellows, blues, or purples make the best borders for mixed beds.

If your plants are a trifle backward in March, apply a little blood and bone and rake it in and they will hurry up; never try to force them on bottom heat; it will not be a success.

A. E. WOHLERT.

Mushrooms in Cellar.

Will it do to grow a few mushrooms in one's cellar? I mean, is there any danger of making things unhealthy for the occupants of the house.

I see in an old edition of Falconer's work that he does not think it out of the way, but I am not inclined to go ahead without further sanction.

—Whether to have a mushroom bed in the cellar or not is simply a question of convenience and susceptibility of the olfactory nerves. Otherwise there can be no real danger and usually the mushrooms do well. Many of the market gardeners of Lancashire, England, build their houses on piles and use the cellars for mushrooms and forcing rhubarb.

Spraying.

(To E. D. James).—What to use as a spray depends upon what it is to be directed against. Thus for chewing insects, Paris green is the thing; for suckers use kerosene emulsion; for scale, whale oil, and so on.

Growing Black Walnut for Timber.

There has come to be a widespread notion that fortunes can be made in a very few years by growing Black Walnut for timber. If the idea, erroneous as it is, were to result in the extensive planting of this valuable species it would result in great ultimate good, though it is doubtful if any of the planters would live to harvest their crop. The Black Walnut is a rapid growing tree when planted under favorable conditions, but it does not develop the rich dark color that gives to the wood its peculiar value until it approaches maturity, or at an age beyond one hundred years.

I know of trees only thirty years old that are over sixty feet in height and ten inches in diameter at breast high. But the wood of these trees is sappy and light colored, showing none of the richness that makes the timber sought for furniture and finishing purposes. It is the color that gives value to the wood, and young trees cannot be sold at a price much beyond that of any other species. And yet, given a deep fresh loamy soil, such as that of river and creek "bottom" and "second bench" lands, and I doubt if a better crop could be grown in odd corners, or where land is cheap.

The nuts should be planted where the tree is to stand, shortly after they drop from the tree. It is unnecessary to hull them. They should be covered about one inch deep, and will ordinarily grow a foot high the first year. They are easily transplanted when one year old, but as a heavy tap root is formed they are difficult to reset after the first year.

For timber they should be grown among other trees that make a denser shade. These are called nurse trees, and their purpose is to prevent the walnut from branching low, and forcing its stem straight and tall. Red and Silver Maple, Russian and native Mulberry, and Box Elder are all good nurses for Black Walnut. Suppose all the trees stand 4x4 feet apart, then each walnut should be surrounded by nurse trees. This would place the walnuts at least 8x8 feet apart. I would prefer to make the entire plantation 3x3 feet, placing walnuts at 9x9 feet, this would require 537 walnut trees per acre, and a total of 4,840 trees per acre.

The rate of thinning would depend entirely upon the development, and this in turn depends on many things: soil, exposure, rain, humidity, winds, and all the conditions of a locality that can influence tree growth.

As to the number of trees that should stand on an acre at a given age, and the value of a walnut plantation at any given time, such subjects are too speculative for discussion, and any attempt at a didactic statement would be absurd.

Fashions change in woods as well as in bonnets, and because Black Walnut is a prized tree to-day, it does not of course follow that it will be so a hundred years hence.

CHARLES A. KEFFER,
Division of U. S. Dept. of Agriculture.

The World's Apple Crops.

The annual report of W. N. White & Co. (Ltd.), London, on the European and American apple crops is in part as follows:

England, with the exception of early apples in the home counties, has a very bad crop, the worst crop of winter fruit that has been known for many years.

France, in the south, is short, and there are only moderate crops in the north; cannot export many except at high prices.

Belgium.—Very poor crops. Prices at present are ruling very high throughout. Belgium will, later on, no doubt, be a buyer of American red apples.

Germany.—Very bad crops indeed. Orders are expected to be sent to England from time to time for red fruit.

Coming to your side; Nova Scotia last season exported to the United Kingdom 410,000 barrels; from information obtained from reliable sources I can only estimate the crop this year from 150,000 to 160,000 barrels, in addition to which,

I am told, the quality cannot be reckoned as good.

Canada last season shipped to the United Kingdom from the port of Montreal, 700,274 barrels; this year the crop will not exceed 200,000 barrels, of which the larger portion will be Greenings and Northern Spy; choice red fruit is likely to be scarce.

New York last season shipped us 570,000 barrels, but this year, unless fruit is brought from the far west (for which

lot of wormy and bad fruit, which came forward in November and December, whereas this season the states, unless they draw largely from the West, cannot total more than 1,000,000 barrels, certainly not so many as was sent here in 1894-95; and as there is not much fall fruit in Canada this year to spoil the market we think fair stock will realize good prices.

The Vegetable Garden.

Cauliflowers for late use can easily be grown by utilizing some of the cold frames. Prepare a bed the size of the frame intended to be used, by manuring with well decomposed dung, forking it over deeply, and on soils liable to club root add a sprinkling of fresh air slacked lime. In this bed set out, 18 inches apart each way, well established plants that have been previously transplanted. Cultivate often, water thoroughly when necessary. As soon as cold weather is at hand, set the frame in position, leaving on the sashes on cold nights and days. All the air possible should be admitted whenever the weather is congenial, by raising the sash at the rear or higher part; this should always be done when the temperature outside is over 40 degrees. In mild seasons this excellent vegetable can usually be had by this method, until Christmas, if properly attended to. For this purpose there is no better variety than a good strain of the Early Snowball.

Cultivate the Endive.—A good supply is very useful for winter. Just before hard frost, the roots should be carefully dug up with a ball of soil, and stored away in a dry, cool, airy place, and protected from frost. In November a few roots can be brought in every two weeks, and placed in gentle heat in a somewhat dark position. Under the greenhouse benches, but not in close proximity to the heating pipes, is an ideal place for them, as in such a place they will immediately commence to grow nice white leaves, which are highly appreciated for salad.

Radishes may now be sown in cold frames, they will always grow whenever the temperature is above 35 degrees. They can also be easily grown in mild hotbeds. Radishes should be sown thinly, and given all the air possible on bright days and water early in the mornings when they require it, so that the foliage may be dry when the sashes are closed in the evening.

Turnips and Beets, if old enough, should be pulled up on dry days, and stored away in a cool pit dug in the ground, or a better plan is to sink a few barrels in well drained ground, into these put in such vegetables, and they will keep splendidly. They should be covered up with some loose material such as straw or salt hay, which allows ventilation to enter. Both these vegetables will continue to grow for some time yet, but, if at this date they have grown to normal size, it is much better to pull them and store away, as if left growing the turnips will become spongy and ultimately rot, and the beets will only be growing more tough with advanced age, and this class of vegetables is not needed anywhere.

As Crops Mature clear them off the ground, it is then an easy matter to prevent crab grass and all other obnoxious weeds from growing to seed, by hoeing the cleared ground and clearing away all weeds. If one is not careful at this season with the seeding weeds, the ground will become infested with weeds for all time. After the potatoes are dug, do not abandon the patch to become, as we so frequently see it, overgrown with tall weeds of every description, if these cannot be kept down, plow them under before they seed, and they will add nourishment to the soil, instead of robbing the soil as would be done if allowed to grow.

W. M. EDWARDS, Conn.

Sylvester Newhall, a pioneer nurseryman and prominent citizen, died at San José, Cal., on August 27.



FIG. 187.—NEW TYPE OF CYCLAMEN, CRESTED.
(See page 661.)

there will be heavy railway charges), supplies cannot be reckoned over 200,000 barrels; reports from this district also speak of a shortage in red fruit.

From Boston last season we had something like 1,000,000 barrels, but fear the quantity this year will be only one-quarter that number.

Seeing that there is likely to be a shortage of red fruit from Canada and New York, we think this should leave a good



FIG. 188.—NEW TYPE OF CYCLAMEN, DOUBLE.
(See page 661.)

opening for best reds from Massachusetts and Maine.

Now, looking at the European prospects generally, we say, and say it without hesitation, that there is a greater opening for American fruit this season than last. Last season the combined ports of America and Canada shipped 2,919,846 barrels to Europe, all of which made good prices with the exception of a

Diseases of Shade and Ornamental Trees.*

By B. T. GALLOWAY AND ALBERT F. WOODS.

(Continued from page 660.)

Cracks occur in a great variety of trees during very cold spells, especially when the fall of temperature is very sudden. It is a well-known fact that trees shrink under the influence of intense cold in the same way that felled timber does in drying. This shrinkage is due to the withdrawal of water from the cell walls, in the first case by freezing, and in the second by evaporation. The extent of shrinkage is dependent upon the amount of water withdrawn. The cell walls of the outer new wood usually contain more water than do the walls of the heartwood. The outer wood will shrink in drying more than will the inner wood and will therefore split. The chance of splitting is greater when the outer wood layers freeze before the inner ones, as they do during a sudden fall of temperature. This is Hartig's explanation of frost cracks and the one which has the most experimental evidence in its favor. Other explanations have been given, but it will be unnecessary to discuss them here. The cracks usually close up again during warm weather and ultimately heal over, doing little damage to the trees from the standpoint of this article.

Preventive measures.—The injuries to the trunks and branches by alternate freezing and thawing and the diseases resulting from them may be prevented by shading the parts exposed to the sun by means of a board set up on the south side of the tree, or, as is sometimes done, by screening the parts with straw, burlap, building paper, or other material which may be easily fastened to the trunk and branches. When once injuries of this kind have been produced, the dead areas should be cut out down to the healthy wood and the wound thus made covered with coal tar, varnish, or "hard oil."

INJURIOUS GASES IN THE AIR.

In the vicinity of manufacturing establishments and often in cities and villages where large quantities of bituminous coal are used, vegetation, especially trees and other woody plants, are frequently seriously injured by the fumes which are thrown off into the atmosphere. Smelting works, fertilizing manufactories, brick kilns where soft coal is used, and similar establishments are the principal agencies involved. Frequently the injuries may be limited to a small area immediately adjacent to the factory or other place from which the fumes are given off. Again, the effects of gases may be seen for several miles, usually extending farthest in the direction of the prevailing winds. The effects of such gases on the trees are various, and it is often difficult to distinguish the injuries produced in this way from those resulting from purely climatic causes. From the evidence at hand it appears that the chief injury in such cases is due to sulphurous and hydrochloric acids, acting singly or in combination. The effects of these poisons are shown by the leaves turning reddish brown in spots or along the edges and eventually drying up entirely. The injuries are cumulative, certain branches of the trees being killed each year, while the others may make a feeble, struggling growth, owing to the cutting off of the food supply through the injuries to the leaves.

Preventive measures.—The question of remedying or preventing such evils is an important one and may often involve complicated legal questions. It may happen that the establishment of a factory in a certain neighborhood will result in much injury to farmers in the immediate vicinity by destroying their trees and crops. All the evidence goes to show that little can be done towards mitigating the trouble in the way of special apparatus for connecting the gases, high chimneys, etc. The question therefore resolves itself into one respecting the rights of the farmer on the one hand and the factory owners on the other. These

matters, however, are beyond the province of this article.

FUNGUS DISEASES.

All portions of the tree are subject to the attacks of fungi—minute parasitic plants, whose vegetative parts, known as mycelium, penetrate the tissues and by their action on them cause the various forms of blight, rot, etc. The fungi are rapidly propagated by means of spores and also in other ways, which do not concern us here. There is a very close relation between these organisms and the various other factors, such as the condition of the air, soil, etc., already discussed. In other words, the growth and development of the fungus parasites are intimately related to the condition of the host, which is in turn, as we have already seen, materially affected by the weather and by the soil. There are many fungi which under ordinary conditions could never injure a tree, and yet if by some chance a favorable opportunity is offered they may prove quite destructive. For example, a limb may be blown or cut off, hail may make a bruise, or in other ways wounds may be produced and in these the spores of certain fungi may lodge and germinate and start decay that could not have been produced in any other way. Trees may succumb to the attacks of fungi only in certain stages of growth. Thus, young conifers are seldom affected by the disease known as canker, because any wound made in the trunk or branches is quickly covered with a coating of resin which prevents the spores of the canker fungus from developing. When the trees get to be quite old, however, the wounds are not covered with resin and the spores of the canker fungus fall in these places, germinate, and spread into the surrounding tissue, and the tree is killed. On the other hand, the young, tender, rapidly growing tissues are more susceptible to the attacks of certain fungi than those older and better matured. With these introductory remarks, we may now pass to some of the diseases in detail.

ROOT DISEASES.

In considering any case where fungi are found attacking the roots the importance of the previous effects of soil conditions must not be overlooked. An injury or a weakened condition produced by any of the means already pointed out may permit the entrance and development of some disease-producing fungus which might not otherwise gain entrance or find suitable conditions for development. On the other hand, there are fungi, which, while they are better able to develop under these conditions, are nevertheless able to gain entrance into and kill what appear to be perfectly healthy roots.

Southern Root Rot.—This disease, which is produced by a fungus known as *Ozonium auricolum*, attacks a great variety of trees and other plants, including the elm, basswood, oak, cottonwood, mesquite, china tree, mulberry, etc. It also attacks cotton and the sweet potato.—In fact, no plant appears to escape except the plum and some closely allied groups.

The disease first becomes apparent by the sudden wilting of the leaves, and soon the death of the tree follows. Examination of the tap-root and many of the other roots shows them to be dead and partly rotten, and thus unable to furnish the top with water or food. Trees growing in well-drained and well aerated soils are seldom attacked, while those in soils very retentive of moisture are the first to succumb. The disease is confined largely to the Southern and Southwestern states, and is especially bad in wet seasons and where excessive amounts of water are used in irrigation. If the roots are examined closely, a whitish or usually yellowish-brown growth of loosely interwoven, hair-like threads will be seen on the surface and in the decaying tissues. These are not confined to decaying parts, but attack apparently healthy roots. Once inside, the fungus spreads rapidly through the cortex and wood, killing the cells and causing their decay. Only the mycelium, or plant body, is known, and this is reproduced from branches or pieces which may be broken or washed off. It has been observed growing in decaying vegetable material taken from the side of

an irrigating ditch which furnished water for pears, cottonwood, alfalfa, and other plants dying from the disease. It is probable, therefore, that it may sometimes be distributed in this way. It spreads along roots and decaying material from plant to plant through the soil, and its distribution may also be hastened by tools used in cultivation.

(To be continued.)

Sutton's Peachblow Tomato and Others.

To the Editor of American Gardening.

In your issue of August 28, Mr. Anderson gives us some valuable information in regard to his tests with tomatoes under glass, and it may be of interest to the readers of AMERICAN GARDENING to know how some of the English varieties behave in this country grown outdoors.

At the head of the list we would place Sutton's Peachblow. This is without doubt the finest tomato we have ever seen or grown, the fruits are of large size and of fine quality, and are borne in long clusters with from four to eight fruits to a cluster. It is a heavy cropper and no doubt will become a standard variety when better known. It is also an early tomato coming in as it did nine days after Sutton's First of All, and twelve days ahead of Perfection (American).

Sutton's Best of All, with us, comes next to Peachblow. It is a fine tomato, a heavy cropper and of good flavor, and is equal to any American variety we have ever grown, one very good point about this variety is that every fruit we have gathered has been perfect, and the same can be said of the Peachblow.

Sutton's Earliest of All. The fruit of this variety is of medium size but sometimes not very smooth, but its earliness commends it as we used it nine days ahead of any other variety we had. It is a good cropper and flavor also good.

Sutton's Magnum Bonum, like the Peachblow comes in long clusters; the fruit is of large size and of good flavor; a very rank grower and ripens the same time as Peachblow; a very heavy cropper.

Sutton's Dessert is a small red tomato of fine quality. The fruit is produced in long clusters and when grown as a pot plant it has a novel appearance. I grew some of it last winter and would advise anyone who forces tomatoes to try a few of it, as it sets so freely and makes such fine show that no one can help liking it. Outside it does just as well.

Sutton's Sunbeam is the best yellow we have ever tried; we like it better than Prince of Wales or Golden Nugget, the fruit is in very large clusters about the size of a hen's egg; it is very ornamental and of fine quality. It is also a heavy cropper.

These tomatoes spoken of are all All; we have others, but the five varieties mentioned are the ones which have done the best in outdoor culture, and I think it would be a good plan if some of our American seed firms would catalogue a few English vegetables of the various kinds. Some of them are well adapted to our climate, and in fact Sutton's Favorite lettuce with us this year was the finest lettuce we had in the garden. Now it is very unhandy for some of us who only want a few seeds from "the other side" to be sending away over there for them. Never mind though the seeds be English, German, or French, if they are any better than or outclass any of our American sorts, by all means let us have them.

DAVID FRASER, N. J.

San Jose Scale.

Experiments with sprays against the San Jose scale have been carried on at the New Jersey State Experiment Station. Dr. J. B. Smith reports that we have been all wrong hitherto, and instead of winter applications, summer work will, it is believed, prove most satisfactory, and kerosene, undiluted, most effective.

Spray thoroughly in September, all infested bearing apple, pear, plum, and peach trees, with undiluted kerosene, during the middle of a clear, sunny day.

*In Yearbook of the U. S. Department of Agriculture 1896.

The Fruit Garden.

Plums.—Look over the trees for black-knot, and if any be found cut out and burn.

Plum Juicy.—When visiting the nurseries of John Lewis Childs at Floral Park, Long Island, in the early part of August, my attention was attracted to a tree, apparently a weeping variety; on closer inspection it proved to be the plum Juicy, one of Burbank's productions, from crosses with some of the Japanese varieties. The long slender branches were literally covered with light-green fruit and weighted down so that this tree looked like an overgrown bush. On August 31 the fruit was fairly ripe and dropping from the tree. Mr. Miller, the superintendent, gave me some of the fruit. I then was not favorably impressed, except by color. The box containing them was placed with the cover off, in an ordinary light closet and the contents have been gradually used, so that what were left September 12 looked like imitation wax plums of a bright scarlet color with minute specks of light yellow (the flesh color) showing through the rather tough thin transparent skin, which skin no doubt accounts for the long keeping quality of the fruits, which is then of a surprising honey sweetness. These plums were 1½ inches in diameter. What the size would have been had some of the immense crop been removed, can only be conjectured but I am willing to buy and find out later. Another point is that, anyone growing it, will not lose the crop by Curculio.

Pruning.—Now is a good time to note where the branches are so thick that the sunlight does not reach all parts of the tree. The same tree without foliage would not appear to need thinning. Paint all cuts.

Order Any Apple or Pear trees you need, and prepare good large places for them. How many poor starved stuck-in-a-post-hole trees one can see driving around in the country, and all because they are only apples or pear trees that will grow (or die) anywhere.

Plums or Peaches, in fact all stone fruits usually start better if planted in the spring. That fact need not prevent the places being prepared for them this fall, when there is more time to do it properly, and don't forget the manure, if it is good get some of it as near the roots as possible without actually letting it touch.

Fruits in Season.—Crawford's Late Peach, Schuyler gage, and Coe's Golden Drop plum, with plenty of grapes, with Seckel and Sheldon pears will supply the table until October. By the way the German prunes are fair eating by the first of the month. J. HOLLOWAY, L. I.

Adaptation of Varieties.

The question often arises, "Are certain varieties of fruits adapted to certain soils and conditions, or not?" This is an age of specialties, and I believe the grower who finds out the varieties which give him individually the best results, will, in the long run, be the most successful.

We have varieties which succeed almost anywhere and everywhere. The Concord grape, Ben Davis apple, Bartlett pear, and Crescent strawberry being good examples, but does it always pay to plant these varieties? Every other fellow can do the same. But if we find some especial kind suited to our situation and grow it largely, it pays far better. The Elberta peach made big money when first introduced and really gave Georgia its peach boom. The Albemarle Pippin apple has done the same thing for portions of Virginia. Never have I seen finer strawberries than the Parker Earle on J. H. Hale's grounds. Still, with me this variety is worthless. The same may be said of Beder Wood. I believe the grower should endeavor to select those kinds that are best adapted to his own particular wants and grow them. Such varieties may be found.

In some portions of Michigan extra early peaches pay. They do not rot there, but to plant them in Delaware

would be utter folly. Likewise it is next to impossible to raise plums of the *Prunus domestica* type here. At the same time those of the native and Japanese types are great successes. I know of men who grow fine crops of Reeves' Favorite peach, and get big money out of them, but on an adjoining farm the same variety may be an utter failure.

The Lady Thompson strawberry is largely planted in portions of North Carolina, while with us it is of little value. Instances come up every day to prove the truth of what I have said.

I believe in the near future the progressive fruit grower will test a number of kinds and retain that which suits him best. Perhaps he will not stop at this, but originate his own varieties. In this he will be guided by the markets he intends to supply, and by other demands. As an instance, examine local nurserymen's catalogues and you nearly always find some local variety highly praised up. Some grower has made a success of it.

There are many points about fruit growing which are as yet but little understood, and I believe this adaptation of certain varieties to the wants of some specialist is one of the developments of the near future. CHAS. WRIGHT, Del.

Chrysanthemums.

Watering is the rock on which the boat of many a good man's hopes gets wrecked. Some people have an idea that a Chrysanthemum cannot have too much water once it is well established. The result of such a policy is always seen in a long thin stem and pale sickly foliage. Season must be largely considered and while plants take a good deal of water during hot summer we are now at a cooler period and shorter days. Pot plants are now full of roots and must needs be kept well supplied but the benches should not be allowed to get into a muddy condition.

When watering do the job well and then let the bench get into a moderately dry condition before repeating. The roots work best when the soil is neither wet nor dry and my experience has been that the old roots rot as quickly as young ones are made when they have nothing but a wet pasty mass to work in. When this is the case it is certain that the bud cannot swell so well as when every root is sound and doing its share to help push a good thing along.

Where mulching with cow manure has been carried on it sometimes bakes into a hard mass and the water cannot pass through it when the soil beneath may be almost dust dry. Again when plants are in boxes, as many of ours are, the ends sometimes come apart and what might have been meant for a good watering has most of it run outside. All these things are insignificant in themselves, but they must be guarded against for "mony a mickle mak a muckle."

Specimens should now be pretty well into shape and no more tying should be done than can be helped. The less tying they get from now on the more natural will they look when exhibition time comes.

Tidiness.—Keep all dead leaves cleared away; refuse from the manure barrels and rubbish of every description also. The atmosphere will be sweeter and it is better for the plants, and all better for the eye. C. TORRY, N. J.

Methods of grafting apples have been investigated at the Kansas station and the following conclusions are reached by Profs. Mason and Jones: Whole root-grafted apple trees are of no greater value than trees from clons grafted on piece roots from two and a half to five inches in length. Grafting above the crown of the seedling has no particular merit over grafting below the crown. While roots or very long pieces may have some slight advantage, but these do not compensate for the extra labor and expense in securing them. The greatest uniformity in growth is obtained by the use of grafts that secure an earlier rooting of the clon.

Injury to Rhododendron Leaves.

Would you be kind enough to advise the best method for protecting leaves of Rhododendron from enemies that eat them? I tried powdered hellebore, but find I have injured one variety.—VOLNEY ROGERS.

—We have never been fortunate enough to find any insects feeding on the leaves of Rhododendrons, so cannot answer V. R.'s query, except in the following manner: A species of "lace-bug" (*Tingitidae*) feeds upon the leaves of Mountain Laurel (*Kalmia*). It does not devour the tissue of the leaf, simply sucks the juices out, the same as plant lice do. For these pests either kerosene emulsion, Fir Tree Oil, Antipest, Cedar Oil, or some such thing should be used. On Long Island Rhododendrons are troubled with a spot disease. This disease causes the leaf to turn brown in spots. In time these spots fall away, hence the leaves appear to be eaten full of holes. Thorough spraying with Bordeaux mixture will prevent this trouble, and, if a little Paris green (one-fifth of an ounce to every barrel of the mixture) is added to the Bordeaux mixture no leaf eating insect will trouble the plants.—F. A. S.

Mealy Bug in the Garden.

The leaves of Marigolds all turn nearly white and then die. I send you some of the leaves and also stems of Coleus; these also die and seem to be covered with a number of white bugs. Will you please to tell me what to do.—G. O.

—G. O.'s Marigolds are infested with the common mealy-bug (*Dactylopius destructor*). The peculiar cottony masses noticed on the leaves are the cocoons of the males of the mealy-bug; within these cocoons the males change from a wingless to a winged insect. The mealy-bug is one of the worst insects with which forcing-house men have to contend. Thorough spraying with kerosene emulsion, or some of the oils advertised for aphides ought to control the mealy-bug on out-of-door plants.

Exhausted Peach Tree.

What is the best treatment for a peach tree about six years old which for two years past has been bearing an abundance of large beautiful peaches of fine flavor, but this year though this is an abundance of fruits they are very small and bitter.—H. I.

—Evidently, the tree has partially exhausted itself by excessive fruiting, and what it now needs is liberal feeding. Work some good stable manure in and in addition at some time when growth is active use a little potash in the form of wood ashes.

Propagating Altheas.

H. I. can increase the stock of her particular Althea by budding. To do this a young plant two or three years old is needed. The stock may be raised from any kind by sowing the seed, or a chance seedling may be found somewhere, or any nurseryman can supply it at a very low cost.

Moles in Lawns.

A reader asks how he can rid his lawn of moles. A persistent use of traps is the only method that we know of that is effectual.

Violets.

"Subscriber," Richmond, Va., is informed that no notice can be taken of his communication unless full name and address are furnished.

One of the most essential points in successful orcharding is the proper selection of varieties. That means not only varieties which in themselves are good, but which are also adapted to the locality.

The liabilities of the Highlands Nursery, Kawana, North Carolina, having been satisfied in full, the entire property has been re-deeded to Mr. Harlan P. Kelsey, the proprietor, by his late assignee. Mr. Kelsey has opened an office at 1128 Tremont Building, Boston.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 15, 1894.

PUBLISHED BY
A. T. DELAMARE PTG. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 3154 Cortlandt. P. O. Box 1697.
REGISTERED CABLE ADDRESS
Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious) Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per agate line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

WANTED.

Copies of AMERICAN GARDENING for March 6, 1897. Address the Publishers.

The Village Square.

As previously announced, we have had prepared a model plan for The Village Square. As considerable thought has been put into it, and in view of its general value, we have decided to present the plan as a special supplement with the next issue of AMERICAN GARDENING.

Our Two Native

Hazel Nuts.

THE common American hazel nut (*Corylus Americana*) is more or less abundant everywhere in the Eastern states, growing along the borders of forests and old fields, and generally in fence corners and against stone walls forming dense thickets, the result of its habit of throwing up an immense number of suckers from the subterranean stems and roots. The nuts have a rather hard shell, and while the kernel is sweet the small size is so much against them that they are not considered of much value except as food for squirrels. The husk in this species is composed of two smooth, leaf-like bractlets with fringed or deeply lacerated margins, extending beyond the end of the nut as in the European filbert. A less common native species is known as the beaked hazel (*Corylus rostrata*) found

mainly in the north, extending sparingly southward along the mountains. In this hazel the plants do not multiply by suckers as in the former, but from the scattered nuts there growing up into a single stem at first, but later sprouts usually push out from the base until we eventually have a many-stemmed, dense, erect bush four to six feet high with slender straight twigs. The nuts are small, broadly ovate with a blunt point. They are usually produced in pairs, the husk united at the base and covered with short nettle-like hairs, and prolonged into a contracted cylindrical tube an inch or an inch and a half beyond the nut. The husk adheres rather firmly to the nut, rarely opening to allow the nut to fall out while attached to the plant, and it is somewhat difficult to extract them even later, especially if ones fingers are at all sensitive to the punctures of the irritating hairs. This beaked hazel is found wild from Maine to the Pacific coast, and in "the typical form of the Atlantic states occurs in Washington Territory and Rocky Mountains." (Botany of California, vol. 11, p. 101.) But in the work quoted the bushes are said to grow from three to

as original matter the best articles and reports in them, and this without giving any credit whatever. It may be economical to get other editors to do your work for you, but it is not straightforward. Readers of AMERICAN GARDENING can congratulate themselves on very often having first pull on some interesting topic which during subsequent weeks reappears in the pages of some other publication. If the papers in question desire further identification we will gladly comply with the request.

The Chrysanthemum Rust.

Hitherto growers of Chrysanthemums in this country have fortunately not been bothered to any great extent with the disease known as rust, and which manifests itself by the eruption of small circular dots of red-brown on the underside of the foliage. Lately our attention has been called to a bad outbreak of the trouble which is comparatively, a new one in America, and in an early issue we hope to say more concerning it.

Premium Notice.

All the Henry Strawberry Plant Premiums to date were mailed on Monday

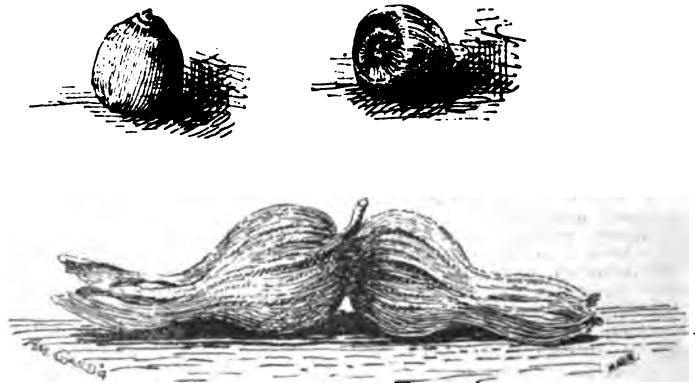


FIG. 189.—THE BEAKED HAZEL.

six feet high in the Rocky Mountains, but, said the late A. S. Fuller, residents of those regions with whom he had corresponded for years, assured him that this beaked-hazel often assumes the tree form, growing to a height of 25 feet or more, with a stem five or six inches in diameter. In proof of this assertion Mr. J. J. Harnden, of Marion Co., Ore., forwarded him a section of the stem of one of these trees five inches in diameter. This specimen was obtained in the mountains of northern Oregon and the correspondent assured him that it is not an exceptionally large one. Shortly before his decease, Mr. Fuller received a box of the nuts from Mr. Harnden; these differ somewhat from the Eastern type in their deeply corrugated husk and rather more open, and the deeper cut end of the tube as shown in the accompanying illustration. The nuts also have a decidedly and regularly depressed base at the hilum or scar which is surrounded by an evenly-raised border. Query? Would it not be well for some of our nurserymen to introduce this free form of beaked hazel, although it is probably nothing more than a local variety of the species.

To Certain

Contemporaries.

ONE way of making up the reading matter of a paper is to sit at a desk, read through contemporary publications, cut out and use

last, September 20, in A1 condition, from the local post office of the district in which they were grown. The total weight of plants mailed exceeded, according to the postmaster, the largest and heaviest mail ever previously despatched from that office. Amongst other points to which plants were shipped was Nova Scotia, British Columbia, and many of the far Western and Southern states.

Treatment of Plants on Receipt.

Enquiries from some readers necessitate the advice to set out the plants at once on receipt, wetting them if the sun be very hot, and shading them in the middle of the day. There is no necessity whatever for anyone to put the plants into a cellar for a day or two before planting out.

The Henry Strawberry is Controlled exclusively by American Gardening.

Mr. Jerolaman wishes it to be distinctly understood that he is not a nurseryman, but is a fruit grower; it is not his business to sell plants. Hitherto he has disposed of a few plants in order to have the variety generally tested. For the future, however, the Henry strawberry plants will be distributed only as premiums through AMERICAN GARDENING.

Plants will be delivered from now onward through the month of October, or until the ground freezes which in the place where the plants are growing is not until December. Mr. Jerolaman always sets out plants for himself until the middle of November, and in some seasons even up to the end of that month.

BIG BERRIES FOR ALL.

Being the Cultural Methods of Henry Jerolaman, the N. J. Strawberry King, Preceded by an Autobiography.

Continued from page 651.

I always set the plants in raw ground; that is, in land that has been in cultivation for one or more years, land that has grown a good crop of potatoes is best, and if the potatoes have been well cultivated there will be few weeds on such land. Soon as potatoes are dug, about September 1 (before the weed seeds ripen), I plow in a good coat of well-rotted barnyard or stable manure, not too heavy a coat, or you will make your land too light and thus burn the strawberry roots.

If your land is very rich there need not be any manure plowed in (at the time plants are set), but when plants are set and start to grow then cover each side of row close up to the plants, but not so as to cover them, with a good heavy coat of well-rotted manure extending one foot on each side of the row. If well-rotted there will not be any weeds to bother you, and besides, it will protect the plants from that constant freezing and thawing in the middle of days in winter, thus throwing them out of ground.

In field culture set the plants always in rows not less than 2 feet 10 inches apart, plants 9 to 10 inches apart in the rows, and as soon as weeds start, cultivate with one-horse harrow tooth cultivator so as not to cover the leaves of plants with the soil.

In garden culture you may set the plants somewhat closer if cramped for room, say, rows 2 feet 6 inches apart, plants in the rows from 6 to 8 inches apart.

Now we have our plants properly set; what I mean by being properly set is, that the plants must not be set too deeply, so as to cover the center or crown, nor yet set too shallow; the crown must be set just level with the earth; if too shallow it will dry up and die unless very wet; if set too deep, it will not throw out fruit stems, but long slender leaves will be all you will ever have on the plant. Many wonder why they have fine plants and no fruit.

In getting the ground ready for setting plants we must always plow the land twice (as our ground is clay bottom and becomes very hard and lumpy in dry weather). At the last plowing we do not allow the horse to walk on the plowed land or the man either, but they go in the furrow and after every four or five furrows, rake smooth with an iron-tooth garden rake; standing in the furrow we can easily reach the four or five furrows without stepping on the plowed part. When the bed is ready, we use a common ball of white cotton cord or grocer's twine, costing about 5 cents per ball, stretch our line tight as possible, using a measuring stick at each end of row. Some of our rows are 300 feet or more in length, and if line does not touch land in the center we pin it down by putting two sticks across it where too high; then we set just as close to the line as we can without disturbing it. You will be surprised to see how straight the rows are by this means. If land is stony we use a common garden trowel, sticking it down first, then opening out the cavity thus made, by the hand; taking plant from the plant box with the other hand, and shaking out the roots set it in the cavity made by the other hand or trowel, until the crown of plant is level with the land; then, removing my hand or trowel from the cavity, I press the soil on other side of the plant with both hands. It is all done in a moment, in much less time than it takes to tell, and I can set out with ease 2,000 plants in less than one day (ten hours) by having some one to take up the plants and carry them to the setting bed for me.

If set as stated, the plants are properly set and ready to be covered with salt hay as soon as ground freezes. See that your plants are hoed and cleaned from all weeds and grass before the ground does freeze; this is about December 1st with

me. I cover the plants just deep enough with salt hay, or any other kind of mulch that is free from seeds, so that you cannot see them through the hay—one inch is deep enough, and there is also at least six inches on each side of the plant. I cover nearly the whole surface as I can get plenty of salt hay here cheap, 30 cents per 100 pounds, delivered; but please remember that you must not ever plant too deeply, or you will smother the plants, rot the leaves, and give protection to field mice to work and burrow among the plants, thus almost destroying your beds. The only necessity for covering the plants at all is that my land will freeze and thaw during warm spells in winter, thus throwing or loosing the roots of plants from the soil, and that the only necessity for covering is to have it just enough to keep the midday sun from thawing the earth around the plants. If the land does not heave or freeze and thaw then I would not advise any cover at all.

As soon as warm weather in spring opens or grass starts to grow (here it is last week in March or not later than April 5), I remove all covering, stack it, and if any weeds or grass seeds start, I cultivate or hoe my plants, then soon as the plants bloom, or just before the last of April or not later than May 5, I put back the mulch between the rows just as close up to the plants as I can without covering the leaves or fruit stems; the center or path between the rows is covered at least two inches; this acts for a treble purpose—keeps weeds down, ground moist, and fruit free from sand or dirt during rain-storms. I may add one more purpose served and in that one lies nearly all our success;—the Bible tells us that Sampson's great success or strength over others was in his hair; ours over all other growers of strawberries in the United States is just as simple as that, and I will state it did not get out through my wife, but by certain intelligent men who came here from all parts or from almost every state in the union during strawberry season (June), to see the strawberries growing. They would ask me certain questions. I would nearly always evade the point by joking or starting on some other subject. Reader, I do not wish you to think that I would prevaricate for the price of a little cherry tree; but for a large amount or something great, like other men, I honestly believe Henry Jerolaman could not trust himself. But I was well aware that if the secret were generally known, it was good-bye to Henry Jerolaman getting any more high prices for his strawberries in New York City. The secret of our success, as I call it, has been generally known about here for the past ten years or more, and that is one of the principal reasons why this section of New Jersey is known in every state for its strawberries. I first noticed it was getting beyond us in 1896, and last season this 1897, I noticed that fully one-half or more of the Southern strawberry growers had, as the boys say, "caught on," and are sending to the New York market just as clean and fine strawberries as we do. But we still hold the fort by reason of our position, being so near the great market of the world. Our berries being carted direct by wagon to the city do not get bruised, and are in much more solid condition than those from the South. That is the principal reason that I advised AMERICAN GARDENING when its representatives called here to see strawberries growing and the plants, to publish something useful to all the people, as there is not a town (unless it be very, very small) in the whole United States that cannot support or pay one or two men to grow strawberries for it.

I have given you my mode of culture for the whole year, and if you follow it, that is set out plants in clean rich soil, keep clean, mulch in winter if the ground heaves, by action of frost, mulch between rows in spring, pick, eat, or sell your

fruit, that is all there is in strawberry culture; you cannot fail in strawberry culture unless you have or get poor varieties of plants. Simple is it not, and plain, all summed up in less than three lines?

Let us repeat and see if we cannot get it in two lines: Rich soil, keep free from weeds by hoeing, protect in winter, mulch in spring.

Now for our secret just as plain and simple, only one word—gloss; this can only be accomplished by mulching, and the best effect I ever saw was by using clean salt hay and freshly mown lawn grass, using the grass just as soon as it had wilted and before it became too dry like hay. The only object in letting it wilt is that we can get it between rows thick enough, and by lifting fruit stems gently so as not to break them, and pushing the wilted lawn grass under the stems, we had strawberries when ripe, to look just as if they had been varnished.

If the readers of AMERICAN GARDENING wish me to state just what effect this had upon the price of the first load of large strawberries ever sent to New York City up to that time, 1872, (only 450 quarts 10 crates, 45 quarts each), I will state it in a future issue and state price received, that is, if readers notify the Editor.

In a future issue I will state just how I take care of all our strawberry beds, and how long we keep each bed in bearing, and, also, if desired, will state what it costs to grow a first-class crop of strawberries on my place. In the foregoing it will be noticed I only give my method and am well aware that there are thousands of cultivators of the strawberry, and that many of them have grown strawberries perhaps before I was born, and that all persons have methods of their own. It is human nature for a man to think that his method is the best one; such an one I neither intend nor attempt to instruct, but I write this for the benefit of those that have never set out a plant or grown strawberries, and if I can benefit any one, I shall feel proud of it, and consider it as part pay for any trouble that I have taken.

I would like to say in regard to mulching and its effect on price of strawberries, that I honestly believe that the growers here are the first men that ever mulched for cleanliness in field culture on a large scale. It may have been done in the garden, but I have never heard of it. As long as I can remember I have always seen and have eaten strawberries covered with sand or dirt, and they still come to market in that condition and that is one reason why people do not like strawberries, or soon get tired of them. I saw thousands of quarts in the New York and Newark markets last June, fine berries covered with sand and dirt, sent up by Southern growers, and I can safely say, by some other nearer-by growers, for the people to eat. They did not sell for enough to pay for picking. But people are getting educated and will not eat berries covered with white or black sand, besides sand will not digest, not even in a chicken, and after eating sandy strawberries, we generally have a sandy feeling, and in a day or so do not like strawberries.

To this mode of strawberry culture I strongly object, as I think it very much injures the trade, but as I have stated, almost every cultivator of the soil thinks his or her mode the best—I have never yet seen a lunatic but what honestly believed the other fellow was certainly crazy! This assertion is made to turn either way, and if I am the lunatic I want the other fellow to mulch his strawberries so that the person who buys his strawberries will not buy and eat his sand, as it is impossible to wash sand clean from the berries and at each rain storm it is beaten onto them.

The Carman Peach, says the National Stockman and Farmer, merits the attention of all who are interested in choice peaches. It lacks a few days of being as early as Alexander, but is early enough, ripening about the time of Early Rivers, surpassing it in size while fully equal to it in quality and being free from rot. In addition the tree is thrifty, healthy, and a good bearer.

W. & D's.

CELEBRATED SURE CROP.

MUSHROOM SPAWN.

8 LBS. FOR \$1.00.

Lilium Maritima, Roman Hyacinths, Freesias,
Paper White Narcissus, Callas,
Etc., Etc.

Special PRICES on application.

WEEBER & DON,

Seed Merchants and Growers.

114 Chambers St., N. Y. CITY.

Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and
dealers in Cut Flowers

50 West 30th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Com-
mission. Best market prices guaranteed.

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.If you want to know about them send
10 cts. for Mrs. Theodosia B. Shepherd's**New Catalogue of Rare and Beautiful
Flowers.**Many New Begonias, New Cosmos,
Rare Oenothera, etc., not offered by others.**Ventura-by-the-Sea, - California.**
Mention American Gardening when you write.

...GREAT...

Horticultural Exposition

FLOWERS, FRUITS, VEGETABLES.

AMERICAN INSTITUTE FAIR

Madison Square Garden, New York.

SEPT. 27th TO OCT. 23d.

\$5000 in Cash Prizes, also Medals, Cups,
Diplomas and Certificates.

For particulars apply to

DR. F. M. HEXAMER,

Madison Square Garden, New York.

Mention American Gardening when you write.

PRICE LIST FOR

**Exhibition
Stationery**

1000 Entry Forms -	\$2.75
Two Exhibitor's Books - . . .	2.00
Two Glass Books -	2.50
Six Judge's Books -	3.00
500 Entry Cards -	3.50
500 Pastors (assorted) - . . .	1.00

Total - . . . \$14.75Secretaries of Horticultural, Agricultural,
or any other form of competitive show, are
invited to write us for full particulars.It is freely conceded that the system we
have adopted saves time, temper, trouble,
worry and expense.The clerical work of every exhibition, large
or small, should be run on business lines, and
you will find this system the best, the easiest,
least expensive, and most satisfactory. Ad-
dress correspondence**A. T. DE LA MARE PTG. & PUB. CO. Ltd.**

P. O. Box 1607, New York.

PRIVATE GARDENERS.**Appointments and Doings.**Gardeners and others knowing of recent
appointments and movings are requested to
forward particulars of the same for publica-
tion in this column. No charge is made.Joseph Gibson, for many years gardener
for the late Gov. E. D. Morgan, and more
recently for Commodore E. D. Morgan at
"Beacon Rock," Newport, died on Mon-
day, September 18, from a ruptured blood
vessel. He had been out driving and
when a sudden rain came up his compan-
ion raised his umbrella, which frightened
the horse, and in gaining control of him
Mr. Gibson received his death strain,
barely arriving at the estate of which he
had the care and alighting from the
wagon when he expired.The ticket with the regular nomina-
tion of officers and standing committees
of the Massachusetts Horticultural So-
ciety for 1898 has been published. The
election will occur on Saturday, October
2d. Patrick Norton succeeds John G.
Barker as chairman of the committee on
gardens. With this exception there will
probably be no change in the officers this
year.On September 15 a party of about 20
horticulturists went to Morristown, Pa.
on the invitation of Hugh Hughes, gar-
dener at the State Hospital for Insane,
and spent a very pleasant day looking
over that immense institution. Mr.
Hughes deserves great credit for the ex-
cellent manner in which the grounds are
kept. The principal bedding is in front of
the administration building, the first
thing to catch the eye being an immense
bed with Ricinus in the center, edged with
Salvia splendens; in two large tropical
beds a new bedding plant was noticed.
Cardoons were used to fill up spaces, and
had an excellent effect. Coleus, Ageratum,
etc., have all done very well here this
season.The horticultural jury for the Nashville,
Tenn., Centennial exhibition meets on
September 28. It is composed as follows:
P. J. Berckmans, Augusta, Ga.; J. H.
Small, Washington, D. C.; and William
Falconer, Pittsburgh, Pa.The southside parks of Pittsburgh, Pa.,
three widely separated areas, have lately
been placed under the superintendence of
William Falconer, of Schenley Park.**Fruit at the Delaware State Fair.**The Delaware State Fair was held at
Dover. While the display of fruit and
vegetables was fine, nothing especially
new was presented except a new white
peach of the Chinese type exhibited by W.
T. Case of Felton, and some chestnuts ex-
hibited by J. W. Killen of the same place.
The peach is somewhat similar to the
Chinese Free, though more highly colored.
Mr. Killen made a very nice display of
nuts including two Japan seedlings, one
very large, of good quality which has
been named Killen, and another of very
fine quality which has been named Fel-
ton.—W. W.**Four Reasons for Fall Planting.**1. Plenty of time in the fall. Other
work does not crowd so hard then as in
the spring and the planting of trees and
plants can be more thoroughly and satis-
factorily done.2. Nearly a year gained. By becoming
well-established before winter sets in they
are ready for early and vigorous growth
at the first opening of spring.3. Fewer failures. Through the cer-
tainty of late fall rains, planting is more
sure at that season. Ninety per cent. of
the failures come from late spring plant-
ing when followed by unfavorable
droughts.4. No time in spring. Our springs are
of such short duration that much
intended work is left undone. Never a
season goes by but some one says, "I
intended planting this spring but I could
not get around to it until too late."
Nearly all hardy stock except evergreens
can be safely planted in the fall.—THE
GEO. A. SWEET NURSERY CO.**READERS' NOTES AND COMMENTS.**This space is devoted to short notes of expe-
rience and observation, but not necessarily reflect-
ing our own opinions. You, reader are trying
new varieties, new implements, new methods. Let
us have your verdict—short, pointedly. Possibly
you may wish to comment on statements found in
this or previous issues or to offer suggestions; let us
hear what you have to say. In the multiplicity of
counsel there is wisdom and safety. Write us often.**Violets.**—G. C. (who in your issue of
August 21) asked "where Violet plants
suitable for early flowering could be ob-
tained is informed that many thousands
of The Giant Russian Violet now in bud,
can be had from Miss Le Sasser, No. 3202
Prytanla street, New Orleans, La.**Getting Rid of Nut Grass.**—In your
issue of September 11; William H. Seela
asks how to get rid of nut grass. If he
will plow the land two or three times
after the first of August, the thickest
patches of it will be almost entirely killed
in one year. The nuts grow in the fall
and if the land is kept plowed then, there
will not be any seed for another year as
the roots except the nuts all die.—C. W.
KNAPP, Conn.**Poison Oak, Poison Ivy.**—On page
358 AMERICAN GARDENING is an excellent
picture of a spray of Poison Oak, also a
well written editorial upon this terrible
plant, and the matter is further taken
up by a correspondent in last issue. I
would be pleased to give a few more
facts:Some twelve years ago I was working
in a florist's nursery near Philadelphia,
when, one evening, as I sat upon the
porch of our boarding house a thunder
storm took place, and a large tree near
where I was sitting was struck. I went
to within three feet to see the rent that
the lightning had made in the tree, and
the same evening I was suffering from
Poison Oak. A plant was clinging to the
damaged tree but I never touched either.
I soon got rid of the effects.Some six years ago I went to Califor-
nia, got employment in Golden Gate
Park, where is a great quantity of Poison
Oak growing; there I worked for four
and one-half years and I continually
suffered from its effects, whether I touched
it or not. Sometimes men would be
burning the roots, etc. I would be going
by and receive a small puff of smoke, and
would be immediately attacked with a
burning, itching inflammation. I have
been attacked from head to feet, my eyes
closed and nearly blind. I have had the
best medical assistance, and have tried
many things, alcohol, sugar of lead, salt
and vinegar, camphor, and received little
or no relief. If when well, I passed to
windward or in the plant's vicinity, I
had a fresh attack. If I changed my
clothes and laid them by for a week or
two, and get well, when I resumed the
clothes again I had as bad an attack as if
I had handled the ivy. A man who
worked with me handled the Poison Oak
without suffering any ill effects, he would
take the influence home in his clothes,
and his wife suffered martyrdom in con-
sequence.I came here in May last, as head gar-
dener, we have a great number of very
large oak trees, which are covered with
the wild grape vine, and are being slowly
killed. I ordered one of my men to cut
through the stems of the vines, and he
also cut through a Poison Oak, of which
the stem was over two inches in
diameter. This tree is only a few feet
from my cottage, and in one week after
cutting, the leaves had withered, emitted
a sickly scent, I had to pass it daily, and
had a fearful attack of Poison Oak, no
sleep nor rest for four days and four
nights, the inflammation and itching were
maddening. A high wind came and blew
away all the leaves and now I am about
well again.I am very fair complexioned, with a
very thin transparent skin; I have a
strong constitution, never suffer from
any illness, and am over 50 years of age.
The poison makes blisters, and if their
water is taken up, on the hard part of the
finger and placed upon the soft part of
the arm or body, the place will be imme-
diately infected, also if clothing takes up

the water, and is laid by for two or three weeks and reworm without washing the effects will result. I know several men who handle Poison oak without any troublesome effects, but in every such case their skin is thick and hard. Poison oak is a surface disease, and thin skinned people will take it every time.—G. M. SBRATTON, Fla.

Replies on Diseases.

Correspondents' names have been mislaid, but they will each recognize which instruction is personal.

The samples of diseased beans show unusual development of the bean mildew, and by the way, this belongs in the same genus with the potato rot, and bears the botanical name of *Phytophthora phaseoli* Thax.

The peach leaves are beyond our determination. They would seem to be leaves of a tree with insufficient root action. Very likely the root may be badly infested with root galls; the rose leaves from same source are infested with a form of black spot.

The Fall River correspondent with diseased Phlox will have to send better material before an investigation can be made. We incline to the belief that the trouble is due to inattention.

The asparagus seems to be injured in some way other than by a fungus. The young branches have died and dried up, possibly due to a trouble below and even below ground.

Enriching the Lawn.

Would it be desirable to put a couple of inches very rich garden loam on top of the lawn after mowing it off very close? Will the grass come out nicely and evenly next spring without having any new seed, and would it be correct to mix some fertilizer with the soil before putting it on?—W. J. S.

—To renovate lawns it is not sufficient to add a coating of rich loam. The proper method is to spade it up and work the manure and soil in together. A light sprinkling of soil may be allowed and would probably do good. But two inches would be sufficient to kill the turf, and more than that an unequal surface would be created and weeds only would be the result. The present is a good time to break up the ground and seed may be sown at once or left until the soil warms up slightly in very early spring.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

D. B. LONG, Buffalo.—List of Forcing Bulbs, etc.

J. M. THORBURN & CO., New York.—Wholesale Trade List of Bulbs, etc.

THEO. F. BECKERT, Neville Island, Pa.—Price List of Bougainvilleas.

ALFRED BRIDGEMAN, New York.—Descriptive Catalogue of Bulbs, etc.

C. PETRICK, Ghent, Belgium.—Price List of Palms, Azaleas, Rhododendrons, etc.

JOHN LEWIS CHILDS, Floral Park, N. Y.—Catalogue of Bulbs, Plants, Seeds, etc.

JOSEPH BANCROFT & SON, Cedar Falls, Iowa.—Price List of Plants for Fall and Winter Blooming.

THOS. MEEHAN & SONS, Germantown, Philadelphia.—Wholesale Trade List of Choice Nursery Stock.

HENRY F. MICHELL, Philadelphia.—Catalogue and Wholesale Price List of Bulbs, etc., for Fall planting.

T. W. WOOD & SONS, Richmond, Va.—Fall Catalogue Grass and Clover Seeds, Bulbs, Fruit Trees, Fertilizers, etc.

VILMORIN-ANDRIEUX & CO., 4 Quai de la Mégisserie, Paris, France.—Bulbous roots, Strawberries, and autumn seed list.

WILLIAM BULL, King's Road, Chelsea, London, England.—Tuberous rooted plants and bulbs.

HENRY A. DREER, Inc., Philadelphia.—Quarterly Wholesale Price List of Bulbs, Plants, Seeds and Miscellaneous Florists' Stock.

AMERICAN BULB COMPANY, Short Hills, N. J.—Catalogue of Bulbs, Roots, Plants, Seeds and Garden Requisites. Also fall quotations on Bulbs and Price List of Flower Seeds.

ARMSTRONG & McKILLY
Pittsburgh.
BETHEA-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR } Cincinnati.
ROKSTEIN }
ATLANTIC }
BRADLEY } New York.
BROOKLYN }
JEWETT }
ULSTER }
UNION }
SOUTHERN } Chicago.
SHIPMAN }
COLLIER }
MISSOURI } St. Louis.
RED SEAL }
SOUTHERN }
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALIM
Salem, Mass.
COENWELL
Buffalo.
KENTUCKY
Louisville.

IT is a significant fact that responsible dealers sell and responsible painters use Pure White Lead (see list of genuine brands) and Pure Linseed Oil. They know their business. Those who don't know, try to sell and use the "just-as-good mixtures," "so called White Lead," &c., &c.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

**The True AROMA, FLAVOR, LUSCIOUSNESS and
...HEALTHFULNESS of the...**

STRAWBERRY

Is known only to the gardener who planting the very best varieties, allows them to ripen to perfection under his own tender care. We grow the Large, Superb, Highly Flavored, Highly Colored Table Varieties, and will deliver plants anywhere on the continent fresh as when dug.

Practical Treatise Telling How to Grow Them to perfection and how to Turn a Pretty Penny with your surplus berries, free to buyers.

Illustrated Catalogue and copy of the Strawberry Specialist, a monthly journal devoted to Strawberry culture, free to all. 14th year.

CONTINENTAL PLANT CO.

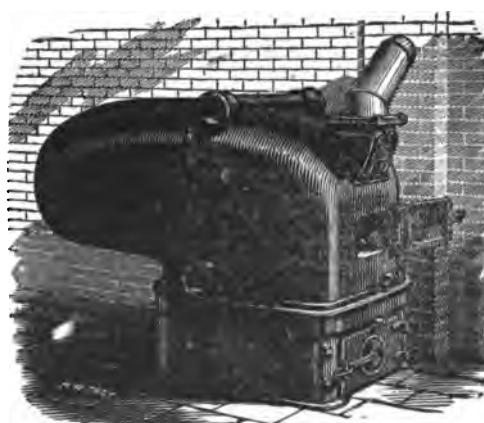
Strawberry Specialists,

KITTRELL, NORTH CAROLINA.

O. W. BLACKNALL, President and General Manager.

Mention American Gardening when you write.

GREENHOUSE HEATING AND VENTILATING,
Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

**FIVE PATTERNS OF BOILERS
NINETEEN SIZES**

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

Iron Frame Benches with the
"Perfect Drainage Bench Tile"
or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Palms from Seed.

It was one of the busiest of women, on a large farm, one doing all the work of the house, and having the merest odds and ends of time to devote to flowers, who proudly showed her potted palms. "What? not from seed!" exclaimed the visitor in amazement. "Yes; raised from seed by my inexperienced self, and five plants from one packet." "That's wonderful success. How did you manage them?" queried the friend. "Very much like ordinary plants, except that I gave more heat at the first. The seed-boxes stood on the wood-box, behind the stove for weeks before the seeds germinated. And for months the plantlets were but slender green shafts, which grew later, to be sure, but seemed to have no intention of becoming anything different. At last, however, when I was sure my patience was at an end, the leaves began to spread, and now, as you see, I can really claim success. The plants vary much in size, but this largest one is worth a dollar and a half, at least. Brought through two winters by a 'chunk' stove, too!"

Cannas for Winter.

Probably there are no plants both "decorative" and blossoming, which will grow throughout the year better than some of the Cannas. Roots which are removed to large boxes from the garden will throw up new canes and bloom well in winter, if treated to heat and moisture to suit their needs. The Canna grows wild in our Southern marshes, and because it can bear much water, it is not so likely to be ruined by the novice as are many other plants. Flamingo is a brilliant, well shaped, red sort especially recommended for window blooming. A fault which it sometimes shows of blistering in leaf, renders it less satisfactory than it might otherwise be. If this can be averted, the plant is almost ideal for the window.

A New Cyperus.

Not wholly new, but at least a variation in form is the Cyperus with leaf segments much narrower than those of the well-known house plant. Slenderness nearly always adds grace, and is to be welcomed. "Nile grass" is an attractive, common name which for the Cyperus rivals that of "Umbrella plant."

Lifting Plants.

Generally speaking, it is a mistake to leave such house plants as are to be lifted, late in the ground. If placed now in the winter pots, they can still have fresh air outside for some weeks, while becoming reconciled to restricted root quarters. Plants which have had bedding privileges are not, however, much prone to early bloom. If plunged and ripening, it is often best to remove them to house quarters before the continuous fall rains, as these may push the plants into growth too soon.

Geranium, Madame Bruant.

This fancy flowered sort is sometimes described as "aureole-flowered," and is called entirely distinct from any other variety now in cultivation. "Distinct," as applied to a flower, means that it has some characteristic of leaf, or habit of growth, or form of flower, or style of coloring different from known sorts. It need differ *distinctly* in but a single point to be "distinct." It is the color arrangement, the carmine-veined center with heavy and regular silver border which distinguishes Madame Bruant.

"Shades of White."

This odd expression catches the eye as it ranges a descriptive page allotted to Roses. The sixteen varieties found under this heading are described variously as: White, pure white, pure snow-white, creamy white, salmon-white, white, tinged lilac, white, shaded lemon, white, shaded flesh, light flesh, delicate flesh. It is by no means a bad thing for the customer to find the many sorts of Tea

Roses grouped under color. But "shades of white" seems amusing, if instructive.

Pelliconia Pulchra.

Thus was named a specimen plant, taking first prize at a late state fair. Those who are fond of vines, and equally fond of variegation may find both tastes satisfied in this heavily-netted trailer, with its shades of pink, red, violet, and silver in the nearly oval, velvet leaves. A light soil and plenty of heat and moisture are the requirements of the plant. It is offered at retail in an occasional popular catalogue, but may need too much heat and moisture in the air to prove a good plant for the average retail buyer. Doubtless here and there one might succeed with it.

To Build, or to Repair.

Last week I held some conversation with a farmer who numbers his hens by the hundred, yet cannot get winter eggs in any adequate numbers. He feels that if he had a good, modern hen-house, his fortune would be made, and is about decided to build one during the present autumn. He possesses already several old but good-sized poultry shelters which need only good scratching-shed attachments to render them profitable, and, best of all, more than 100 feet in length of fine, barn cellar that might be utilized for the fowls, in greater or less degree. Is it not the height of foolishness for one so situated to put up entire new buildings, which at the best, can give him only the counterpart of his great, barn cellars? A new house built to one's ideal is a delightful thing, but it is also a drain on the purse. Can any farmer afford such drain, in these days, unless better justified by the facts?

Immediate Income from Poultry.

An exchange wisely says that the first question with the average beginner with poultry relates to the source of immediate income. Eggs for market are named as the surest and steadiest source of this, and the inexperienced worker is advised to depend for the first year solely and for several years mainly on eggs, leaving large rearing for broilers and market carcasses generally until he is fully established. In this direction lies the least risk, and therefore the least chance of failure and discouragement.

Present Range of Prices in Eggs.

An authoritative report of prices of eggs in Boston markets at the middle of August gave 10c. as the lowest for the poorer grades. This was for Western stock. Fresh Eastern were reported as in demand at 14c. But above the "fresh" is still another grade, given thus: "Fancy, near-by henery (if reliable) are worth up to 20c." We need more information as to these 20c. eggs. What constitutes "henery" eggs? Is it not their supposed reliability, and that alone, that gives them an added 50 per cent. of value over poor Westerns? If there is a doubt as to this quality, what is the grading worth to the buyer?

Prize-winning Brown Leghorns and Others.

At the last New York show of poultry one anxious to learn, asked a winner why his birds had taken precedence of those receiving the second prize. He was unable to tell, but opined that it was mainly because of dark shafting in the feathers. "It depends a great deal upon the judge," said he. This statement is one in which all exhibitors will acquiesce. A

A Vain Search.

SEVERAL YEARS AND THOUSANDS OF DOLLARS EXPENDED.

An Expert Accountant and Bookkeeper of Detroit Troubled with Hereditary Scrofula in its Worst Form—Spends a Small Fortune Seeking to Find a Cure.

From the Evening News, Detroit, Mich.

James H. Wallace, the well-known expert accountant and bookkeeper, of Detroit, Mich., lately had a remarkable experience, and a reporter called at his pretty home, 240 Sixth street, to interview him regarding it. He found Mrs. Wallace in the midst of house cleaning, and after the reporter stated the object of his visit Mrs. Wallace said: "You had better see Mr. Wallace at the office of C. A. Haberkorn & Co., table manufactory, on Orchard street, and he will tell you of this experience much better than I." A visit was made to the office of the above concern where Mr. Wallace was seen. "I am," said Mr. Wallace, "yet a young man, still I have suffered untold agonies and tortures. I was born with that awful hereditary disease known as scrofula, and what I suffered cannot be well described.

"The first physicians that treated me said it was a constitutional blood disorder and by constant treatment and diet it might be cured. The blood purifiers and spring remedies I used only made the eruptions more aggressive and painful. In 1888 I was a fearful looking sight and was in fact repulsive. On my limbs were large ulcers which were very painful, and from which there was a continual discharge. In three years I spent over \$3,000 in medicine and medical services and grew worse instead of better. I tried the medical baths, and in 1893 went to Medicine Lake, Washington, but was not benefited. I then tried some proprietary medicine, but did not receive any benefit.

"One day in the fall of 1895 while reading the paper I noticed an article about Dr. Williams' Pink Pills for Pale People, but did not give it much attention. That afternoon while moving some books I broke an ulcer on my leg and nearly fainted, the pain made me sick and I had

to stop work. While sitting in the chair I again noticed the Dr. Williams' Pink Pills article in the newspaper which was lying on the floor. I read it carefully and immediately decided to give the pills a trial, as the account which I read had been of a case similar to mine. I sent the office boy over to Frank Houpp's drug store for a box and took some that afternoon. I continued their use and before I had used one box I noticed an improvement. I grew better rapidly and all my friends noticed the improvement, and after taking eight boxes there was not a sore on my person.

"I am covered with scars from the ulcers, but since that time I have not seen a single indication of the old trouble. I continued the use of the pills long after I was cured as I wanted to get my system rid of that awful disease.

"If I only had bought Dr. Williams' Pink Pills for Pale People at the start I would be thousands of dollars ahead and had five years of health and happiness instead of torture. To-day I feel like a perfect man and my doctor says I am entirely rid of my old trouble."

(Signed) JAMES H. WALLACE.
Detroit, Mich., May 7, 1897.

Before me a Notary Public in and for Wayne County, Michigan, personally appeared James H. Wallace, who being duly sworn, deposed and said that he had read the foregoing statement and that the same was true.

ROBERT E. HULL, JR.,
Notary Public, Wayne County, Mich.

Dr. Williams' Pink Pills for Pale People are sold by all dealers, or will be sent post paid on receipt of price, 50 cents a box or six boxes for \$2.50 (they are never sold in bulk or by the 100), by addressing Dr. Williams' Medicine Co., Schenectady, N. Y.

recent article on Brown Leghorns charges that the brown Leghorn females have been judged for years largely by the judge's fancy. If a black stripe in the hackle—which the standard requires—is not a black stripe, as the judges say, unless the feather shafts are also black, judge and standard are too far apart. The standard is the judge's dictionary, whereby he is to define every point. Now, with the revision of the standard so near at hand, it is a burning question as to which shall be revised the most, the judges or the standard. As the judges are proverbially cranky, apparently the change must come in the standard, the more especially as about this time every breeder seems to be constituting himself a judge.

Crossing Fowls.

"I could never understand," says one, "the motive which any one who has once kept thoroughbred poultry should have, in attempting to cross with another breed." Reference is made, further, to the "superstition" that half-breeds are more prolific in eggs, with the affirmation that years of experience have led the writer of the note to doubt the superior value of half-bred fowls. Strange that one man's experience should so contradict that of the great majority! Were it not for the added vigor which out-breeding gives, we believe this man's position might be tenable. But we find, usually, that the more experience breeders have, the more strongly do they lean toward a belief in vigor above all else.

MYRA V. NORRIS.

Pollination of Plums.

At the recent meeting of the American Pomological Society at Columbus, O., a paper prepared by Professor Waugh of the Vermont Experiment Station, giving his results in testing the ability of certain varieties of plums to fertilize their own flowers was read. He stated that many of the native varieties of plums were so unfruitful that they could not be profitably grown and the difficulty was that they could not fertilize the ovaries of their own flowers, although their pollen might be potent when applied to the pistils of other varieties.

The experiments reported were tried in the Kerr orchards at Milford, Delaware. The blossoms of a number of varieties were covered with paper sacks, thus keeping from them the pollen of other sorts and yet permitting self-fecundation. In the case of De Soto, one hundred clusters covered with the sacks gave no fruit at all, while the uncovered flowers that could be cross-fertilized gave a moderate crop. The Minnesota and Minnesota seedlings 1, 2, and 3 gave but twenty fruits from 380 sacks, while the uncovered trees gave in two cases moderate and in two others full crops. Pottawatomie from 20 covered flowers gave no fruits, although the tree bore a light crop. In 1896 from over 6000 sacks, only five fruits set.

The experiment covered many Japanese varieties as well as a number of native species. Of the American varieties Robinson is about the only one that is self-fertile.

In order, therefore, to grow successfully the American varieties of plums, trees of different varieties should be placed in close proximity, and care must be taken that they are such as blossom at about the same time.

Mr. Harrison, of Ohio, criticised the experiment as unfair, the flowers that were covered being deprived of the assistance of the bees to bring pollen to them.

Mr. Goodman, of Missouri, considered the experiment was of no value, as the covered flowers were growing under unnatural conditions, and it was unfair to compare the results obtained from them, with those secured when the blossoms were uncovered, while the latter would also have the benefit of insects and wind to scatter the pollen.

The Westchester County Horticulture Society will make an exhibit of plants and cut flowers at the County Fair to be held on September 27 to October 2, at White Plains, N. Y.

Potash.

to stock means a "scrubby" animal.

Free

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

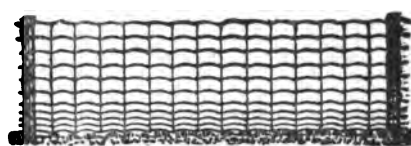
GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write.



FOR ROOFING or Siding
either new or old buildings there is nothing the equal of CORRUGATED IRON AND STEEL. There is much less danger from fire which is an object to the farmer who lives away from the ample fire protection of the city. A good corrugated Steel Roof at 2 1/2 cts. per sq. foot. THE BERLIN IRON BRIDGE CO. E. BERLIN, CONN.

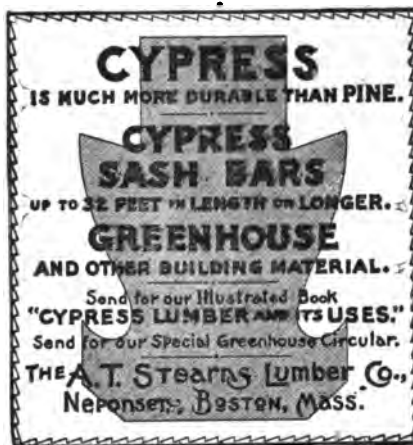
Mention American Gardening when you write.



A MAN

Across the street lugging a water melon always attracts attention. So does a man showing up the superior qualities of Page fence. Why? Because men like a good thing. PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.



CYPRESS
IS MUCH MORE DURABLE THAN PINE.
CYPRESS SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.
GREENHOUSE
AND OTHER BUILDING MATERIAL.
Send for our Illustrated Book "CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.
THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

GLASS FOR GREENHOUSES, GRAP- ERIES, CONSERVATORIES, GLASS HOTHOUSES AND HOTBEDS.

VANHORNE, GRIFFEN & CO.,
Importers of French Glass. 40 to 48 VESTRY STREET,
COR. GREENWICH ST. NEW YORK.

Mention American Gardening when you write.

Diplomas and Certificates



FOR

HORTICULTURAL SOCIETIES,
FAIRS, INSTITUTES, : :
GARDENERS' CLUBS, ETC.

These should be selected well in advance of the date needed, and secretaries of above should send now for our set of samples, all of which have been especially designed by first-class artists and engravers for the purpose. Owing to the wide demand for these samples and their expensiveness, we will mail the set of five, postpaid, for \$1.00; money refunded on return of samples, or placed to credit of order, as directed. One single sample sent free on application if the writer will explain the exact purpose for which it is wanted.

A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.

HEADQUARTERS FOR ALL PRINTED SUPPLIES

WHOLESALE MARKETS.

New York.

The cut flower trade shows no improvement, roses are arriving in enormous quantities and realize but small sums per 100 varying from 25c. to \$2, and will not average for high and low grade together more than \$1.25 per 100.

Violets have made their appearance since August 21, but there is little or no demand for them.

The fruit and vegetable market is in a very much better condition than was reported in our last issue. A better tone exists, and the market cleans up more quickly.

Hothouse grapes are in poor demand and price is low. Outdoor grapes are coming in but the market is hardly ready for them.

Plums are in better demand and prices are higher and firmer. Pears are improving slightly for good quality.

Apples are poor and cheap; with this crop there is just now an interesting fight between dealers and growers; the last-named are holding back for higher prices on the grounds that the crop is short, while the dealers contend that there is plenty of good fruit, that several states have a full crop, and therefore there is no reason for any advance or guarantee of stiff prices; and further it is claimed that the growers are asking more than the selling price in this city. A slump is predicted later. So far with sound stock the grower has the best of the argument and \$2 is being held for by many.

Apples—Duchess of Oldenburg, hand-picked, d.-h. barrel, \$2@2.50; Gravenstein, hand-picked, per d.-h. barrel, \$1.75@2.50; Holland Pippin, hand-picked, per d.-h. barrel, \$1.50@2; Fall Pippin, hand-picked, per d.-h. barrel, \$1.50@2; Twenty-Ounce, hand-picked, per d.-h. barrel, \$1.50@2; Blush, hand-picked, per d.-h. barrel, \$1.75@2.25; King, hand-picked, per d.-h. barrel, \$2@2.25; Greenings, hand-picked, per d.-h. barrel, \$1.25@1.75; Baldwin, hand-picked, per d.-h. barrel, \$1.25@1.75; mixed varieties, fair to good, per barrel, \$1.25@1.50; poor to fair, per barrel, 60c.@\$1; Virginia, selected, red, choice, per barrel, \$1.50@2; mixed kinds, ordinary, per barrel, 60c.@\$1; Jersey, winter, open heads, 75c.@\$1; crab apples, small, choice, per barrel, \$2@3; large, per barrel, \$1.50@2.

Peaches—Maryland and Delaware, fancy table sorts, carrier, \$1.25@1.75; Smocks, per carrier, 75c.@\$1.25; Clings, per carrier, 75c.@\$1; extra, per basket, 85@85c.; prime to choice, per basket, 40@60c.; common to fair, per basket, 25@35c.; Jersey, extra, selected, per basket,

65@85c.; selected, choice, per basket, 50@60c.; fair to good, per basket, 25@40c.; culls, per basket, 17@25c.; up-river, per carrier, 50c.@\$1.

Pears—Bartlett, large, clean, per barrel, \$2.50@3.50; poor to fair, per barrel, 75c.@\$2; Seckle, per barrel, \$1@3; Beurre Rose, per barrel, \$1.50@2; other late sorts, fair to good, per barrel, 75c.@\$1.50; common kinds, per barrel, 50@75c.

Grapes—Delaware, up-river, per 24-pound case, 50@90c.; western N. Y., per small basket, 10@11c.; Niagara, up-river, per 24-pound case, 40@65c.; western N. Y., per small basket, 9@10c.; Pocklington, up-river, per 24-pound case, 40@65c.; Worden, up-river, per case, 35@50c.; Concord, up-river, per case, 40@50c.; western N. Y., per small bag, 6@7c.; black varieties, up-river, per 8-pound basket, 9@12c.; Jersey, per 8-pound basket, 9@11c.; Jersey, per 5-pound basket, 5@6c.

Wine grapes—White kinds, in trays, per pound, 2c.; Delaware, in trays, per pound, 2@2½c.; black kinds, in trays, per pound, 1½c.; barrels, per pound, 1¼@1½c.

Plums—German prune, 8@10-pound basket, 20@30c.; Quackenbos, State, per 8@10-pound basket, 15@20c.; Egg, State, per 8@10-pound basket, 16@20c.; Purple Egg, State, per 8@10-pound basket, 15@20c.; Gage and Reine Claude, State, 8@10-pound basket, 18@20c.; ordinary kinds, sound, per basket, 10@12c.; inferior, per basket, 6@8c.; Damsen, per 8@10-pound basket, 20@25c.

Watermelons—Nanticoke, extra large, per 100, \$20@28; small to medium, per 100, \$4@12.

Muskmelons—Local stock, per barrel, 50c.@\$1.25; Colorado, per 70-pound crate, \$2.50@3.

Cauliflowers—Per barrel, 75c.@\$1.50. Celery—Choice, large, per dozen, 25@35c.; fair to prime, per dozen, 15@20c.; small and poor, per dozen, 5@10c.

Corn—Hackensack, per 100, 75c.@\$1; other Jersey, per 100, 50@75c.

Cabbages—Jersey and Long Island, per 100, \$3@4.

Cucumbers—Shelter Island, per barrel, \$1.25@1.75; pickles, State, per 1,000, \$1.50@2.50; pickles, pr. to fair, per 1,000, 50c.@\$1.

Egg plants—Jersey, per barrel, 60@75c. Green peas—Long Island, per bag, \$1.25@1.75.

Lima beans—Jersey, Potato, per bag, 75c.@\$1; Jersey, flat, per bag 40@60c.

Onions—Jersey, white, per barrel, \$1.50@2; Jersey, other kinds, per barrel, \$1@2; Orange Co., red, prime, per bag, \$1.25@1.75; Orange Co., yellow, per bag, \$1.25@1.50; Orange Co., white, per bag, \$1.25@2; Orange Co., inferior, per bag, 40c.@\$1; Long Island, yellow, per barrel, \$1.50@1.75; State and Pennsylvania, yellow, per barrel, \$1.50@1.75;

Ohio, yellow, per barrel, \$1@1.50—eastern, white, per barrel, \$2@3; eastern red, per barrel, \$1.75@2; eastern, yellow, per barrel, \$1.75@2; small, white, per barrel, \$2@3.50.

Peppers—Jersey, per barrel, 75c.@\$1. Squash—Hubbard, per barrel, 75c.@\$1; Marrow, per barrel crate, 60@75c.

Tomatoes—Choice, round kinds, per box, 75c.@\$1; ordinary, per box, 50@60c.

Turnips—Russia, local, per barrel, 50@75c.; Russia, Canada, per barrel, 75@80c.

Potatoes—Long Island, in bulk, per barrel, \$2.25@2.50; Jersey, per bag, bag included, \$2@2.25; choice round, in bulk, per barrel, \$2.25; average prime, in bulk, per barrel, \$2@2.12; poor to fair, in bulk, per barrel, \$1.75@1.87; Albany and Troy, in bulk, per barrel, \$1.50@2; Western New York, per 180 pounds, \$1.75@2.25; Sweet potatoes, South Jersey, per d.-h. barrel, \$2@2.25; yellow sweets, Virginia, per barrel, \$1.25@1.50.

Boston.

Michigan has broken out with a carload of those fancy Gem melons which last year gave excellent satisfaction. Another car of the Rocky Fords expected this week, and will be placed at not less than \$3 per bushel crate.

Green corn very firm; the common table varieties selling 12@18c. per dozen; there has been introduced this season a special corn called Craig's favorite. It is very sweet and tender and all receipts are taken each morning by our first-class hotels and some of the fancy restaurants. It easily brings 30c. a dozen, or about twice that of the generally accepted varieties. Said to be the finest ever produced for table use.

Rhode Island cantaloupes are getting towards their end. The only variety appearing this morning being the Black Jap which brings \$2.50@3 per barrel.

Watermelons are so near their end that no comments need be made.

Choice tomatoes are in quick demand at 85c. @ 1.25 per bushel, while the common grades find very good sale at about 50c.

Sales are slow on egg plant, as well as for peppers; celery a little firmer at 75c. @ \$1 a dozen.

Onions are easier, large barrels \$2; Ohio barrels \$1.75.

Marrow squash unchanged \$1@1.25 a barrel.

Artichokes \$1.50 a bushel.

String beans for pickling \$1 a bushel; limited demand for table use; shell beans take range of \$1.50@2.50 a bushel according to variety.

Mint 40c. dozen bunches; lettuce 10@15c. a dozen; parsley 50c. a bushel.

NOW READY.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$2.00. 25 per cent. off to subscribers to American Gardening and Florists' Exchange.

This work contains nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work.

On heavy enamelled paper. Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8 Duane Street, P. O. Box 1697, New York City.

Cabbage continues to move at 8@5c. a head; cauliflower steady.

Carrots \$1@1.25 a bushel; beets or turnips 50c. a bushel.

Potatoes are practically unchanged, no large receipts coming; to name figures should say 75@90c. a bushel; while if in barrels \$2.25@2.75. Sweet potatoes in good demand \$1.60@1.75.

Bartlett pears have doubled in price since last week; some fancy home-grown stock \$2 a bushel.

Near-by peaches take a range from \$1 to \$1.50, according to how fancy they are. Connecticut stock takes about the same range; a car of fancy Michigans placed \$1.50@1.75 in six-basket carriers; Cumberland Valley stock very poor; scarcely brought freight; New Jersey stock 40@80c. a basket.

This city has just commenced on hot-house cucumbers, the first being put out on Monday morning at 4@5c. each; the small field stock for pickling \$2.50@4 a bushel.

Delaware grapes, pony baskets, 12@13c.; Concord 9@10c.

Plums are not as plenty, consequently little firmer prices; Damsons in 10-pound baskets 30@40c.; other blue varieties 25@35c.; with Greengage in as good demand 30@35c.

Apples continue to advance; receipts being very light, and some choice New York state Twenty-Ounce \$2.25@2.50, while some Kings, highly colored, brought \$2.75; Missouri stock is in better condition, and common green or light red cooking varieties \$1.75@2, with fancy eating like the Jonathans at \$2.25@2.75.

There is no demand whatever for green peas, and weather has been so cold that the later yieldings have not been tender; it probably took them too long to grow.

The crop of onions in the Connecticut valley will not be over two-thirds that of last year.

Philadelphia.

The general market has been good; receipts of peaches have been moderate and the market is firm with a good demand. Pears are in fair supply and demand, at former prices. Receipts of watermelons are showing better quality, and the demand for best stock is good. Receipts of plums have fallen off; prices are firmer with good demand for good stock. Grapes are in fair supply, demand light. A few cranberries are seen, but the demand is light.

Apples—Maldens' Blush, per barrel, choice, \$2.50@3; Duchess of Oldenburg, choice, per barrel, \$2.75@3; mixed varieties, per barrel, choice, \$1.75@2.25; fair to good \$1@1.50.

Peaches—Mountain fruit, choice, per basket, 75@90c.; fair to good, 40@60c. Jersey fruit, choice, per basket, 50@60c.; fair, 30@40c.; culls, 15@20c.

Pears—Bartlett, per barrel, \$1.75@2.50; per basket, 40@60c.; cooking, per basket, 15@25c.

Plums—(N. Y., per 8 to 10 pound basket) damsons, 20@25c.; Washington, 20@25c.; Rene Claude, 20@25c.; Quackenboss, 20@25c.; common blue, 12@18c.

Grapes—Hudson River, per 20-pound case, 80@50c.; N. Y. Concord, per 8-pound basket, 8@10c.; N. Y., Delaware, per 8-pound basket, 12@14c.

Cranberries—Cape Cod, per barrel, \$4@5.

Watermelons—Extra, per 100, \$12@15; fair to good, \$8@10; culls, \$4@5.

Muskmelons—Jenny Lind, per barrel, 75c. @ \$1.25; Jersey, Gem, per barrel, 60c. @ \$1; Maryland and Delaware, per bushel basket, 40@50c.

Beets—Local, per 100, \$1@1.50.

Celery—Choice, per dozen, 25@40c.; fair, 12@20c.

Corn—Per 100, Jersey, 60@80c.; Pennsylvania, 75c. @ \$1.25.

Cabbages—Jersey, per 100, \$2@3.50.

Cucumbers—Jersey, per 100, 60c. @ 1.25, pickling, per 1,000, \$1.50@2.

Egg plants—Jersey, per barrel, 75c. @ \$1. Lima beans—Per 100 pounds, \$2@2.50.

Green peas—Marrows, choice, per bushel, \$1.25@1.40; fair, per bushel, 80c. @ \$1.

Onions—Jersey, white, per barrel, \$1.50

HOT BED SASH AND GLASS

It is for your advantage to always obtain our quotations on HOT BED SASH AND GLASS before purchasing. We make a specialty of these goods in connection with our Door, Sash and Blind business.

THE BROCKWAY-SMITH CORPORATION, 146 Oxford St., Lynn, Mass.

Mention American Gardening when you write.

@1.75; Jersey, yellow, \$1.30@1.50; per barrel, 50@60c.

Peppers—Jersey, per barrel, 45@60c.

Squash—Hubbard, per barrel, \$1@1.80.

Tomatoes—Choice, per basket, 40@60c.; fair, 25@30c.

Receipts of potatoes are on the increase, and sales have been mostly on bushel basis at 45@60c.; per basket, 80@40c. Jersey sweets, 25@30c.

Cost of Growing Corn.

This subject has been lately investigated by the American Agriculturist, the figures being collected from various growers.

The result of this investigation shows the actual cost of growing 118,049 bushels of corn on 2,632 acres to have been as follows:

	Per acre.	Per bus.
Taxation.....	\$0.278	\$0.006
Removing stalks.....	.081	.001
Plowing, har'ng and plant- ing.....	.549	.018
Seed Corn.....	.064	.002
Cultivation.....	.559	.018
Gathering and cribbing.....	1.126	.026
Total from actual records.....	2.607	.061
Est. team maintenance.....	.814	.007
Est. depreciation machinery.....	.266	.006
Gross cost.....	\$8.187	\$0.74
Less value of fodder.....	.594	.014
Net cost.....	2.698	.060

That corn can be grown at a cost of 6 cents a bushel will be a surprise to the best posted, yet these exact records, kept by growers themselves, prove it. If it be desired to add interest on money invested, which, however, is not a part of the actual cost of the crop, the average value of the land used in making this crop was \$39.16, and to this must be added a proper allowance for the equipment of the farm. The selling price of this corn crop must be not less than 18 cents in order to give the producer a net profit of 6 per cent. upon the capital which his thrift has accumulated.

Deafness Cannot be Cured

by local applications, as they cannot reach the diseased portion of the ear. There is only one way to cure Deafness, and that is by constitutional remedies. Deafness is caused by an inflamed condition of the mucous lining of the Eustachian Tube. When this tube gets inflamed you have a rumbling sound or imperfect hearing, and when it is entirely closed Deafness is the result, and unless the inflammation can be taken out and this tube restored to its normal condition, hearing will be destroyed forever; nine cases out of ten are caused by catarrh, which is nothing but an inflamed condition of the mucous surfaces.

We will give One Hundred Dollars for any case of Deafness (caused by catarrh) that cannot be cured by Hall's Catarrh Cure. Send for circulars, free.

F. J. OHENNEY & CO., Toledo, O.

Sold by Druggists, 75c.

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1897, New York City.



WE grow TREES, PLANTS
and vines; all kinds; 100,000
FRUIT TREES. Millions of fruit
and vegetable plants; ever-
greens, shrubs and shade
trees. Stock first-class.
Prices low. Our 1897 cata-
logue free. T. J. DWYER,
Orange Co. Nurseries, Cornwall, N. Y.

INCUBATORS. Self-regulating. Catalogue free G. S. SINGER, Cardington, O.

Mention American Gardening when you write

PEACH TREES, \$3 P & R 100.

All kinds of Trees and Plants CHAP. Cat. FREE. RELANCE NURSER CO., Box 1410, Geneva, N.Y.

Mention American Gardening when you write.

JAPAN PLUMS

Large stock of best varieties at lowest rates. Full assortment of Trees and Plants. Get our prices before ordering elsewhere. Catalogue free. Established 1861. 100 acres. THE GEO. A. SWEET NURSERY CO., Box 1848, Danville, New York.

Mention American Gardening when you write.

Grape Vines Small Fruits

Extra fine stock of CURRANTS, including the new and unrivalled WILDER. Lowest rates. Quality extra. Warranted true. T. S. NURSERY CO., Fredonia, N.Y.

Mention American Gardening when you write.

PEACH TREES

Guaranteed free from Yellow, Rosette, or San Jose Scale. State Inspectors certificate with each order. All standard varieties including Elberta, Emma, and Triumph. Also Pear, Plum, Apple, and other Trees and small Fruit plants. Catalogue on application.

CHAS. WRIGHT, Sanford, Dela.

Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial or a number, counts as one word. No cuts or display type allowed.

RASPBERRY and Strawberry plants. Chas. C. Nash, Three Rivers, Michigan.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 718 Whar-ton St., Philadelphia. Three shipping points, can save you freight.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Ascleads, etc. Branch of the Horticultural Company, Boskoop, Holland.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

LILY OF THE VALLEY PIPS.—The undersigned are open to undertake the purchase of Lily of the Valley Pipe for a first-class firm and can supply the very best qualities by reason of their intimate connections with the most renowned cultivators of the "Mark" District. Schultze & Pfell, Seed Merchants, Rathenow, (Brandenburg).

CALIFORNIA Privet make the finest ornamental hedge, and are perfectly hardy. Fine large plants grown at seashore, two years old, \$3 per hundred. Cash with order. References, First National Bank, Asbury Park, N. J., State Banking Co., Newark, N. J., Atlantic Coast Nursery, James H. Cornell, Proprietor. Office, 606 4th Ave., Asbury Park, N. J.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

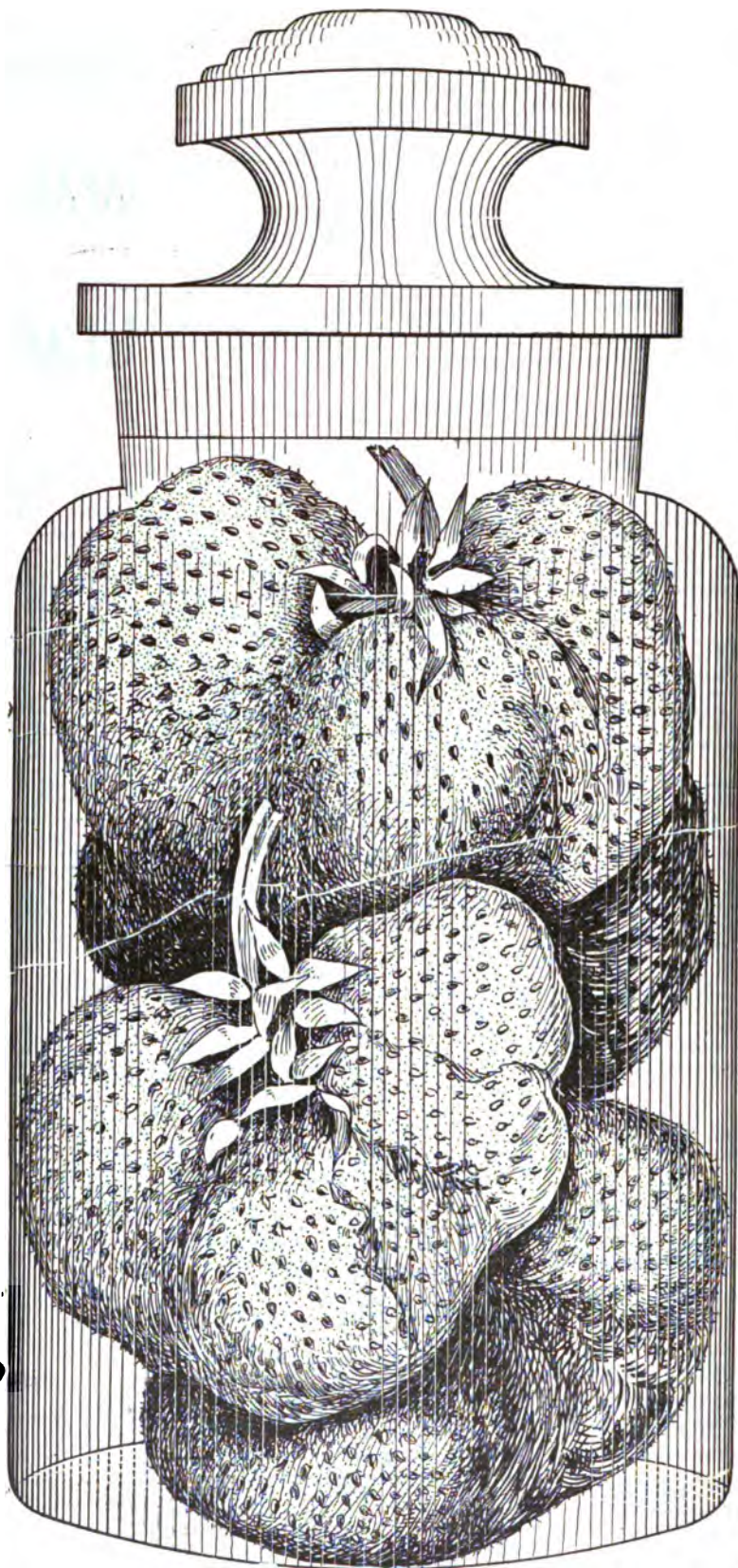
WANTED a place; I can with confidence recommend my gardener to any lady or gentlemen in want of such; he is in all trustworthy and a good gardener who knows his business. J. K. Larren, Box 93, Marion, Mass.

MARRIED man desires situation in private or commercial place. Understands all green-house plants, and has made a specialty of chrysanthemums. Best of references. John Dyer, Short Hills, New Jersey.

THE HENRY

The Most Wonderful Strawberry of the Age.

MESSRS. STEVENS, SIMPSON & CO., Commission Merchants, 232 West Street, New York City, state they handle the HENRY Strawberry, and have realized for it the highest price obtainable for any outdoor stock coming into New York market. Mr. Simpson further states that, in his opinion, as grown, packed and shipped by Mr. Henry Jerolaman, it is the BEST HOME MARKET BERRY in existence. For SIZE, COLOR, and SWEETNESS, and, in its KEEPING QUALITIES, IT HAS NO EQUAL; these many points in its favor rendering it easy for the grower to realize considerably more per quart than the regular market value of Strawberries generally.



MR. JEROLAMAN says, and his statement is corroborated by those who have seen the fruit: The HENRY is beyond all doubt not only the strongest plant, but the largest, best, hardiest and sweetest Strawberry ever yet produced; color, dark crimson; it is perfect (staminate), very large, round, and no coxcombs grow on it. . . . It will out-produce any Strawberry plants that I have ever known, four-year old plants giving very large and just as fine berries as plants one year old. . . . The plants as yet have shown no disease. . . . It is the first berry ripe and the last.

➡ *Read Premium Offer on Next Page* ➡

Henry Strawberry Plant Premiums

WILL BE
SHIPPED
UNTIL

FROST
PREVENTS
DIGGING

Premium Orders

WILL BE
HELD UNTIL

SPRING

WHEN SUBSCRIBERS
SO DESIRE

Trial Subscriptions

YOUR FORTUNE IN STRAWBERRIES!

The Strawberry King and his Remarkably Successful Career: How a Poor Boy Became Wealthy.

THROUGH one of those strange dispensations which often mock in real life the wildest imagination of the novelist, the publishers of AMERICAN GARDENING have become possessed of the story of the life and cultural methods of Henry Jerolaman, undoubtedly the **STRAWBERRY KING OF THE UNITED STATES**. We have prevailed upon Mr. Jerolaman to write the history of his life and a full description of his cultural methods, exclusively for the readers of AMERICAN GARDENING. Further than this and at our urgent solicitation we have prevailed upon him to make a contract to supply us **One hundred thousand plants of the HENRY STRAWBERRY**, to be used solely as premiums to subscribers to AMERICAN GARDENING. The Henry Strawberry has positively never before been advertised.

THE CONTRACT

Publishers American Gardening.

Gentlemen,

I hereby agree to furnish you within the next twelve months in quantities as ordered. One Hundred Thousand plants (100,000) or any portion thereof, of the Henry Strawberry, to be used solely as premiums for subscribers to American Gardening and not to be sold.

Witness
Thos. L. Bolten.

(Signed)
Henry Jerolaman.

The Best Berry of the Age.

Four Berries of the Henry, grown by Mr. Jerolaman, rounded a wooden quart measure. Individual berries were three-and-a-half inches through each way. Mr. Jerolaman's description of this wonderful berry in a recent issue of AMERICAN GARDENING has brought him hundreds of inquiries from the cream of the professional growers.

A GOLD MINE AT YOUR OWN DOOR.

"He who hesitates is lost." It is not likely that such an offer or such an opportunity will occur again in years. More than one strawberry grower in every town, village, and hamlet can come into a good thing through practising the cultural methods and getting some of the plants which have made Mr. Jerolaman not only wealthy and well-known, but so wonderfully successful, by at once

Taking Advantage of Our Offer:

For \$1.00 (check or money order preferred) we will forward you, by mail, postpaid.

FIVE PLANTS

..Of the..
Unequaled

HENRY STRAWBERRY

And AMERICAN GARDENING One Year.

Present Subscribers are entitled to this Offer on renewal; if their subscription has not expired, it will be dated ahead.

Plants to be shipped this Fall or in the Spring, as you prefer.

OFFER EXTRAORDINARY

For every new subscription you send us at \$1.00, we will forward you, postpaid, as a premium, Five Plants of HENRY STRAWBERRY; at the same time we will also send Five Plants to the party subscribing through you. Thus a club of 10 new subscribers entitles you to 50 plants of this wonderful Strawberry, as well as each individual subscriber to 5 Plants. This is a BIG OFFER to all who want to become larger holders of this wonderful Berry, never before advertised. Time is short, get to work to-day.

Address Publishers AMERICAN GARDENING, P. O. Box 1897, New York.

For \$1.00 we will send AMERICAN GARDENING on three months' trial (13 weeks) to four separate addresses, and as a premium, **Five Henry Strawberry Plants** to the one getting up the club. **HUSTLE.**

POT YOUR PLANTS IN
JADOO FIBRE
 WATER YOUR PLANTS WITH
JADOO LIQUID

And they will thrive
 during the Winter.

Particulars and Prices on Application to

THE AMERICAN JADOO CO.,

813 Fairmount Ave.,

PHILADELPHIA, PA.

Mention American Gardening when you write.

METAL WHEELS
 in all sizes and varieties, to fit any axle. They last forever. Either direct or stagger spoke. Can't break down; can't dry out; no resetting of tires. Good in dry weather as in wet weather. Send for catalog & prices. **ELECTRIC WHEEL CO., QUINCY - ILLINOIS.**

Mention American Gardening when you write.

Popular Botany!

The First Number of the

PLANT WORLD

A monthly journal devoted to this subject will be issued October 1st. It will be 16 pages, octavo in size, edited by F. H. Knowlton, Ph. D., assisted by a corps of specialists.

Subscription price \$1.00 per year. Sample free if requested now. Address

WILLARD B. CLUTE & CO., Publishers,
 BINGHAMTON, N. Y.

Mention American Gardening when you write.

**Raise
 Hens**

People living just outside cities and large towns can (owing to their nearness to markets) make large profits in the poultry business. No other occupation pays better or is easier to conduct. It can be successfully carried on by women or boys and girls, provided they have a knowledge of the right methods of management, feeding, etc. This may easily be gained by faithful study of that best and most practical poultry paper,

Farm-Poultry

It teaches how to make money raising poultry and eggs for market. It is edited by practical poultry raisers, who tell their readers how to prevent and cure all poultry diseases; bring pullets to early laying maturity; make hens lay when prices are highest; build the best houses and yards; keep poultry free from vermin; hatch strong chickens in incubators; caponize and dress poultry for market.

Published semi-monthly.

Price, \$1.00 a year; 50 cents for six months. Sample copy and a 25c. book, "A Living from Poultry," sent for 12c. in stamps.

L. S. JOHNSON & CO.,
 Custom House St., BOSTON, MASS.

Mention American Gardening when you write.



If we could teach the
 Indians **SAPOLIO**
 to USE
 it would quickly civilize them

Mention American Gardening when you write.

STANDARD FLOWERS

THE WHILLDIN POTTERY CO.

BRANCH WAREHOUSES:

Jackson, N. J.

Mention American Gardening when you write.

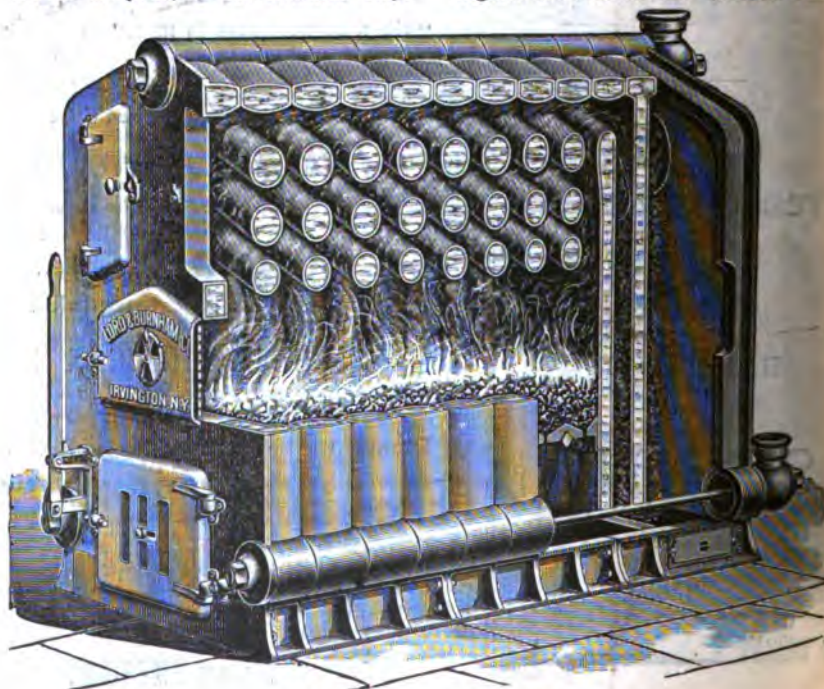
Send for our new price list with extra discounts. All of our pots from 7 in. and upwards have our Patent Flower Bottom, which is a great advantage, as it secures perfect drainage. A Full List of Bulb Pans. **HARTON ST. PHILADELPHIA.** Kearney Ave., JERSEY CITY, N. J. Jackson, N. J. **B. M. Watson, Jr., Busseyinet-South St. Jamaica Plain**

LORD & BURNHAM CO.,

Horticultural Architects and Builders and Manufacturers of Heating and Ventilating Apparatus.

(Established 1856.)

Plans and estimates furnished on application for Heating and Ventilating Apparatus erected complete, or for material only. Highest Awards at the World's Fair.



NEW SECTIONAL HOT WATER HEATER.

Specially adapted to large ranges. Will heat up to 16,500 feet of glass. Highest economy. Moderate cost. Also heaters for smaller work. Send six cents postage to New York office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
 160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
 IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO 145. NEW YORK, OCTOBER 2, 1897. 6 CENTS A COPY. \$1.00 A YEAR.

CONTENTS OF THIS ISSUE:			
Americ'n Institute Show 685	Clematis paniculata..... 681	Plaster, Use of..... 686	Roses, Some Good..... 681
Aristolochias..... 681	Fowls, Color in Typical 690	Plums in Delaware..... 679	Roses Under Glass..... 680
Big Berries for All..... 683	Fruit Garden..... 681	Poison Plants..... 680	Sweet Pea Cupid..... 680
Botanical Gardens, N. Y. 681	Gynura aurantiaca..... 681	Poultry Notes..... 690	Tomato Blight..... 679
Bulbs, Our Supply of... 680	Home Plot, All About 690	Plan for Town Square 678	Tomato Culture, Suc-
Celeriac..... 686	The..... 690	Plan for Village Lot... 681	cessful..... 679
Celery Patch, Dilatory 679	Louisiana, Notes from.. 681	Private Gardeners..... 684	Trees for Shipping..... 686
Chrysanthemum Rust... 682	Market Reports: N. Y., 688-689	Raspberry, Columbian.. 680	Vegetable Garden..... 679
Chrysanthemums..... 678	Phila. and Boston. 688-689	Readers' Notes..... 680	Village Square..... 678
Cky Shade Trees..... 682	Peaches..... 681	Rosa multiflora & others 681	Window Gardening..... 690
			Illustrations.
			Increasing the Lead.... 681
			Plan for Town Square 681
			(Supplement)
			Plan for a Village Lot... 681
			Rosa multiflora as a 681
			Hedge Plant..... 677
			Tomato Culture, Suc-
			cessful..... 679



FIG. 100.—ROSA MULTIFLORA USED AS A HEDGE PLANT. (See page 681.)

The above picture is reproduced from a photograph taken for AMERICAN GARDENING by Mr. P. Bisset, and shows a hedge of Rosa multiflora as seen in the gardens of Hon. Gardiner P. Hubbard, West Washington, D. C. The freedom of growth and profusion of bloom are well illustrated by the picture.

The Village Square.

[SEE SUPPLEMENT GIVEN WITH THIS ISSUE.]

On a former occasion some of the general principles which should govern the laying out of such areas were indicated and their practical application is now set forth graphically by Mr. J. Forsyth Johnson whose explanation of the details follows:

Before entering into a discussion of the development of the square itself, let us first look to the surrounding features. It will be noticed that the corners of the adjoining blocks are shown rounded; this is a suggestion which deserves attention in all places, and is incidentally alluded to here. By following the curve as shown, there are made five or three "corner" lots according to the sweep of the curve. Experience has proved that this treatment greatly enhances the value of the lots for residential purposes—as an instance at Inman Park, Atlanta, Ga., where the ground was thus laid out these "corner" lots realized 25 per cent. above that of the other lots, although the actual area was smaller; it is the frontage and improved prospect that tell.

The important feature of the rounded corners was made because in planning building grounds on the square system the lots on the side streets are some 25 to 50 per cent. below the value of those on the main streets; the cause of this in the square setting out of street corners is that the corner house facing the main street always, more or less distinctly, has its back exposed to the side streets, and this forms a bad introduction to it. By the adoption of rounded corners as here suggested, the side streets are made nearly as desirable as the main streets. Moreover the five corner lots make a gradual transition and each successive side on the curve is but a trifle below its neighbor in importance and value.

The rounding of the corners as above leaves ample space for the four small triangular plots in the roadway; these can be utilized to very great effect and serve as a link, harmonizing the streets with the garden effect of the square. The transition is not abrupt, which effect is also materially aided if the streets be lined with shade trees as indicated. It is important that the trees used in the triangular areas be as shown, narrow, not spreading; they are not shade trees being used merely for effect, and preferably let them be evergreens—the common so-called cedars, for instance. The shade trees, it will be observed, are arranged so as not to interfere with the view from the houses, that is to say, they are planted opposite the divisional line. If the situation be in a business center, of course the buildings will be brought as near to the road as possible, but in a residential quarter the park-like area can be almost doubled by placing the houses at some distance from the road, even to 40 feet.

The trees (*Acer pseudo-platanus*) lining the streets are shown on a prepared ground. This is done merely to indicate the imperative necessity of making proper preparations for their reception—a tree to do well must have good soil, and plenty of it. Make a bed of good mellow loam, five feet wide and three feet deep. It may be well here to caution some of our improvement societies against too deep planting, for that will be fatal. The surface of the prepared soil may be used for grass, or be paved over (except five feet square right around the tree) as necessity demands.

The design is for a public square, not a private garden, and care has been taken that as such its vistas are taken from the surrounding streets. Public squares, gardens, and parks in cities should always display their beauties to the public from the streets. The banking out of these views from the public which pays for them is not to be defended on any ground whatsoever. In arranging for a private garden other considerations arise as can be seen by a reference to the plan already issued by us*. The broken lines

drawn across the plan in various directions show some of the principal views of the square.

The entrances are placed at the corners as affording the greatest convenience here, and also providing long views, each different, and indeed, no two views are alike on the whole ground. The curves of the walks are so taken as to lead pedestrians along them, offering no excuse for their crossing the grass. Around the water and band stand ample provision is made to accommodate those who come to linger, the promenade is wide, and offers many opportunities for the artistic placing of seats. It will be observed that no large trees are to be planted on the island devoted to the band; this is because their presence is destructive to the best results from the efforts of the musicians. The piece of water is of necessity small, therefore no large growing weeping trees are to be used around it, and the surface of the water should be but two inches below the level of the walk, the margin being kept at the level of the walk except where plants on rockery are shown. The raising of a bank around a Lily pond or any ornamental water is against all principles of natural and artistic effects; the water should appear as part of the ground.

The walks are lined with shade trees—Linden, Beech, or Maple—one walk to one tree; thus we will have the Beech walk, the lime walk, etc., using heavy shade trees inside the area and on the surrounding streets the English Sycamore is suitable, or in a smoky atmosphere the Plane.

As regards the other plantings shown, there is scope for much individual taste, but care is advised that the balance between high and low-growing subjects be maintained as is shown in the plan. Our present suggestions are general, not detailed; any special information on that may be had by a reference to the previously issued plan alluded to above. *Hydrangea paniculata* is a valuable shrub and opportunity for its use is frequent. For evergreen effect some of the beds should be planted to Box or Yew, and others again to *Rhododendrons*, taking care to make each subject a distinctive feature and not mixing them all up together in a confused mass. Aim to give local features in the planting. Use *Deutzia crenulata* in some beds, and where they are in a shaded location the *Loniceras* will give satisfaction.

Care should be exercised to secure perpetual effect, thus, for instance, a bed of *Deutzia crenulata* would have a weak appearance in the fall, and some rough growing autumn flowering perennial such as *Hellanthus Maximilianus* should be introduced to bridge over the otherwise dull time. In this connection we would also add emphatically that every border or bed in any grounds should spring into life with the first flush of spring's warmth, which end is best obtained by planting near to the margins, so as not to interfere with the characteristics, the hardy permanent bulbs—Snowdrops, Scillas, etc. In the shrubberies fair masses of *Narcissus* give very valuable effects. It is imperative that a public garden should present a pleasing appearance at any and all seasons of the year; thus the evergreens are to be placed so that they have their special effects in the winter season and act as a frame to the colors lent by the blossoms of other plants in their particular seasons. The art of landscape gardening is to have a reason for the placing of every individual plant.

When we approach the beds in the vicinity of the water the effect of latter may be enhanced by a graduation as it were of the vegetation which surrounds it; for this purpose the plants to be put on the beds in the grass area should be *Arundo donax*, *Eulalia gracillima*, and such like, and the beds on the promenade itself it is suggested to plant with *Cannas* or some such subject each season.

It will be observed that no formal bedding has been arranged for; this is on account of economy, but should such be desired the grass about the pavillion affords ample and suitable space for such work; and it may here be added that Lilies can very effectively be planted in the shrubberies in all parts of the square. The

large bed on the side opposite to the pavillion should be planted so as to have a center height of fifteen feet. *Eucynna alatus* would be effective so used its red leaf in the fall and its bright berries would give a welcome show of color.

In order to get an "established" effect as quickly as possible it is always desirable to use a number of quick growing, cheap plants which are to act as nurses to the permanent subjects, and which are to be cut out and destroyed as becomes necessary. For this purpose the Willows and *Populus monilifera* are well adapted and a variety of color can be had very easily by the use of Castor Bean, tall Sunflowers and such like for the first year or two.

Chrysanthemums.

The Temperature must be watched now, for a cold night may cause lots of trouble. We are not in sympathy with the idea of keeping the plants so cool; it is ruinous to crown buds, and many are annually spoiled in consequence. The conditions governing a crown bud seem to differ materially from those which are best for a terminal. The petals are packed in hard and close, and must have heat, or they will never free themselves, and the center will remain in a hard lump, making what is often called a bad eye. Our houses never run below 50 degrees, and range from that upward for six or seven degrees. A little heat makes the atmosphere dry and buoyant and in this temperature the crown bud will develop into a magnificent deep flower.

Incurved Varieties are some of them improved a good deal if a few of the petals are removed from the center. It is not perhaps absolutely necessary, but I have noticed that Mrs. Twombly makes a higher built flower if some of the petals are taken out so as to give the others more room.

Reflexed Varieties, when crown buds are taken, need more feeding than for the terminal buds, or they lack depth and substance, and all one may get out of them will be a few rows of very long petals and nothing to speak of in the center.

Feeding Tells More now when the buds are swelling than at any other time, and applications of fertilizer can be given often and strong, remembering that pot plants should get the most, as they have so much more to maintain in proportion to the soil they have to grow in, the little six-inch pots most of all. Feeding can be kept up till the flower is half way developed, but if kept on too long the petals will damp, pink and brown kinds being the quickest to show this falling, while Mrs. Robinson will stand feeding, when, judging by other kinds, it is pretty well developed. It makes a very deep flower, and it is wonderful to note its improvement day by day.

Early Varieties like *Marquis De Montmort* and *Merry Monarch* are on the market by this time, but the season hardly seems to begin till Mrs. Robinson comes forth in her peerless beauty.

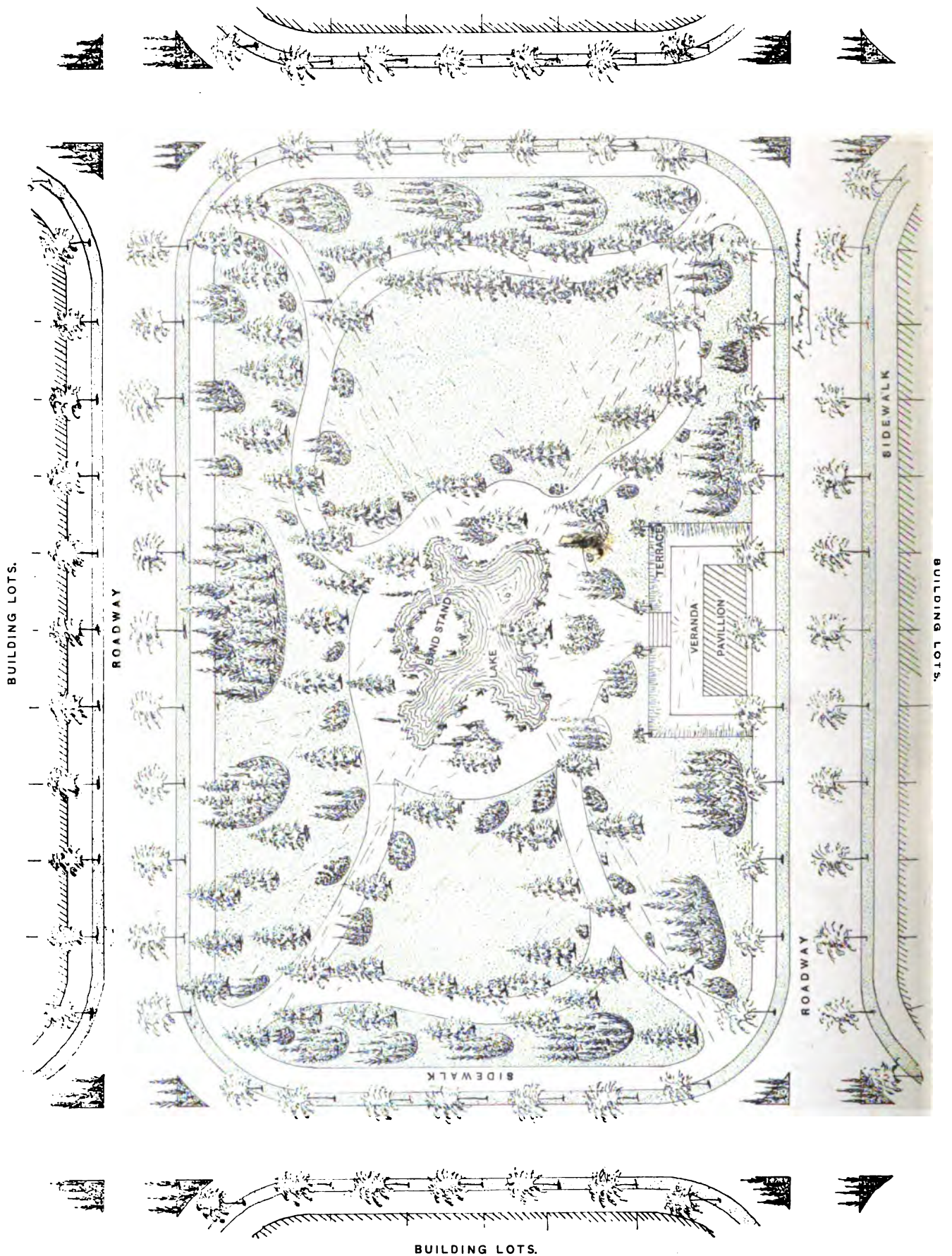
C. TOTTY, N. J.

An Ornamental Bed Wanted.

An ornamental bed on the lawn in view of the parlor windows is desired. Perennial plants and those which will bloom all summer preferred. The location is shaded by high-trimmed trees in the forenoon till 10, and at two the rest of the day by the house. Circulation of air good, light good, water and fertilizers in plenty. Can you suggest plants, perennial or annual, which will thrive and bloom in situation described? How would *Spiraea Anthony Waterer* do? or *Polyantha Roses*? Tuberous Begonias not desired.—D. U. X.

—Without knowing the area of the lawn and its aspect, whether smooth or sloping, it is impossible to form an opinion. Tell us how large a bed is needed, also what the soil is. There are so many things that may be suitable we cannot advise without specific details.

*"How to Lay out Home Grounds"; republished as a separate sheet. Post free 25c.



MODEL PLAN FOR A TOWN OR VILLAGE SQUARE.

The Vegetable Garden.

Preparations for the Winter should now be made by fixing up the cold frames, and doing any necessary repairing and providing shutters and mats to protect the contents of the frames from frost. See that storage cellars are in good condition for the reception of vegetables, as they will soon have to be all in.

Lettuce.—Transplant, if not already done, into cold frames, and if properly taken care of by freely ventilating and protecting from frost, lettuce can be had till February; any full-grown plants that may still remain in the garden, can, if taken up just before frost, with a good ball of roots, and placed on the bottom of a cool dry, airy cellar, be kept three or four weeks. Care should be taken to put them in when the leaves are perfectly dry. Stand them close together and they will commence at once to grow to an ivory-white color, and should be used at once, as they become very tender in the cellar.

Celery.—Do not be in a hurry to put this into its winter quarters, as it will withstand several degrees of frost; if it is stored away too early, and the fall should prove to be a warm one, it will very quickly rot. It is usually safe to let it remain where growing until November 1 or later, according to the latitude and the weather prevailing.

Squash should now be all ripe and ready to store away in a dry airy place. A good place to keep them in until frost is in the corn-crib, or in open shed, where they are sheltered from rain. They should not be allowed to remain where they are liable to freeze, or they will not keep long.

Egg Plants.—Ours have, for the past year or two, both here and in Rhode Island, been quite subject to a peculiar attack of some unknown disease that destroys the vitality of the plant, the leaves become yellow, then brown, and shrivel up and die. I am unable to find any insects or distinguish any blight of any sort, and any reader who has noticed any disease upon these plants, or can suggest a remedy, will confer a favor by communicating. I have tried every remedy, but apparently with no result.

Asparagus Beds.—Now is a good time to make new beds wherever needed. Before any permanent plantings are made, the ground should be well enriched with manure and bone dust, deeply plowed and cultivated. If beds are properly prepared, they will be in good condition when twenty years old.

W. M. EDWARDS, Conn.

Tomato Blight.

(To A. A., Kas.)—The specimens of tomato leaves have been examined, and prove to be affected with the Tomato Blight that has prevailed throughout the country for the present year. The fungus (*Septoria lycopersici*) causing the trouble attacks the plants while they are small, even in the plant bed before setting in the field. While young the plants lose their lower leaves, but soon the stems become affected and show the presence of the fungus in innumerable small dark specks. After these stem-spots appear the whole plant ceases its growth, and losing its foliage, falls to the ground and matures little or no fruit.

The cause is well-established and the remedy may satisfactorily follow. Large growers of tomato plants, who have been troubled, may well use every precaution to clear their beds by the use of fungicides upon the woodwork, and the use of soil obtained from a place where tomatoes have not been grown. It might be still better to build new beds in a new place, and thus move away from the infection.

After the plants are well up, they should be sprayed from time to time, and the same treatment continued in the field. In our experiments with spraying tomatoes the present season, this and all other tomato blights have been kept down by the use of Bordeaux, the spraying being at intervals of ten days. The

cost is but a trifle, and while the sprayed plants are still green and in bloom, those in adjoining fields where no treatment was given have long been practically dead.—B. D. H.

Successful Tomato Culture.

Herewith I hand you a photograph of tomatoes growing in my garden in a suburb of Pittsburgh. They are of the Beefsteak variety, transplanted into ground fertilized with manure from cowyard; on May 31 plants were 20 inches high. Following directions in AMERICAN GARDENING I laid plants down in furrow and covered 15 inches of same 4 inches deep, leaving 5 inches of top uncovered; have given them no special attention except to keep clear of weeds, keep top stirred up to conserve moisture and tie up to trellis of plasterers' lath.

They now (September 6th) measure 6½ feet long on an average; I show two plants in a row of 12, on the first are 26 immense solid tomatoes and on the second, 38. This does not include the first ripe nor the small ones and blossoms. The average for the row at present is about 30 large fruits to the plant. The photo will give you an idea of their size. The one in the quart basket on top measures 5½x4½x2 and weighs 1½ pounds, is not the very largest. The fruits are very



FIG. 191.—SUCCESSFUL TOMATO CULTURE.

solid, meaty, almost seedless and of excellent flavor. E. D. SMITH.

A Dilatory Celery Patch.

What shall I do with my celery? I transplanted it about the 10th of July in light soil fairly rich, the ground being previously plowed; but the celery did not seem to grow. I put 200 plants on one-half an acre the beginning of September and gave some salt. There is rust present. I have cultivated once a week.—T. M.

—Ground intended for the growth of celery cannot be made too rich, it should also be of a retentive nature, and plowed deeply and thoroughly cultivated before the plants are set out. In the hot and dry months of July and August, efforts should be directed to retain the moisture in the ground by frequent cultivation, or by the use of a mulch. If this cannot be done, a good supply of water is necessary, and when the ground is dry, and any watering is done, a good soaking to a depth of at least five inches should be given; a light sprinkling to the depth of an inch or less will not reach the roots, and will evaporate quickly, without any

good results following. As soon as the top soil is dry enough after watering, cultivate thoroughly, leaving a nice mulch of dust on the surface, which retains the moisture in the soil.

On light sandy soils celery is very liable to become rusty, especially during hot, dry weather; this is caused by a fungus, and it is now too late to attempt a remedy. On its first appearance it should be sprayed with the Bordeaux mixture. This will not kill the fungus outright, but it will keep it in check and prevent it from attacking any new leaves. It is sometimes advisable to cut off the badly rusted leaves and destroy them by burning; if this is not done the spores will remain dormant all winter, ready to attack the crop again another season.

The celery being a voracious feeder, possibly suffered for want of food, and the season is now rather too far advanced for the celery to gain much benefit from an application of fertilizer, but if 100 pounds of nitrate of soda be carefully scattered between the rows (being careful not to touch the leaves with it or it will burn them), then cultivate twice by going up and down the rows, to thoroughly work it into the soil, there will be immediate effect if the soil is moist; but if the soil is not moist, the soda should first be dissolved by placing about 2½ pounds into a barrel of water. After this is applied and the weather proves favorable, the celery will grow vigorously until November 1. It is well to remember that good celery cannot be grown with fertilizers alone, it needs plenty of organic manure. Salt is sometimes used to advantage on dry sandy soils to retain moisture, otherwise it has no manurial value.—W. M. E.

Plums in Delaware.

Notes on Varieties.

Among the plums that have borne good crops this year here, the natives have done the best. We had no Japans of any kind. They were just out of bloom at Easter when that cold snap came, and hence they were killed entirely.

Wild Goose and Whittaker gave us good crops and paid fairly well. Newman ripening a few weeks later bore fully, but could not be sold at any price; likewise Rowlette, which is a fine plum but comes at a bad time for profit.

Pool's Pride was loaded with medium-sized light red plums, that ripen here about August 1, Wolf a little later.

Purple Yosemite was the best, I think, of the Americana type and is really a fine plum, though American Eagle and Prairie Flower were both fine.

Rachel, Reed, Moreman, Golden Beauty, Garfield, and Wayland wound up the season, but sold at no profit. Most of these are fine for family use, especially Reed, Moreman, Wayland, and Golden Beauty, but I doubt if there is any profit in them.

I have a number of new varieties on trial that have not yet fruited. We cannot grow plums of the *Prunus domestica* type here with any degree of success, hence it is best to rely on natives and Japans. Some seasons both of these give a crop; it often happens that one or the other fails, but rarely both, so one is sure of plums if he plant both kinds.

There is a point that must not be lost sight of. Don't plant Japans and natives together with the idea that one will pollinize the blooms of the other. The Japans are usually out of bloom and have young fruit as big as a shot before the natives show any bloom, hence one will not fertilize the blossom of the other.

The agent of a well-known nursery sold a man here a lot of Burbank, Abundance, and Satsuma plum trees and sold him Marianna to pollinize them. A pretty good case of fraud, as the Marianna is of little value commercially and no earthly use in respect of a pollinizer. Such instances are common.

CHAS. WRIGHT, Del.

The Philadelphia Times of September 11 contains a very full and interesting description of the Fordhook seed farms of W. A. Burpee & Co., of Philadelphia.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multiplicity of counsel there is wisdom and safety. Write us often.

Our Supply of Bulbs.—In regard to the question in AMERICAN GARDENING of September 11, I take the liberty to say a few words about the question. Having worked and traveled through France, Germany and all through Holland for different nurserymen and bulb growers, I believe I have a little experience and do not doubt but we could grow all kinds of bulbs in the United States. If any one would let me know what kind of soil he has, and the climate, I would be willing to explain my thoughts. I am also sure that L. Harrisli could be grown here very successfully. Of course it takes a little study and careful attention to find out where bulbs will thrive the best, what soil they prefer, etc., but on the other hand there is no easier thing to propagate. The stories of the foreign growers are for me of no account, for they are not growing all of their bulbs on the same soil. Holland, France, and Belgium have all different soils, and neither are their climates the same. If there is any nurseryman who wants to give it a good trial, you may give him my address. Now I hope this will be enough for the present, and shall be glad to hear from some interesting nurseryman about the matter.

Further I will say a few words about our foreign traders. I have seen packed *Rosa multiflora* for climbing Roses of all kinds. I have seen in the spring where they had many Roses, Clematis, etc., left, the names changed for them what were scarce and looked for, and shipped to the United States to be sold on public auction. I have seen transplanted Evergreens two and three years old shipped to the United States, and were never transplanted, and the same with Rhododendrons, Azeleas, etc., as with Roses, Clematis. I myself bought four years ago, when I only was a few months in this country for over \$100 worth of bulbs, and came afterwards to the conclusion that four of the most preferred kinds had been substituted.

I think AMERICAN GARDENING is more widely circulated among amateurs and others horticulturally interested than any other weekly.—XENO.

A Little More Specific, Please!—Nearly all the many readers of AMERICAN GARDENING are doubtless devouring with eager interest the series of articles by Mr. Jerolaman, in order to learn from his experience how to grow such mammoth strawberries as the paper assures us have been grown by him. But if his directions are to accomplish their design, it is quite important that they should be so specific as to shut out all possible misunderstanding. In his last article, (September 25) he says: "I plow in a good coat of well-rotted barnyard or stable manure, not too heavy a coat, or you will make your land too light and thus burn the strawberry roots." Now on reading this a tyro very naturally asks, How much is a "good coat of manure?" Does it mean covering the land an inch deep, or two inches or six? How soon does the coat become "too heavy," so as to endanger making the land "too light and thus burning the strawberry roots?" And again he advises that when the plants are set and start to grow, the ground for one foot each side of the row should be covered with "a good heavy coat of well-rotted manure." And again the question arises, How much is "a good heavy coat?" I once heard of one who being told that "a good coat of wood ashes" would benefit his strawberries, covered his whole bed with unleached ashes three inches deep! Surely this was "a good coat." He reasoned that if ashes are good for strawberries, then the more of them the better. It is of the utmost importance when giving

directions to be followed by others, that the statements should be so clear and so specific that no two readers can get different impressions from them.—W. H. W.

Columbian Raspberry.—I want to tell you a little of my experience with the Columbian raspberry and perhaps get through your columns from some one who has had experience some advice.

Two years ago this last spring I bought one plant and set it in a moderately rich place in my garden. The growth that summer was something little short of marvelous; it had only a few berries, but enough for me to know what they were going to be, and I was very much pleased with them. In the fall I covered the tips and this spring got six good plants which I set out with about same results as to growth, and now I have six—well, I will call them small trees, with their branches trailing on the ground. I want to know the best thing to do with them as to pruning, etc. I would say further that this variety has proved to be very hardy and healthy and satisfactory in every way unless it is that it grows too strong.—FRANK C. DOWD.

Is It Hardy?—I would like to know through your valuable paper if the raspberry Cuthbert is perfectly hardy for northern Illinois and if you can over-winter them safely without protection?—C. G.

An Answer Wanted.—How should crops be rotated so as to get the most off of land. Assuming that the season is of average length, and that the land is located near a good market? Is it better to plant early crops and remove them, plowing and replanting the land, or to plant in alternate rows the early and late crops?—G.

Cupid Sweet Peas.—Referring to your recent remarks I would say I had a couple of large vases in my front doorway, which, as they stood, were most barren and unsightly objects. The bowls were shallow, and I had little hope of making anything live in them, especially as they stood under Pine trees. I, however, put in what little earth I could and planted Burpee's Cupid Sweet Peas and a few Pansies. The effect has been a most agreeable surprise. The Peas have bloomed freely all summer, and have accorded beautifully with the white vases, while the Pansies have lent a tinge of color most delightful under the dark foliage of the pines. Cupid is certainly an acquisition among our decorative flowers, if it is properly planted and cultivated.—J. H. GRIFFITH, N. Y.

Poison Plants.—There is yet another poisonous shrub that resembles the Ivy in its effects; it is the Poison Sumach, growing principally in swampy places. Mr. Stratton is evidently easily affected by the poison. If he will prepare a saturated solution of bluestone and bathe with it he will find a sure remedy. At first it is but a surface trouble, but if allowed to extend, it soon affects the blood and in some cases causes death. It always renders a person more and more susceptible to its effects after each attack. Hard and thick skin is not a safeguard, as I know from experience, having had the "blisters" under the soles of my feet after having penetrated through a leather boot. Yet in my younger days I could handle it with impunity. I am the reverse of Mr. Stratton, yet I am just as easily affected by it at the present time. Recipe: Take bluestone in a stoneware vessel and pour boiling water on it, so that some of the bluestone will remain undissolved; when cool keep in a bottle, scratch the blisters open and bathe. The second application usually cures.—HENRY SNYDER, Md.

A good mixture for painting on the trunks of trees for the purpose of clearing out fungus and insect enemies is made by adding a little flowers of sulphur to, say, about a teaspoonful to a bucketful of white-wash. A small quantity of Bordeaux added will darken the whole.

Poe's Park is now under way. The New York Park Department has adopted plans for the work. Ten thousand dollars are to be spent on the park around the old home of the famous author.

Roses Under Glass.

I have been asked several times if the small black spots, about the size of a pin-head, sometimes seen on the Gontier, were identical with the well-known spot; also its cause and cure. This is not what is known as black spot of the rose, but is the white powdery mildew in a disguised form, and is superinduced by excessive moisture and an insufficient circulation of air; so conditions the reverse of these should be resorted to for its cure. It is not very dangerous, but has a tendency, in bad cases, to induce the green foliage to fall, which is a well-known habit of this variety.

In regard to mildew it is most advisable now, even though none be seen, to prevent its putting in an appearance, by painting every here and there on the heating pipes some sulphur and lime mixed together, half and half, to the consistency of cream. It should not be put on too strong—just enough being applied so that the fumes are perceptible.

It is a very good policy to observe cleanliness in the houses at all times by keeping all dead leaves picked up, and having all other rubbish that may accumulate both on top and under the benches removed.

Don't on any account neglect keeping the plants tied up properly; it will be found that lots of work and time are needed in this direction, as during this month the plants must generally make their best and most rapid growth of the season.

You are all doubtless aware that light is one of the most important factors for the production of fine roses, so if you have not already cleaned your glass on the under side, the work should be done on the first favorable opportunity. I always select a bright day for this purpose, as in the course of the operation some water falls on the foliage. There is always more or less matter on the under side of the glass that obscures considerable light, especially where butted glass is used. We moisten the glass first, then rub it over with a rag, when a fine jet of water from the hose from ridge to gutter plate completes the work.

If you want to grow some of that useful little polyantha rose, Clothilde Soupert, for Spring sales or cutting during next Summer, now is the time to put in some cuttings in a hotbed. They root very quickly, and are best carried over early Winter in small pots, in a cool house.

While attending to our current work, we must not overlook procuring soil for another year. There are undoubtedly many men who neglect this work until almost time for commencing replanting and for quite a long time afterwards they are troubled greatly by the grass growing from the green sod. That is not the only trouble, for it often times happens that owing to pressure of other work, the soil is obtained from the first and nearest spot, irrespective of whether or not it is best adapted to the future welfare of the rose. There is no question but that one of the fundamental principles in successful rose-growing is in procuring a soil best suited to their needs, so we should be most careful in its selection. I find a soil that suits most varieties to be of a good fibry sod, from a pasture of a medium heavy texture; that is, a soil not light or the extreme of heaviness; and much prefer taking it from low lands, but am careful to avoid that which has not been mown or grazed for years, as the large accumulation of grasses, mosses, etc., thereon makes it too light, and it has too much of a leaf-mould appearance when thoroughly rotted down. A good strong loam is what is needed; nothing of a mucky nature. It is sometimes perplexing for those engaged in growing inside a city's limits to know where to get soil near enough at a reasonable cost. We were in that predicament this year, and as we had to get our soil from a point six miles distant, we found the most inexpensive way was to carry it by boat, as the canal was near by at both ends. Soil should not be drawn in wet weather.

H. H.

Some Good Decorative Roses.

Rosa multiflora is to my mind one of the very finest of climbing roses. When once established it is a strong robust grower, sending up shoots from 10 to 12 feet in length in one season, and every year is covered with beautiful single white flowers, so heavy indeed is its white mantle that we have difficulty in convincing one who sees it for the first time that it is a Rose. The picture of *Rosa multiflora* on the first page of this issue gives one a clear conception of the habit and flower of this beautiful Rose. The picture shows a fence covered with the Rose, and so satisfactory is it that we use it a good deal in this way, also for banks, or for covering tree stumps; and for running over the lower limbs of tree in the wild garden nothing could be more beautiful. The leaves are quite large, of a beautiful dark green color, and always look well even when the plant is out of flower. It is very healthy and rarely do we find any insect pests bothering it.

Other Roses we use for like work, and which do equally well are:

Bennett's Seedling from the Ayrshire; it is pure white, double flowers of medium size, and grows 15 feet in one season. Very free flowering. A beautiful Rose to ramble over a tree or a rustic seat.

Dundee Rambler (Ayrshire) a white semi-double flower, is a fit companion of the above in every respect. Of easy growth, it will thrive in a very poor soil where no other Rose would exist; it very often sends out shoots from 15 to 20 feet in length which in their season are quite covered with the small flowers.

Rosa setigera is also a charming Rose for the wild garden, flowering after those just named are past. It lengthens the season of bloom very agreeably; the flowers are of a deep rose color, fading to white, therefore it gives a decided range of color when in flower; the newly opened buds are deep rose, and from this there is a gradation through all stages of pink to almost white on the same plant. The plant is of the strongest habit, sending out shoots 20 feet long.

All of these Roses named should be given their own free will, not being checked in any way, and do very little with the pruning knife, merely removing dead wood. Bend the branches to some object that will furnish some support so that the wind will not break them. Treated in this easy, natural way, any of these Roses will be in place in any part of the grounds.

P. BISSET, Washington, D. C.

The Fruit Garden.

Peach, Crawford's Late.—This is a decided failure with me this year, owing to a very hot spell on September 10, 11, and 12, following a long cool period, the fruits at that time being about two-thirds grown. Since then they have not grown any and are now dropping badly, and to all appearance are dead-ripe culls. Trees of Crawford's Early from which we began to pick on September 18, are laden with full-sized, firm fruit, ripening very slowly. This has been a very peculiar summer, anyhow. I see that we began picking Crawford's Early on September 3, last year. I believe I mentioned in a previous note that peaches and grapes were about two weeks late, and here I am with Late Crawford culls dead ripe, ahead of time, for I see we began on them last year on September 20, so that peaches and time are slightly mixed, but not the trees; they are all right. I have charged the mixing to the weather.

Apples are fine, but dropping rapidly; we are picking full two weeks earlier than usual, for by the usual time there apparently would be nothing on the trees to pick.

Currants.—The bushes are practically bare of foliage, with some fruit trees in the same uninteresting condition. Those most affected are Belle Magnifique cherry, Transcendent crab apple, with Flemish Beauty and Buerre Diep pears. This has been a fruitful season for fungi, there being so much cold, dull, unsettled weather through July and August that

spraying did not control the fungi on the trees mentioned.

These notes sound so much like a constant grumble about the weather that I better stop and start in fair weather.

J. HOLLOWAY, L. I.

Notes from Louisiana.

After a long hot summer, September has set in cool, for which we should all feel thankful. I spend every minute that I can in the gardens, and notice that all the Roses I cut back three weeks ago are full of tender red shoots, and in a little while we will have our autumn Roses in plenty. I cut out all *Salvia* spikes, not waiting for the top buds to open, and the big plants are scarlet.

Rudbeckias are a mass of flowers; I

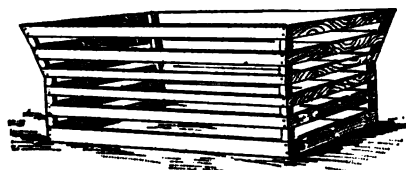


FIG. 192.—INCREASING THE WAGON'S CAPACITY.

notice something being written of their coarseness. I do not find them coarse, they are such a bright, clear yellow, and the foliage is so clean and green.

The blue *Solanum* is hanging full of clusters of flowers; it is not purple here, neither is *S. Wendlandi*, clusters on the latter were a foot across and lasted for weeks. Blue *Solanum* has drooping clusters of large red berries the size of grapes and is very ornamental.

Balsams from self-sown seed are just in good bloom and are much finer than from seed sown in spring. Little self-sown Japanese Glories are full of big, lovely flowers that will increase in beauty as the weather gets cooler.

Allamanda Hendersoni.—A small plant set in a half-gallon bucket last spring is now, September 7, four feet tall and branching. Since the first of July it has been full of big, lovely yellow flowers, and still new buds are forming; the foliage is not dense and the flowers stand out well on the plant. The foliage is

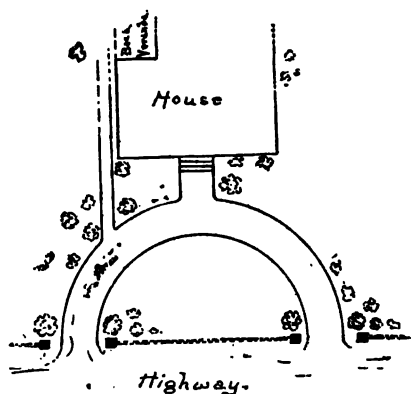


FIG. 193.—SUGGESTION FOR A VILLAGE LOT.

long, smooth, and shining, and the plant droops with the weight of flowers. I shall start a small plant for the gallery and next spring set the big one in the garden. Here a fast-growing plant soon gets too heavy for a woman to handle in a pot. I have a Palm that measures over 10 ten across, and what to do with it this winter I really do not know. If there was a marriage or "swell" entertainment every day in winter it would be little trouble to me, as it is always loaned for such occasions.

Clematis paniculata, for the last six weeks has been lovely, a sheet of white fragrant flowers; it is called an autumn bloomer, but here opened its first flowers in July, and now, September 3, still has scattering clusters of bloom. I think anyone in the cut flower business would do well to have this vine. It is easy to manage, hardy, holds its foliage, and is

never troubled by insects; just a small spray of flowers will scent a room, and for bordering bouquets nothing could be prettier. Coming as it does when there are so few white flowers, makes it a valuable plant. *Clematis crispa*, a native blue, and *coccinea* an imported red, are both profuse bloomers here from early spring till frosts; these latter two die to the ground in winter and early in spring throw up long tender dark shoots that soon branch and cover the vines with flowers. The large flowered *Clematis* flower well here in the spring and a few flower in fall.

Aristolochias.—*Elegans*, from seed self-sown last year, is full of flowers, and as this is the only one that has no offensive odor, it is very desirable. Start the vines on strong twine and they will climb to the tops, and in a few weeks the twine will be strung from the bottom to the top with the really pretty, curious flowers. The foliage is small, smooth, and heart-shaped. *A. ornithocephala* has been in bloom sometime; the flowers are very large, curious, and plenty of them, but the odor is not desirable at all; *A. gigas* *Sturtevantii* is immense in leaf and flower; here in rich soil and with plenty of sun the flowers often measure one yard in length and half a yard across; a vine in full flower is a sight to behold. This year I have mine in the far lot, for the smell is so terrible that I will never have one near the house again, but all the same it is a grand vine.

Gynura aurantiaca (see page 621) here in Louisiana makes a nice plant for outdoors, but I notice a plant growing where it is in partial shade nearly all the time is much richer in color than plants that have sun all day. Years ago I had a very fine *Gynura* plant; the foliage was much larger than any I can grow now, the coloring, too, was much richer. I kept the plant on an upper window shelf in the living room, and it had little sun; in spring I pinched out the ends and put the plant in a cool sheltered place; it bloomed in summer, then mealy bug that came in plants I bought destroyed it; the flowers are yellow and insignificant.

MARGARET E. CAMPBELL.

Plan for Village Lot.

The accompanying plan for laying out a village lot has given such satisfaction to the writer that he reproduces it as a suggestion for others. The half-circle driveway is both ornamental and exceedingly convenient, as it does away with the necessity for all turning of teams. You drive in at one entrance and out at the other. The plan shown does not provide for a stable, but when this is an adjunct of the premises, a driveway to it takes the place of the walk to the back veranda, that is shown, the entrance curving slightly as it leaves the half-circle driveway. Such an arrangement of the grounds gives an excellent chance for the disposal of shrubbery, and leaves an open space in front that can well be utilized for flowers.

W. D.

Increasing the Wagon's Capacity

It is frequently desired to haul to market, or from the garden or field, a load of bulky, but light, produce, such as cabbages, squashes, etc. The ordinary farm wagon will not hold half, perhaps, that the team could haul. In such a case he contrivance shown in the cut will be found very useful. It is a strong, but light frame made of a size and shape to set into the body of the farm wagon, occupying the whole space. The back can be arranged to let down on hinges, if desired, for convenience in unloading.

New York Botanical Gardens.

As we go to press we learn that the Board of Apportionment and Estimate has voted the appropriation of \$500,000 as instructed by the act incorporating the Botanical Gardens. The City of New York is to be congratulated at this successful termination of a long struggle between opposing factions.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1897.

PUBLISHED BY
A. T. DELAMARE PTO. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.
REGISTERED CABLE ADDRESS
Commercial Cable Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

WANTED.

Copies of AMERICAN GARDENING for March 20, 1897. Address the Publishers.

The Chrysanthemum Rust. SPECIMENS of diseased Chrysanthemum leaves recently submitted by a New Jersey florist were submitted to Dr. Halsted for examination and advice as to the course of treatment to be pursued. His reply is as follows:

"There is a genuine rust upon the cultivated Chrysanthemum sent by your correspondent, and it probably is the *Puccinia tanacetii*, D. C. There is doubt as to the species, because only the uredo spores have been found upon the leaves examined, but these agree in size and shape with those of *P. tanacetii*, and furthermore this species is found upon a species of Chrysanthemum as shown by an herbarium specimen.

"The florist has written me that he may lose his whole crop from this rust. It appears upon the foliage in small brown spots, which consist of heaps of spores borne upon the tips of threads that have pushed through the skin of the leaf. The Carnation rust is not unlike this in general appearance, but the final spores are very different, provided the Chrysanthemum rust proves to be as suspected.

"Growers of Chrysanthemums should

look to their plants, and if any find the rust it ought to be dealt with summarily, for the enemy is a serious one. The rust fungus sends its threads all through the plant before the spores are produced, and therefore spraying may not prove a satisfactory remedy for it. All affected leaves should be picked off and burned."—BYRON D. HALSTED, Experiment Station, New Brunswick, N. J.

City Shade Trees. UNDER our modern system of constructing streets, this is in fact a misnomer, for there are not and cannot

be healthy trees of any size in the great majority of completed streets. This is because the residents in them are either too poor in æsthetic education to appreciate them or so destitute of the necessities of life as to be without thoughts of a horticultural nature; and on the other hand, wealthy residents admire and demand such perfectly shod streets and avenues of asphalt and kindred material from side to side that hardly a spot of Mother Earth can be seen, unless, as sometimes happens, the spot be about the base of a relic of past poverty days and dirt roads.

Do our city fathers believe that trees can thrive on the rains that run into the sewers coupled with a bountiful supply of water, gas, and electric mains at the roots, not to mention little amputations done by the stringer of our disfiguring overhead wires? And again, the trees are being crowded to the wall by the elevated railroad here and there. We cannot have waterproof avenues and vigorous shade trees at one and the same time.

We usually start well when opening a new street; some country-loving citizen plants and suggests planting trees, which, by the bye, as a rule, has to be done several times before the small boy forgets to whittle the bark from the trunk, and the city drivers find out that the tree is not a juvenile hitching post. These trifles past, the trees begin to feel their feet, as it were, and try to forget they are now city trees, not minding the few cobblestones in the street and the modest three-foot slabs for a walk, later. But the three feet is soon replaced by a six or eight-foot paving right up to the cellar walls of the artistic flat, the occupants of which soon decide that nothing but an asphalt road will give style and repose to the neighborhood; this last it certainly does, for the trees (thinking, no doubt, of style) soon dwindle and die in repose, and stone and brick remain to constitute the beauty of our great modern cities. And this is the end, unless some public-spirited officials see the need of a breathing spot for the tired-out every-day toiler.

Such officials may truly be called public benefactors, and it is gratifying to see so many coming to the front in that great humane work of creating so-called city parks. In these our hopes must center and herein only (with few exceptions) can we look for and expect to find flourishing city shade trees.

The necessities of the modern city life having chased our shade trees into other breathing spots, or out into the suburbs, which latter stand to the man of means, as does the city park to the poor, we run over in our mind the available

material and are surprised at the small number of trees which are really suitable for the work in hand, being all the time reminded of the large number of beautiful deciduous and evergreen trees that will not even do fairly well in these "parks."

Starting, we place *Salisburia adiantifolia* (Ginkgo tree) at the head of the list. This wherever we have noted it in Hartford, Conn., Newport, R. I., Brooklyn and New York, N. Y., and Washington, D. C., has been a clean tree almost exempt from insects and disease. The tree is a vigorous grower with foliage of a peculiar shape and color, and added to these qualifications, is its fantastic or eccentric style of growth; it is one of the first trees to catch and hold the attention of beholders, as a very uncommon and beautiful tree of medium size.

Next may be placed *Liriodendron tulipifera* (Tulip tree or White wood). This has also a peculiar appearance, inasmuch that the tips or points of the leaves are missing. The color of the foliage is of a light shade, always clean, and being smooth any dust is easily washed off. The habit is of a decided pyramidal cast, spreading considerably at the base if given room; add to these the wealth of Tulip-like flowers and it may be added up as a vigorous, clean, straight, ornamental tree of large size.

Acer platanoides (Norway Maple) is commonly looked on as the ideal city tree; it varies considerably from the natural habit of a round-headed top of dark-green leaves which turn to a russet brown yellow in autumn.

To many persons *Acer saccharinum* (Sugar Maple) is far superior, especially for avenues or as a single specimen, making an almost too regularly pyramidal tree, the branches coming out horizontally with a slight upward curvature. The foliage is not quite so heavy as the Norway Maple, but usually it colors finely in the autumn, ranging from a very light green to a clear orange and crimson, which characteristic each individual tree appears to retain in a more or less fixed degree every year. Some of these specimens in health and in their showy autumn colors are objects not to be soon forgotten, or easily effaced by any other ornamental deciduous tree. For effect "en masse" we recall a wonderful color panorama seen when riding from the Profile House to Sugar Hill in the White Mountains, the third week in September. Together with them was the golden hue of the Yellow Birch so plentiful in that locality. The wholeforming a sight long to be remembered.

Such then are a few outline ideas of the city shade tree question, and to what end does it all lead? Simply to the conclusion which year by year is more forcibly impressing itself upon us, that modern commercial conditions preclude the general street planting of trees and that there is a demand of growing intensity, a demand that is wrong from the tollers of the factory by increasing competition to obtain the wherewithal to support life, a demand for that pure air of ages gone. This can be to some extent supplied by the establishment of city squares.

Park commissioners and city governments in the name of humanity devote more attention to multiplying small park areas in crowded districts.

BIG BERRIES FOR ALL.

Being the Cultural Methods of Henry Jerolaman, the N. J. Strawberry King, Preceded by an Autobiography.

Continued from page 651.

After moving to Mendham my father rented out the old farm on shares, that is, for one-half of all crops grown. This grain was divided on the farm, my brother and I carting and selling it in Newark at odd times during fall and winter, sometimes we sold it at Drake's mill near Irvington, some four miles on our side of Newark.

In going to Drake's mill we passed a beautiful farm fronting on the main road for three-quarters of a mile. I told my father about this farm, as it then was owned by a Bishop Hughes from Ohio, who wanted to sell it and go back to Ohio. I persuaded father to come down and see it, telling him as an inducement that we could sell right at our door all we could grow on it, and not have to work all night. When father saw the farm he gave me a scolding and forbade me to say anything more about it, as the area was too small for him. I answered, saying that if he did not buy the farm I would. This engagement I never forgot, and I think can safely say have never been known not to do that which I have promised; I try always to keep my word. This farm is located near Drake's mill on the road leading to Irvington, then known as the Arbor, now known as Irving Place.

To make a long story short, I will simply state that after my brother and I told father we would not stay longer at Mendham, he sold or traded the Hilltop for some property in Twenty-fifth street, between Sixth and Seventh avenues, three houses in a row then owned by Robert Orr, the builder of the Croton Aqueduct. We helped father move to the city, and he then told me I could go to the public school (I called it the pauper school), or earn my own living. Choosing the latter, I went to Brooklyn, N. Y., into a store, and let it suffice to say here, that year after year I went out to see the farm just referred to. It had changed hands several times when I bought it in 1865, and on it I lived from then until 1870, when Seth Boyden (who owned a farm that nearly joined one portion of my farm), died. After his death, in the spring of 1870, I bought the Boyden place, my present residence.

While on the Arbor farm, as it then was called, I tried almost everything to make my word good with father, to get off of one acre more than he had ever received in one year from the whole farm. I did very well with tomatoes, selling the early ones at \$1.25 per basket in July, as my books show, but the expense was great and I did not make clear over \$200 per acre; the nearest I came was with Norway oats. I had a large field of this and I made over \$4,000 (I paid income tax on \$2,000) per year on this farm, working more than five times the land I do now.

As soon as I bought my present place I commenced to grow strawberries. I had never set a plant nor had I ever seen a plant set at that time, and when I bought Boyden farm, as I called it, I only found a small bed of Boyden No. 30, but three short rows 9 feet by 13 feet in length. As I stated, I bought this place in the spring of 1870, and in July of the same year I prepared one-half acre of the best of the land, gave it a good heavy coat of barnyard manure, hired a first-class gardener who came all dressed up like a gentleman and had his tools with him. These were embraced in one piece of iron, bent over at one end for a handle, the other end, about one foot long, was sharpened to a point; the iron was about one and a-half inches in diameter (I found out after that it was a trowel or cabbage setter).

The gardener drew a line and called for plants. I took them up with a spade, and incidentally cut a great many in two with the spade, "but," said the gardener, "that made no difference so long as they had any roots they would come

on all right." I remember that he set out the plants much faster than I could dig them up with the spade; all he did was to walk alongside of the line, stick down his iron peg in the ground, pick up a plant, and drop it in the hole he made with his peg, then taking his peg he would stick it alongside of plant and give it a push which would hold the plant fast in the hole, so that the wind did not blow it away.

I should state that he made me drop the plants one about every foot alongside of the line, and when I spoke to him about the loose and careless way he was setting the plants, suggesting it would be better to press down the soil on each side of plant with his hands (I thought if he did that I could keep up with him), I never shall forget his answer; it was about as follows: "Look here, who is doing this, you or I? I'll be — if I will get down on my knees (and soil my hands) for you or any other man, and if you do not like my way of setting out plants, set them yourself. I have set out plants for years before I ever saw you, and I know my business." He did, his business was to get my money. He got it.

About one-half of the plants died, and perhaps the others would have died too, had it not happened that I had a contrary horse that every time he was put to a cultivator, if you attempted to drive or lead him, would either go backwards or sideways, taking one row with his fore feet and another with his hind feet, and what plants the horse did not tread on I did with my feet while trying to keep the cultivator from tearing up the whole business. I found out after we (myself and the horse) had cultivated the strawberries that the horse evidently knew more about setting strawberry plants than the gardener or I. The plants on which we had trodden (except those that we had knocked entirely out of the ground) all lived and did well. This taught me a lesson, and in after years when in spring after uncovering my plants, if I found some that the frost had heaved up, I take a board and get on it and then press them back in the earth. I find by looking over the books that this one-half acre cost me to fertilize, plow, keep clean, cover, and pick and cart to market, \$83.60, the total income from fruit sold was just \$64.25, a net loss of \$19.35. This looks a little discouraging, but I remember telling father when he asked me when I expected to beat his farm with one acre, to wait, father would answer "O yes, I guess it will be wait."

My father had moved from New York City back to Newark, N. J., and often drove out to see me during the summer of 1871 after picking the berries. The strawberries picked in 1871 were dirty or sandy, the same as Southern berries, and brought only a trifle more, although they were much larger. I had not commenced to mulch them. My neighbors would often joke with me and ask how my one-half acre of strawberries paid or "panned out," as some called it. They had never seen a half-acre of strawberries set out in the place. Among them was a middle-aged man, Mr. Ogden Brown, who often came down to see my field of strawberries; he came one day when I was picking strawberries (I was picking in a wooden tray—butter-dish). Laughing at me, he said, "Mr. Jerolaman, I suppose you came out here to teach us folks how to grow strawberries? You city folks must always come out here to teach us something." I was a little nettled or angry as some would call it, but I answered him with a smile, "Yes, Mr. Brown, you are perfectly right; I have come here to do you and all my neighbors good, not evil, and I propose to teach all Middleville (as it was then called) how to grow strawberries, and I will if I live."

Mr. Brown answered me with fire in

his eye, and stamping down his cane, said: "Come up to my place and I will show you a little garden patch that has more and better berries on it to-day than your whole field." Show us, will you? Dropping my tray, I said, "All right, I will go with you right away, Mr. Brown, for I well know that where there is concentration there is power, and I want to see the little patch that will beat my one-half acre, and then I will beat your patch."

He was in good humor by that time, and when I saw Mr. Brown's patch I knew at once what was wanted. I noticed that his berries were much larger than mine, although they were the same variety (Boyden No. 30), and that he had put a heavy coat of stable manure all around and between his plants, and that the berries were much cleaner looking than mine, as the straw in the manure had kept the soil off the berries when it had rained.

But that which I noticed most was the berries on one side of a row next to the walk, where Mr. Brown in mowing his grass plot had taken the grass and strewn it on the path; on that side the berries looked as if they were varnished, they had such a gloss. I said nothing to Mr. Brown at the time about this, but bidding him good-bye, I went home thinking. As there was a piece of salt meadow that went with this place when I bought it, I had all the salt hay mowed the next month. I kept the one-half acre clean as I could all by myself, so as to show a profit the next year.

The Henry Strawberry Is Controlled Exclusively by American Gardening.

Mr. Jerolaman wishes it to be distinctly understood that he is not a nurseryman, but is a fruit grower; it is not his business to sell plants. Hitherto he has disposed of a few plants in order to have the variety generally tested. For the future, however, the Henry Strawberry plants will be distributed only as premiums through AMERICAN GARDENING.

Plants will be delivered from now onward through the month of October, or until the ground freezes, which in the place where the plants are growing is not until December. Mr. Jerolaman always sets out plants for himself until the middle of November, and in some seasons even up to the end of that month.

Treatment of Plants on Receipt.

Enquiries from some readers necessitate the advice to set out the plants at once on receipt, wetting them if the sun be very hot, and shading them in the middle of the day. There is no necessity whatever for anyone to put the plants into a cellar for a day or two before planting out.

Of interest to all engaged in agriculture in any of its branches will be the Congress of Agricultural Industries, to be held at Omaha during the Trans-Mississippi Exposition period. This congress will be composed of representative delegates from State Boards of Agriculture, agricultural journals, horticultural societies, dairymen's associations, live stock breeders' societies, and all other kindred organizations, and will continue in session for from two to four weeks, during which time a number of national agricultural societies will also hold their annual conventions in this city.

Four State Meetings in One.—The annual meeting of the W. Va. State Horticultural Society, Sheep Breeders' and Wool Growers' Association, together with the State Board of Agriculture, will be held at Martinsburg, October 12, 13, 14, 15, 1897. The Horticultural Society will open the four days' session on the morning of the 12th; the last two days being given over to the State Board of Agriculture and State Grange.

The foreign walnut crop is reported as short this year.

W. & D's.
CELEBRATED SURE CROP.
MUSHROOM SPAWN.
8 LBS. FOR \$1.00.
Lillum Hareish, Roman Hyacinths, Freesias,
Paper White Narcissus, Callas,
Etc., Etc.
Special PRICES on application.
WEEBER & DON,
Seed Merchants and Growers,
114 Chambers St., N. Y. CITY.

Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and
dealers in Cut Flowers
50 West 30th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Com-
mission. Best market prices guaranteed.

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send
10 cts. for Mrs. Theodora B. Shepherd's

New Catalogue of Rare and Beautiful
Flowers.

Many New Begonias, New Cosmos,
Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.
Mention American Gardening when you write.

...GREAT...

Horticultural Exposition

FLOWERS, FRUITS, VEGETABLES.

AMERICAN INSTITUTE FAIR

Madison Square Garden, New York.

SEPT. 27th TO OCT. 23d.

\$5000 in Cash Prizes, also Medals, Cups,
Diplomas and Certificates.

For particulars apply to

DR. F. M. HEXAMER,

Madison Square Garden, New York.

Mention American Gardening when you write.

PRICE LIST FOR

Exhibition Stationery

1000 Entry Forms	\$2.75
Two Exhibitor's Books	2.00
Two Glass Books	2.50
Six Judge's Books	3.00
500 Entry Cards	3.50
500 Pastors (assorted)	1.00
Total	\$14.75

Secretaries of Horticultural, Agricultural,
or any other form of competitive show, are
invited to write us for full particulars.

It is freely conceded that the system we
have adopted saves time, temper, trouble,
worry and expense.

The clerical work of every exhibition, large
or small, should be run on business lines, and
you will find this system the best, the easiest,
least expensive, and most satisfactory. Ad-
dress correspondence

A. T. DE LA MARE PTG. & PUB. CO. Ltd.

P. O. Box 1697, New York.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent
appointments and movings are requested to
forward particulars of the same for publica-
tion in this column. No charge is made.

A yellow Canna of remarkable intensity
has been received from Mr. Hanson, who
has charge of the gardens of Dr. Warder,
Irvington-on-Hudson, N. Y. The seg-
ments of the flower are of but moderate
width, inclined to narrow, but in color
they surpass anything that we recall.
They are of a rich Indian yellow, equally
intense on both upper and lower sur-
faces; the numerous small splashes of
pale red on the innerface of each segment
are so thin as to appear pale brown ex-
cept on one segment where a few are
more decidedly red.

We are in receipt of a copy of the Jour-
nal of the Kew Guild No. V. It contains
a portrait and memoir of J. G. Baker,
Esq., portraits of some deceased leading
gardeners who were once at Kew, and
the present address list of old Kewites.

Birth.—At Wethersfield, Conn., Septem-
ber 25, the wife of David McFarlane of a
son.

Show Fixtures.

Secretaries of societies are invited to
forward dates of coming exhibitions so
that an announcement may be made in
these columns.

Mount Kisco, N. Y.

M. J. O'Brien who has for several years
served as gardener to Mr. Robert Scoville,
at Chapinville, Conn., has entered the
ranks of commercial florists, locating in
this town, where he hopes to build up a
profitable local business. The contract
for building and heating his greenhouse
has been awarded to Henry W. Gibbons,
of New York.

Poughkeepsie, N. Y.

The next meeting of the Dutchess
County Horticultural Society will be held
at the Court House, Poughkeepsie, Octo-
ber 6, at 1:30 P. M., when a paper will be
read by Mr. William Russell, entitled "My
Experience With Greenhouse Grapes
Grown Outside."

Mincola, N. Y.

At the Fair held here this week, the dis-
play of William L. Swan of the Seawan-
haka greenhouses, Oyster Bay, was the
center of attraction in the floral depart-
ment. His magnificent exhibit of palms,
some of the specimens of *Areca luteascens*
spreading to a height of ten feet, occupied
the center stand of the building. Some fine
specimens of *Araucarias* attracted con-
siderable attention. Mr. Swan's collec-
tion, which consisted of over 200 pots
and baskets, contained some fine spec-
imens of ferns. P. H. Scudder of Glen
Cove had a large display of palms, ferns,
and greenhouse plants. John Lewis Childs
of Floral Park, the finest display of Glad-
doli ever seen here, and a large display of
miscellaneous cut flowers; G. Rogers of
Hempstead, a large assortment of green-
house plants, Geraniums, Begonias and
Coleus; Ferd Boulon of Sea Cliff, some
handsome floral designs, Roses, Carna-
tions, and palms. Oasis Nursery Com-
pany of Westbury exhibited Cannas, Be-
gonias, and shrubs.

Philadelphia.

The principal event of the past week
was the third annual exhibition of the
American Dahlia Society held on Septem-
ber 21 and 22 in Horticultural Hall. The
show was quite a success and from the
interest taken clearly shows that more
attention is being given to the cultiva-
tion of the Dahlia than formerly. The
judges were Thomas Cartledge, Edwin
Lonsdale, and William K. Harris.

W. P. Peacock filled two large tables
with Dahlias which he had grown as

trials for the Dahlia Society; among
them were some grand flowers. The two
tables were gone over carefully by all
growers of Dahlias, who were thus able
to determine the value of each variety.

Among the Dahlias were a great many
American seedlings, one of the prettiest
of which no doubt is Gilt Edged, a fancy
variety with medium-sized flowers, com-
posed of peculiar-shaped petals, edged
golden yellow. It is an exceedingly free
bloomer, and of an almost new type. It
is introduced by A. Blanc. In the same
exhibit were Grand Duke Alexis, a flower
absolutely unique; the form and color
are perfection, being large and globular,
petals nicely rolled, of a creamy white,
shading to pink. Others noticed were
Colossus, a giant in size of bloom; Glori-
osa, a glowing scarlet, brightest of all
the cactus type; Blanche Keith, un-
doubtedly the best yellow; Mrs. Glad-
stone, an English variety of great merit;
Matchless, a fine dark variety; Miss
Florence Shearer, a delicately shaded
lavender; Snow Clad, a pure white pom-
pon.

Premiums awarded were as follows:
Largest and best general display—
First, William Henry Maule; second, A.
Blanc.

Cactus Dahlias, vase of 50 one color—
First, A. Blanc for William Agnew;
second, W. H. Maule for Red and Black.

Twenty-five blooms, one color—First,
W. H. Maule for Clifford W. Bruton.

Show Dahlias, thirty-six blooms, red—
W. H. Maule for Ruby Queen.

Thirty-six blooms, white—A. Blanc for
Glory of Lyons.

Thirty six blooms, pink—W. H. Maule
for A. D. Livoni.

Thirty-six blooms, yellow—W. H.
Maule for Pluton.

Fancy Dahlias, twenty-five blooms,
tipped—W. H. Maule for Frank Smith.

Twenty-five blooms, margined—W. H.
Maule for Fern-leaved Beauty.

Twenty-five blooms, blended and
shaded—W. H. Maule for La France.

Twenty-five blooms, mottled—A. Blanc
for Uncertainty.

Twenty-five blooms, any other color—
A. Blanc for Mrs. Gladstone.

Pompons, vase of white—W. H. Maule
for Snow Clad.

Vase of any color—A. Blanc for Vivid.

Singles, twenty-five blooms, striped—
E. Clifton Taylor for Novelty.

Six largest flowers any variety—A.
Blanc for Colossus.

New seedling, best of any type, not yet
introduced—First, A. Blanc for Gilt
Edged; second, E. Clifton Taylor for
Single Surprise.

Novelties in Dahlias—A. Blanc for
Grand Duke Alexis.

Best display by an amateur—First,
John McGowan, gardener to Mr. Bay-
ard, Germantown; second, James Camp-
bell, gardener to Mr. J. D. Winsor, Haver-
ford.

Cannas, best display of flowers ar-
ranged in flat dishes filled with sand—
First, A. Blanc; second, Henry A. Drex,
Inc.

Collection of Cacti—A. Blanc.

Flowers at Bristol County Fair, Taunton, Mass.

The 74th exhibition of this Society was
conceded to be the best in nearly all its
branches. The display of fruits, flowers,
and vegetables was very good and more
extensive than usual. Among vegetables
the prize for the most extensive display
went to Col. F. Mason, Riverside Farm,
Taunton (E. C. Lewis, manager), who
staged an admirable table of 170 vari-
eties; this did not comprise any of the
dried peas, beans, corn, and various seeds
usually seen in such displays. All the
numerous vegetable classes were keenly
contested.

The schedule of this Society for fruits
and vegetables is copied somewhat after
that of the Massachusetts Horticultural
Society's fall show. Among fruits
apples were of good quality, while pears
were smaller than usual; peaches and
grapes have been more largely shown,
but quality was good. In cut flowers
the display of Dahlias was much finer
than at the recent Boston show; H. F.
Burt, Taunton, was the largest exhibi-

tor, staging 2,500 blooms in 850 varieties; other large contributors were Winter Bros., Mansfield, Mass.; John Endicott & Co., Canton, Mass., etc. The leading winners in the other cut flower classes were Dr. O. S. Paige, W. N. Craig, C. P. Borden, Briggs' greenhouses, and A. C. Lane. Plants were more largely shown than usual. W. N. Craig captured first and special for general display; other exhibitors were C. P. Borden, Dr. O. S. Paige, and Mrs. C. S. Sweet. C.

New York.

The horticultural display in connection with the 66th fair of the American Institute is now in full swing at Madison Square Garden, New York, and it merits the careful attention of all who can visit it.

The display of Dahlias fully comes up to what was anticipated, and doubtless is the greatest display ever made in New York City and possibly in America. More than 20,000 blooms were staged in competition and many of the classes were keenly contested; some of those competitors who had to take the minor honors coming very close up to the more successful rivals. A great change is noted from last year. Then W. P. Peacock, Atco, N. J., and Rev. W. C. Bolton were practically the only exhibitors of high-class blooms. This season there is a very much larger number of exhibitors, some of whom have come great distances. Another pleasing feature is the large increase of purely amateur exhibitors. Among these notably were D. Wilson, Orange, N. J.; W. H. Smith, Maplewood, N. J.; Rev. C. W. Bolton, Pelham, N. Y.; J. Holloway, Glen Cove, N. Y. Among professionals were W. P. Peacock & Sons, Atco, N. J.; H. F. Burt, Taunton, Mass.; Lothrop & Higgins, East Bridgewater, Mass.; C. W. Ward, Queens, L. I.; and J. L. Childs, Floral Park, N. Y.

John Lewis Childs, Floral Park, made a superb showing of hardy and half-hardy perennials and bulbous plants. Tritomas were very striking, especially the vase of T. Pfitzeri. Montbretias were admirably represented with three grand vases of M. crocosmæiflora, M. Sollei Couchant and M. elegans. The quaint Spider plant Cleome pungens in red and white forms with Phloxes and Lillium speciosum Melpomene were all noteworthy. The showing of Gladiolus from the same firm was unique, no finer showing of this flower having ever been made in this city. One hundred vases containing from six to a dozen or more spikes in each made a display brilliant beyond description in color effect and variable enough to meet the color fancies of all beholders. Among them we noted particularly fine Torch-Light, Canary Bird, W. Falconer, Eugene Souchet, Columbia, and Lamartine. Tuberous Begonias, single and double, giant Cockscornes, Tuberose, Verbenas, and Zinnias in fine strains also came from Mr. Childs.

The finest collection of hardy perennials was that from H. McK. Twombly, Esq., Madison, N. J. (gardener A. Herrington). Some of the newest hybrid Tritomas were shown in this group as Ophir, H. Cannell, and Star of Baden-Baden, this last one of the finest varieties yet raised. Rudbeckia, Autumn Glory, Verbena venosa, Lathyrus latifolius, the new Helenium grandicephalum striatum and some of the finer hybrid Asters were shown in large bunches of each kind, illustrating well the floral riches of this season to be culled from well-planted herbaceous borders.

W. H. S. Wood, Greenwich, Conn. (gardener, J. W. Duncan), was a large exhibitor of hardy flowers, prominent in his group being large bunches of Physalis Franchetti, Eryngium planum, Baccharis halimifolia, Caryopteris mastacanthus, Aconitum Fischeri, and the fragrant Cedronella cana.

A collection of hardy shrubs mostly bearing berries, was also shown by Mr. W. H. S. Wood. This was a most interesting and instructive exhibit. Prominent in fruit were Berberis Thunbergi, Celastrus scandens, Ilex verticillata, Laurus Benzoin, Lycium chinense, Amelanchier spicata, Hippophae rhamnoides, Shepherdia argentea, Dimorphan-

thus mandshuricus, Elaeagnus umbellatus, and Viburnum opulus. Flowering shrubs in the same group included Lagerstræmia indica, Spiræa tomentosa, Vitex agnus-castus, Caryopteris mastacanthus, Desmodium penduliflorum, Abelia rupestris and Spiræa Anthony Waterer.

Wild Flowers.

Great interest is always evinced in the wild flower class, and here A. Herrington made a great showing with over 60 vases of distinct species. There were Golden Rods in nine forms, Asters in like number and besides large vases of the Fringed Gentian (G. crinita), the closed Gentian (G. Andrewsii), Chelone glabra, and others. A smaller but charmingly varied collection was shown by Miss Ida C. French, Springfield, N. J. Asters and Golden Rods were numerous here with Lobelia, Achillea, Gerardias, Evening Primrose, Chelone, etc.

Carl Blomberg, gardener to Oakes Ames, Esq., North Easton, Mass., on Tuesday made a display of Water Lilies and also a great display of native wild flowers.

Plants.

From the F. R. Pierson Co., Tarrytown-on-Hudson, N. Y., came a large miscellaneous collection of foliage plants—Palms, Dracenas, Pandanus, Araucarias, etc., while the many fine specimens of Nephrolepis davallifolia and Bostoniensis disposed around the hall were from the same firm, as also a charming group of coniferous trees in pots.

H. A. Siebrecht & Son exhibited two fine pairs of standard and pyramid Bay trees which were conspicuous ornaments to the platform.

J. M. Thorburn made a great exhibit of vegetables and other products of their seeds, the Squash family in every conceivable form, Egg plants of a fine strain, Beans in great variety, Peas of good quality, and other seasonable vegetables too numerous to mention in detail.

Weeber & Don put up a tastefully arranged exhibit of garden requisites and products, onions and tomatoes, both being represented by excellent samples in the finest standard varieties. The arrangement of this exhibit calls for special comment, as we rarely see such tasteful staging. Among garden requisites the Mushroom Spawn, a specialty of this firm, was shown in quantity and of high apparent quality.

The collection of nuts from Parry's Pomona Nurseries, Parry, N. J., was more extensive and even more remarkable than that which attracted so much notice at the show last year, chestnuts of immense size were Paragon, Success, Comfort, and Parry's Giant, Persian, Japan, and American walnuts, with hickory nuts and filberts contributed to this unique display.

From W. Rockefeller, Tarrytown, N. Y., (gardener William Turner) came six immense fruits of Pitnastion Duchesse Pear gathered from pot-grown trees. Visitors seemed loth to believe that these magnificent products of garden craft had been grown in this state.

Next week there will be a great display of fruits, also stove and greenhouse plants, cut flowers, etc.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and, therefore, requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

We are
ready to
fill your
order for

PEACH TREES

Guaranteed free from Yellow, Rosette, or San Jose Scale. State Inspectors certificate with each order. All standard varieties including Elberta, Emma, and Triumph. Also Pear, Plum, Apple, and other Trees and small Fruit plants. Catalogue on application.

CHAS. WRIGHT, Seaford, Dela.
Mention American Gardening when you write.

DWYER'S SUMMER and AUTUMN LIST

Of Pot Grown and Layer STRAWBERRY Plants, CELERY, VEGETABLE Plants, FRUIT Trees and ALL NURSERY STOCK will be mailed free to all who apply for it.

T. J. DWYER, Cornwall, N.Y.
Box 178.

Mention American Gardening when you write

FREE ILLUSTRATED CATALOGUE...

Ornamental Trees, Evergreens and Plants. Prices never so low. Japan Ivy, 4 yrs., strong, \$1.00 per 100. MONTROSE NURSERIES, Montrose, N.Y.

Mention American Gardening when you write.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

RASPBERRY and Strawberry plants. Chas. O. Nash, Three Rivers, Michigan.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

LILY OF THE VALLEY PIPS.—The undersigned are open to undertake the purchase of Lily of the Valley Pips for a first-class firm and can supply the very best qualities by reason of their intimate connections with the most renowned cultivators of the "Mark" District. Schuitjes & Pfell, Seed Merchants, Rathenow, (Brandenburg).

CALIFORNIA Privet make the finest ornamental hedge, and are perfectly hardy. Fine large plants grown at seashore, two years old, \$3 per hundred. Cash with order. References, First National Bank, Asbury Park, N. J.; State Banking Co., Newark, N. J.; Atlantic Coast Nursery, James H. Cornell, Proprietor. Office, 606 4th Ave., Asbury Park, N. J.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

Business Cards.

C. D. Zimmermann, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 160, New York City.

CAMPBELL'S EARLY Seeds Need Not Be Swallowed.

"First of all Grapes," says *Rural N.Y. Yorker*. Scaled 95 points in possible 100. "Will ship round the world." Early or Late. Insist on our Seals and get what you buy. Largest stock of other Grape Vines, Small Fruits. Elegant Catalogue FREE
GEORGE B. JOSSELYN, FREDONIA, NEW YORK.

Mention American Gardening when you write

Diplomas and Certificates



**HORTICULTURAL SOCIETIES,
 FOR FAIRS, INSTITUTES, : :
 GARDENERS' CLUBS, ETC.**

These should be selected well in advance of the date needed, and secretaries of above should send now for our set of samples, all of which have been especially designed by first-class artists and engravers for the purpose. Owing to the wide demand for these samples and their expensiveness, we will mail the set of five, postpaid, for \$1.00; money refunded on return of samples, or placed to credit of order, as directed. One single sample sent free on application if the writer will explain the exact purpose for which it is wanted.

A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.

HEADQUARTERS FOR ALL PRINTED SUPPLIES

**The True AROMA, FLAVOR, LUSCIOUSNESS and
 ...HEALTHFULNESS of the...**

STRAWBERRY

Is known only to the gardener who planting the very best varieties, allows them to ripen to perfection under his own tender care. We grow the Large, Superb, Highly Flavored, Highly Colored Table Varieties, and will deliver plants anywhere on the continent fresh as when dug.

Practical Treatise Telling How to Grow Them to perfection and how to Turn a Pretty Penny with your surplus berries, free to buyers.

Illustrated Catalogue and copy of the Strawberry Specialist, a monthly journal devoted to Strawberry culture, free to all. 14th year.

CONTINENTAL PLANT CO.

Strawberry Specialists,

KITTRELL, NORTH CAROLINA.

O. W. BLACKNALL, President and General Manager.

Mention American Gardening when you write.

HENS AND EGGS

Undoubtedly there are many readers of AMERICAN GARDENING who keep hens who do not take a poultry paper; possibly some take the wrong one. Gardening, fruit culture and poultry keeping dovetail together perfectly, each filling a season comparatively dull in the others.

Realizing the above facts, we have arranged with the publishers of **POULTRY MONTHLY**, to offer that journal in club with **AMERICAN GARDENING**, for the coming subscription season, both journals postpaid, one year, for the **SMALL SUM OF \$1.25.**

POULTRY MONTHLY Is now in its nineteenth year; it has always been recognized as the leading publication in its particular field. Sound and reliable in its teachings, and not the mouthpiece of cranks, cliques, or rings. Its correspondents are practical and successful men, in the harness to-day. The publishers of **AMERICAN GARDENING** recommend *Poultry Monthly* as being one of the very best poultry papers issued, and advise all interested to accept this Great Combination Offer.

A WONDERFUL OFFER!

American Gardening (Weekly), \$1.00 } Both \$1.25
Poultry Monthly, " " 1.00 } One Year, postpaid.

Present subscribers who are in arrears must pay up in full to become eligible to this offer.

Address **AMERICAN GARDENING, P. O. Box 1697, New York City.**

Use o Old Plaster.

"Will you please tell me whether plaster taken from an old house is of any use in the garden?"—M. J. B.

—Old plaster or lime rubble is always good to use, especially on heavy clay soils.

Pa m Out-growing its Tub.

The root-ball of a *Livstona*, sixteen years old, has outgrown the limit of its tub; can its size be safely reduced two or three inches or so all around? The leaf-tips die, otherwise it is apparently thrifty.—D. U. X.

—Palms recent injury to roots perhaps more than do any other plants. If it is possible to reduce the ball of earth without injury to the roots, you may do so; otherwise to move into a larger tub is all that can be done.

Propagating Althæas.

By an unfortunate accident the paragraph in last issue which appeared under this head was incorrectly placed. The advice there given refers to peaches. Althæas are propagated by cuttings of the ripened wood.

Cuttings Not Striking.

What is wrong when hardy cuttings callus and then rot instead of forming roots?—QUEENS Co.

—Probably the wood was not right, or the ventilation was bad, or too strong a light was given, so that the tops wilted, or it may be all these causes combined.

Trees for Shipping.

Will you give an amateur some plain directions for preparing young fruit trees for shipping to endure two or three days out of the ground? Can the branches of such trees be washed to remove insect eggs, etc., of aphids, which terribly infested them last Summer, that the pest be not carried to new quarters? With what substance?—QUEENS Co.

—The principal point in preparing and shipping fruit trees is to avoid having the roots so exposed that they will get dried. After removal from the ground carefully wrap the roots in moss if possible and see that they are not exposed to winds or sun. Branches and roots may be trimmed according to fancy. If the trees can be handled, give a good dressing with whale-oil soap, kerosene emulsion, or fir-tree oil.

Fruit Trees Suckering.

Do you know the reason for fruit trees ceasing to grow otherwise than by vigorous sprouting from the roots?—QUEENS Co.

—The trees must be in poor health generally, and possibly the stool on which the trees are grafted has begun to grow on its own account, hence the suckers. Dig around the roots, removing all offsets and enrich the soil at the same time.

For Winter Vegetables.

When is the proper time to prepare and sow vegetable seeds in hotbed for winter use?—A. L.

—Consult our vegetable calendar, given in the issue for April 8, or mention specifically what vegetables.

Celeriac.

What treatment does celeriac or Knob celery require?—A. L.

—Celeriac being only a varietal form of ordinary celery, requires the same cultural treatment. For storage during winter it is better, however, to lift and place the root in damp sand.

Plants Named.

(To H. W. M.)—*Aegopodium podagraria*.

(To W. Swan).—1. *Gentiana angustifolia*; 2. *Lycium barbarum*.

(To J. H. C.)—The plant from which the berries are taken is the well-known *Viburnum opulus*—Snowball tree, and is useful as a decorative shrub.

BLINDNESS PREVENTED

The Absorption Treatment a Success. Hundreds successfully treated for all diseases of the eyes or lids without knife or risk at their homes and at our Sanitarium, the largest and most successful institution in America. "Don't wait to be blind." Pamphlet Free.

HE REMIS EYE SANITARIUM, Glen Falls, N. Y.

Mention American Gardening when you write.

INCUBATORS. Self-regulating. Catalogue free G. S. SINGER, Cardington, O.

Mention American Gardening when you write

PEACH TREES, \$3 PER 100.

All kinds of Trees and Plants CHEAP. Cat. FREE. RELIANCE NURSERY CO., Box 1410, Geneva, N. Y.

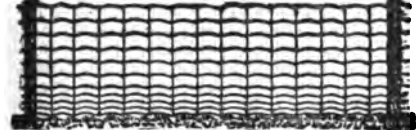
Mention American Gardening when you write

A GOLD DOLLAR

is about the actual worth of your new book on Incubation and Poultry. Contains a full and complete description of the Reliable Incubator & the Brooder of same name, together with cuts and instructions for build's poultry houses and much of interest and great value to the poultryman. Sent on receipt of 10c.

RELIABLE INCUBATOR & BROODER CO., QUINCY, ILL.

Mention American Gardening when you write.

**A MAN**

Across the street lugging a water melon always attracts attention. So does a man showing up the superior qualities of Page fence. Why? Because men like a good thing.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write

Webster's International Dictionary

Invaluable in the Home, School, and Office.

A thorough revision of the Unabridged, the purpose of which has been not display nor the provision of material for boastful and showy advertisement, but the due, judicious, scholarly, thorough perfecting of a work which in all the stages of its growth has obtained in an equal degree the favor and confidence of scholars and of the general public.



The One Great Standard Authority.

So writes Hon. D. J. Brewer, Justice U. S. Supreme Court.

GET THE BEST.

Send for specimen pages to

G. & C. MERRIAM CO., Publishers, SPRINGFIELD, MASS.

Mention American Gardening when you write.

POT YOUR PLANTS IN

JADOO FIBRE

WATER YOUR PLANTS WITH

JADOO LIQUID

And they will thrive during the Winter.

Particulars and Prices on Application to

THE AMERICAN JADOO CO.,

813 Fairmount Ave.,

PHILADELPHIA, PA.

Mention American Gardening when you write.

Potash

is one of the three important ingredients of a complete fertilizer; the others are phosphoric acid and nitrogen. Too little Potash is sure to result in a partial crop failure.

Free

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write.

Park and Cemetery.

An illustrated monthly for the advancement of Art out of doors. Practical articles of permanent value by competent authorities on subjects of special interest to Commissioners, Trustees and Superintendents of Parks and Cemeteries, and those interested in Tree Planting and Town and Village Improvements. Plans of Parks or Cemeteries, and their architectural and landscape features, illustrated every month. Subscription \$1.00 a year. R. J. HAIGHT, Publisher, 334 Dearborn Street, Chicago.

When Writing Mention Florists' Exchange

LORD & BURNHAM CO.,

Horticultural Architects and Builders Steam and Hot Water Heating Engineers.

(Established 1856.)

Plans and estimates furnished on application for Greenhouses, Conservatories, and all kinds of Horticultural Buildings, erected complete with our patent iron construction; or for material only, ready for erection.

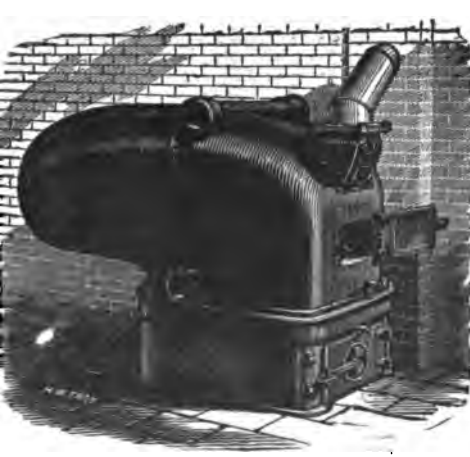


Largest Builders of Greenhouse Structures. Plans and construction embrace latest improvements. Six highest awards at the World's Fair. Send four cents postage to New York office for latest catalogue.

NEW YORK OFFICE: 160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS: IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

GREENHOUSE HEATING AND VENTILATING,
Horticultural Architecture and Building.**Hitchings & Co**

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

FIVE PATTERNS OF BOILERS
NINETEEN SIZES

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

Iron Frame Benches with the "Perfect Drainage Bench Tile" or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.



It's a trying time for delicate plants when they are transferred from the fresh air, dew and the natural stimulants of the soil to the window garden of the house. At this season of the year an application of Essex Flower Food will stimulate the plant to quick foliage and early flowering.

Don't starve your plants.

Ask your dealer for the ten cent package that feeds 10 plants one year—if he does not have it, send eight a cent stamps to the
RUSSIA CEMENT CO.,
 Gloucester, Mass.,
 and get a full size package by return mail.

Mention American Gardening when you write.

Home-Mixed Fertilizers

A man can save hundreds of dollars by mixing his own fertilizers. He saves about half the first cost; he can use the materials best adapted to the particular crop, and consequently secure the best results possible for the money spent. *Nitrate of Soda* should be used to furnish the nitrogen (ammonia). It is not only the *cheapest*, but the most soluble, available, and in every way the best form of nitrogen.

Free A 40-page book, "Food for Plants." Tells all about mixing and using fertilizers. Please ask for it.

S. M. HARRIS, MORETON FARM (P. O.) N. Y.
 Mention American Gardening when you write.

FREE \$150.00 IN CASH.

We print here a list of words. They are sets of letters jumbled together, from which can be made the name of 8 cities in the United States. For instance, CGOIHAC can be transposed into Chicago, and so on down the list. We will give:

First Prize in Cash—\$50.00 to ten persons first sending correct answers.

Second Prize in Cash—\$50.00 to next 20 persons sending correct answers.

Third Prize in Cash—\$50.00 to next 50 persons sending correct answers.

Should more than the required number send correct answers, the awards will be made according to date letter is mailed, hence it is advisable that your letter should be among the first. You can win one of these prizes if you are quick and use your brains. The above rewards are given free as an inducement to read *New Ideas*, a handsome 16-page illustrated journal covering an entirely new field. It gives information about the latest inventions and progress in science, illustrating the most striking novelties for business and household use. Its subscription price is the only cheap thing about it. Send answer to-day!

OUR CONDITIONS.—You must send with your answer 25 cents (stamps or silver) for a Six Months' Trial Subscription to *New Ideas*.

ALL SURE OF A PRIZE.

Aside from the prizes above named, we will give a special prize to each person who sends an answer, whether correct or not, provided that 25 cents in silver or stamps be sent for a six months' subscription to *New Ideas*. These special prizes are awarded along the line of Novelties, Music, Decorative Art, History and Fiction. Be sure to state in letter which you want. This contest will close Saturday, Oct. 30th, and names of prize winners will be announced in Dec. number of *New Ideas*. Address, *New Ideas*, Sta. K.143, Philadelphia, Pa.

Mention American Gardening when you write.

WHOLESALE MARKETS.

New York.

During the past week the tendency of the market in all directions has been in the favor of the producer. Prices have ruled high and especially is this true of apples, pears, and potatoes. On the other hand, buyers show a great reluctance to purchase stock at the prices quoted, yet if they want the goods, they have to come up to those figures. This condition of the market has naturally caused no little excitement on both sides, and it looks as though there is to be a spell of satisfaction to the farmer.

Mushrooms are now beginning to arrive, but as yet the trade on them is not specially good; however, it is expected it will pick up in another week. Other hot-house stock is not yet arriving, but is looked for daily.

Receipts of apples are light and of irregular quality. Really prime to fancy lots of desirable varieties—especially red kinds—are scarce and wanted. Under grades still quiet, but not over plenty. Fancy large clean Bartlett pears in fair demand and firm; poorly kept fruit dull and irregular. Fancy Seckle firm. High grades of desirable later sorts sell fairly well, but common kinds and poor qualities of all sorts drag heavily.

Peaches were not over plenty, but the demand lacked life and the movement was rather unsatisfactory, especially on medium and lower qualities. Very fancy held to fairly steady prices, but there were few such; most sales of Jersey baskets ranged 30¢@60¢, culls going lower; the best prices are realized on Hudson River stock. Delaware grapes rather quiet and a shade easier; quotations cover most sales though a few extra lots both from western New York and up-river, brought a slight premium. White grapes quiet. Black rather firm for choice qualities.

A few quinces arrive for which there is a fair call.

Cranberries are meeting rather more attention from local dealers and prices are held with confidence though the outlet is not yet sufficient to cause any advance from late quotations.

Apples—Soft red table sorts, fancy, d.-h. barrel, \$8@8.50; red sorts, fair to good, per barrel, \$1.75@2.50; Holland Pippin, hand-picked, d.-h. barrel, \$2@2.50; Fall Pippin, hand-picked, per d.-h. barrel, \$2@2.50; Twenty-Ounce, hand-picked, per d.-h. barrel, \$2.25@2.75; Blush, hand-picked, per d.-h. barrel, \$2@2.50; King, hand-picked, per d.-h. barrel, \$2.25@3; Greening, hand-picked, per d.-h. barrel, \$1.50@2; Baldwin, hand-picked, per d.-h. barrel, \$1.50@2.25; mixed varieties, fair to good, per barrel, \$1.50@2; Virginia, selected red, choice, per barrel, \$3; Virginia, average prime, per barrel, \$2@2.50; Virginia, mixed kinds, ordinary, per barrel, \$1@1.50; Jersey, winter, open heads, \$1@1.25; Crab apples, small, choice, per barrel, \$2@3; Crab apples, large, per barrel, \$1.50@2.

Peaches—Maryland, fancy, table sorts, carrier, —; Maryland, Smocks, per carrier, \$1@1.25; Maryland, Clings, per carrier, 75¢@1.12; Jersey, extra, selected, per basket, 75¢@90¢; Jersey, selected, choice, per basket, 50¢@60¢; Jersey, fair to good, per basket, 30¢@40¢; Western New York, per carrier, \$1@1.75; up-river, carrier, 2 pony-baskets, 60¢@1.25.

Pears—Bartlett, large, clean, per barrel, \$3@4; Bartlett, poor to fair, per barrel, 75¢@2.50; Seckle, per barrel, \$2@4; Beurre Bosc, per barrel, \$1.50@2.50; Beurre d'Anjou, per barrel, \$1.25@1.75; Sheldon, per barrel, \$1.25@1.75; Beurre Clairgeau, per barrel, \$1.25@1.50; Swan's Orange, per barrel, \$1.25@1.50; other late sorts, fair to good, per barrel, \$1.25@1.50; common kinds, per barrel, 75¢@1.

Quinces—Apple, good to prime, per barrel, \$2.50@3.

Grapes—Delaware, western N. Y., per small basket, 10¢@11¢; Niagara, western N. Y., per small basket, 9¢@10¢; Pocklington, up-river, per 24-pound case, 50¢@

70¢; Worden, western N. Y., per small basket 8¢@8½¢; Concord, western N. Y., per small basket, 8¢; black varieties, up-river, per 8-pound basket, 11¢@13¢.

Wine grapes—White kinds, in trays, per pound, 1½¢@2¢; Delaware, in trays, per pound, 2¢@2½¢; black kinds, in trays, per pound, 1½¢@1½¢; black kinds in barrels, per pound, 1¢@1½¢.

Plums—German prune, 8¢@10 pound basket, 20¢@30¢; large blue, State, per 8¢@10-pound basket, 20¢@25¢; Gage and Reine Claude, State, 8¢@10-pound basket, 20¢@25¢; Damson, up-river, per crate, 50¢@60¢; Damson, per 8¢@10-pound basket, 20¢@25¢; ordinary kinds, sound, per basket, 12¢@15¢.

Cranberries—Cape Cod, fancy, dark, per barrel, \$5.50; light, per barrel, \$3.50@4.

Receipts of onions are still moderate. Trade is quieter owing to the Jewish holidays, but choice stock of all kinds is firmly held. Inferior qualities moving slowly, but there is no burdensome supply of any grade. Orange Co., red, prime, per bag, \$1.75@2.25; Orange Co., yellow, per bag, \$1.25@1.75; Orange Co., white, per bag, \$1.50@2.25; Orange Co., inferior, per bag, \$1@1.25; Jersey and Long Island, yellow, per barrel, \$1.50@2; state and western, yellow, per barrel, \$1.25@1.75; eastern, white, per barrel, \$3@3.50; eastern red, per barrel, \$2.25@2.50; eastern, yellow, per barrel, \$1.75@2.25; small, white, per barrel, \$3@3.50.

Green corn dull unless of extra quality; a little such sold up to \$1.50, but most sales were at about \$1@1.25. Lima beans firm for choice.

Tomatoes in light supply; choice quite scarce and firm, but few lots command our top quotation.

Celery—Choice, large, per dozen, 25¢@35¢; fair to prime, per dozen, 15¢@20¢; small and poor, per dozen, 5¢@10¢.

Cauliflowers—Fancy, per barrel, \$2@2.25.

Corn—Per 100, 60¢@81¢.

Cabbages—Jersey and Long Island, per 100, \$4@5.

Cucumbers—Shelter Island, per barrel, \$1.50@2.50; selected, per 100, 75¢@1; pickles, state, per 1,000, \$1.50@3; pickles, poor to fair, per 1,000, 50¢@1.

Carrots—Washed, per barrel, \$1.75@2.

Egg plants—Jersey, per barrel, 75¢@1.

Green peas—Long Island, per bag, \$1.25@1.50.

Lima beans—Jersey, Potato, per bag, \$1.25@1.50; Jersey, flat, per bag, 60¢@80¢.

Lettuce—Per barrel, 50¢; eastern, per dozen, 20¢@25¢.

Squash—Hubbard, per barrel, 75¢@1.25; Marrow, per barrel, 60¢@75¢.

Tomatoes—Choice, round kinds, per box, 75¢@1; ordinary, per box, 50¢@75¢; Albany, per bushel basket, 60¢@1.

Turnips—Russia, local, per barrel, 50¢@75¢; Russia, Canada, per barrel, 75¢@80¢.

The week opened with very moderate receipts of potatoes. Sales of prime state stock have reached \$2.75@3, and fancy Long Islands have been placed even a shade higher. There was an effort to reach \$3 for choice Jerseys, but only a few of exceptional quality could be moved above \$2.75. Albany receipts light and prices firm. Market steady; most sales at \$1.62, some ordinary going at \$1.50, and a few fancy at \$1.75. Long Island, in bulk, per barrel, \$3@3.25; Jersey, per bag, bag included, \$2.65@2.75; choice round, in bulk, per barrel, \$2.75; fair to good, in bulk, per barrel, \$2.50@2.62; Albany and Troy, in bulk, per barrel, \$2.62@2.75; Western New York, per 180 pounds, \$2.75@3; sweet potatoes, Vine-land, per barrel, \$2.25@2.50; south Jersey, per d.-h. barrel, \$2@2.25; yellow sweets, Virginia, per barrel, \$1.50@1.75.

Philadelphia.

Arrivals of apples have been small and there has been a good demand for choice fruit at firm prices.

Peaches have been in moderate supply, and fine fruit sold fairly well. Clingstone, however, were dull and had to be worked off at low rates.

Pears have been scarce and prices are firm with a good demand.

Plums and grapes have both been in

moderate supply, and are firmer, with good demand for choice fruit.

Apples—Maldens' Blush, per barrel, \$2.25@2.75; Gravenstein, per barrel, \$2@2.50; Twenty-Ounce Pippin, per barrel, \$2@2.50; mixed varieties, choice, per barrel, \$1.75@2; fair to good, \$1@1.50.

Peaches—Mountain fruit, per 6-basket carrier, \$1.25@1.50; per five-eighths bushel basket, 75c.@\$1; per 20-pound basket, 60@70c.; fair to good, 40@50c.; Clingstones, per 20-pound basket, 25@30c.; Jersey fruit, choice, per one-half bushel basket, 40@60c.; fair to good, 25@30c.

Pears—Bartlett, choice, per barrel, \$3@3.50; fair to good, per barrel, \$2.25@2.50; Seckel, per barrel, \$2.75@3.25.

Plums—N. Y., per 6-pound basket, Damsons, 18@20c.; Riene Claude, 18@20c.; Prunes, 18@20c.

Grapes—Hudson River, per 20-pound case, 40@50c.; N. Y. Concord, per 5-pound basket, 7@8c.; per 10-pound basket, 12@14c.; N. Y. Delaware, per 10-pound basket, 12@14c.

Cranberries—Cape Cod, per barrel, \$4@5.

Watermelons—Extra, per 100, \$15@20; seconds, \$8@10.

Muskmelons—Jersey, per barrel, 75c.@\$1.25.

Celery—Choice, large, per dozen, 25@40c.; fair, per dozen, 15@20c.

Corn—Jersey, per 100, 75c.@\$1.

Cabbages—Jersey, per 100, \$3@4.

Cucumbers—Per barrel, 60c.@\$1.

Egg plants—Jersey, per barrel, 60@80c.

Lima beans—Per 100 pounds, \$2@2.50.

Green peas—Marrows, choice, per bushel, \$1.25@1.40; medium, per bushel, \$1@1.20.

Onions—Jersey, white, per barrel, \$1.50@2; Jersey, mixed, per barrel, \$1@1.75; yellow, per barrel, \$1.25@1.75; Pennsylvania, yellow, per barrel, \$1.50@2.

Peppers—Jersey, per barrel, 75@90c.

Squash—Hubbard, per barrel, 80c.@1.25.

Potatoes—Choice, per basket, 50@75c.; fair, 30@40c.

Potatoes—Per bushel, 60@68c.; fair to good, 40@50c.; per basket, choice, 80@40c.; culls, per basket, 15@20c.; Jersey sweets, choice, 30@35c.; seconds, 15@20c.

Boston.

Apples are very scarce, and consequently old-time prices rule, but the variety of fruit is of the new order. Bulk of receipts coming from far West. Spies or Ben Davis having color easily bring \$2.75@3; Jonathans \$3.75@4; Greenings \$2.75, whether from New York state or from Missouri; Nova Scotia Gravensteins \$4.50; odd varieties of Illinois and Missouri stock \$2.25@2.75.

Cantaloupes and melons about out of the market, there are enough of either kind, however, to supply the demand which is decreasing like the product.

The fancy grades of corn have ceased, and the stock offered for sale is of the general farmers' runs, all descriptions, and bring about 10c. a dozen.

The first hothouse tomatoes of the season come to light this morning; very fine and solid bring \$4 per bushel quicker than the fine field stock at \$1.50 a bushel.

Medium field stock sells \$1@1.25. Celery, better demand; likewise better quality, 75c.@\$1.25 a dozen.

More artichokes offered, \$1.25@1.50 a bushel.

Beans, steady; limas, \$1.50 a bushel; Sievas, \$1.50@1.75; Agricultural and that kind, \$1 a bushel.

Caiflower, 8@15c. per head. Hothouse cucumbers, 4@6c. apiece; stock very fine.

Few hothouse grapes appearing; light demand because of the large quantity of outdoor stock, probably the average amount obtained equals about 25c. a pound.

Cranberries are firmer, \$4.50@5.50 a barrel; very little call for egg plant; peppers range from 50@70c. a bushel.

Onions are higher, \$2.25 in large barrels, \$2 for Ohio barrels.

A better call for squash; marrow, \$1@1.25 a barrel; Hubbard, \$1.25@1.50;

ARMSTRONG & McKEIVY

Pittsburgh.

ASTYMER-BAVIAN

Pittsburgh.

DAVIS-CHAMBERS

Pittsburgh.

FARMERSTOCK

Pittsburgh.

AYCOCK

Cincinnati.

KOKSTAIN

ATLANTIC

BRADLEY

BROOKLYN

New York.

JEWETT

ULSTER

UNION

SOUTHERN

Chicago.

SHIPMAN

COLLIER

MISSOURI

RED SEAL

St. Louis.

SOUTHERN

JOHN T. LEWIS & BROS CO

Philadelphia.

MORLEY

Cleveland.

SALEM

Salem, Mass.

CORNELL

Buffalo.

KENTUCKY

Louisville.

THERE is no getting away from the fact that Pure White Lead (see list of brands which are genuine) and Pure Linseed Oil make the best paint.

Properly applied, it will not chip, chalk or scale off, but will outwear any of the mixtures offered as substitutes. It is, therefore, by far the most economical.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

Turbans, \$1.50; Bay State, \$1.50; the only difference between this latter squash and the Turban seems to be the color of the shell.

Better demand all around for pears; very few choice; stock generally running small sized; Seckles, \$1@2 a bushel; fancy Boussocks, \$1@1.25; Sheldons, \$1@2; receipts light; Congress, a very large pear, \$1.50@2; Paradis d'Autonne, \$1@1.50; Beurre Bosc, \$1.50@2.50; speculators taking out few of cold storage Bartletts, the finest will bring \$2 a bushel.

The only peaches appearing this morning are from Massachusetts and New York; in the five-eighths basket, Massachusetts bringing 75c.@\$1.50; Hudson River stock in same basket, very fine fruit, \$1@1.80; while western New York offers some very good peaches in 12-quart baskets, which bring 50@75c. a basket.

Mint, 40c. a dozen bunches; lettuce, 8@12c. a dozen; parsley, 50c. a bushel; cabbages, a shade better, 4@6c. a head; carrots, \$1@1.25 a bushel; turnips and beets, 50c. a bushel.

Potatoes, easier; receipts quite heavy this week; and at the railroad, 70@80c. are prices obtained; while at the market about 10c. higher per bushel. Sweet potatoes very short, rainy weather not permitting digging, they have therefore been moving very quickly at \$2 a barrel.

Delaware grapes in pony baskets, 10c.; Concord, Wordens, or Moores, 8@9c.; a few Concord in large basket bringing 18c.

Plums have sifted down to two varieties; Damsons in 10-pound basket bring 30@40c., while the Greengage or Reine Claude being in very large supply, sells at 25@30c.

For the benefit of our readers it may be

added that a few Colorado Gems come over daily from New York, bringing \$4 per crate, and certainly those Gems made their record this year; their flavor is excellent.

One firm in this city has handled over 3,000 Montreal melons in the past 30 days, taking a range of price from \$1 to \$3 each.

Cucumbers for pickles are climbing to the highest prices for many years, selling \$4@6 per bushel.

The Everbearing is the name of a new peach introduced by Mr. Berckmans. The name is given because it is claimed that the fruits begin to ripen the first of July, and the tree continues with successive crops until early in September. The fruit is creamy white in color with light purple blush; flesh white, with red veins, freestone, and of first-class quality. Mr. Berckmans recommends it as a very desirable peach for the amateur, but not as having any specially good qualities to grow for market.

JAPAN PLUMS

Large stock of best varieties at lowest rates. Full assortment of Trees and Plants. Get our prices before ordering elsewhere. Catalogue free. Established 1899. 150 acres.

THE GEO. A. SWEET NURSERY CO. Box 1848. Danville, New York.

Mention American Gardening when you write.

Grape Vines

Small Fruits. Extra fine stock of CURRANTS, including the new and unrivaled WILDER. Lowest rates. Quality extra. Warranted true. T. & S. HUBBARD CO., Fredonia, N.Y.

Mention American Gardening when you write.

We PAY FREIGHT Box and Pack free. PAPER line all boxes. REPLACE free. Give BUYER'S choice; low WHOLESALE prices orders large or small; 10 trees at 100 rate, 300 at 1000 rate. Guarantee SAFE ARRIVAL, trees TRUE to name, FREE from SAN JOSE scale, and of BEST quality. Guarantee SATISFACTION—WRITE for lists, photos and FULL particulars of foregoing Stock 12 CHALLENGE Points. STARK BROS. Louisiana, Mo., Stark, Mo., Export, Ill., Danville, N.Y.

Mention American Gardening when you write.

A BARGAIN

ONLY \$1.60 We have made arrangements to furnish THE OHIO FARMER of Cleveland, O., and AMERICAN GARDENING, both papers, one year, making a total of 104 great papers, for only \$1.60.

THE OHIO FARMER is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the LEADER of the Agricultural Press of America. A 28-page, 66-column paper EVERY WEEK in the year; can buy THE VERY BEST WRITERS that money can produce; a strong, fearless defender of the agriculturist's interests of this country; and CLEAN in both reading and advertising columns. IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE. Present subscribers can order this combination at once and have their present term of subscription to AMERICAN GARDENING extended for one year. New subscribers to THE OHIO FARMER will receive the rest of this year free. Address all orders, AMERICAN GARDENING, P. O. Box 1637, NEW YORK.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Admission to the Standard of Excellence.

Fancy and utility have been so strongly at war that one genius proposes that they unite on a common platform to be known as "beautility." It seems doubtful that the war of words will influence the association greatly. The preliminary committee have united in refusing admission to the standard to the breed known as the White Wonders. The Indian Runner duck seems likely to be admitted. The White Wonders have scores of pushing friends, whereas few are familiar with the duck above-named. It is thought, however, that these white fowls, fine though they be, are too nearly like some present standard breeds.

Breaking Up Litters.

Quite positive in their ideas are the motherly birds whose minds run to incubation at this season. Do not let them waste time. If a sitter is doomed to grace the festive board, let it be before she has been sitting a month, as Johnny claims the last one did. The longer a fowl sits, the less wholesome will the flesh be, and the smaller will be the proportion of fat. Upon this proportion (in lieu of butter) often depends the fullness of the gravy bowl. Let not the small boy be defrauded thus by useless and wasteful incubatory preliminaries to the feast of St. Dominick. Rather let immediate decapitation "break up" the sitters.

Ambrosia for Greenery.

One of the prettiest things for pots, when it can be well grown, is the Ambrosia, with its delicate fringed spikes. It is a dainty green for bouquets, its chief defect being the stiffness of the spike itself. Sometimes, however, it obligingly grows in curved sprays, which makes it slightly more amenable to graceful arrangement. With training of the right sort, the spikes can be made to take on curves, and other dispositions more graceful both for pot plants and for cutting than the natural upright form. It is an interesting plant, to such especially as are not familiar with its thickly clustered bud and bloom of neutral green tint.

Unusual Indoor Plants.

Among the subjects to be more vigorously pushed (by dealers) for winter use are Irises and Gladioli. The various groups of both have been improved and increased till even the most critical tastes must be pleased, even if not yet satisfied. It must be remembered when effort is to be made to grow new window subjects, that those which like coolness and mois-

ture outside will crave it inside also. Those fond of heat outside will like it indoors also; but often not in the same degree. This last is the more likely to be true if the indoor heat is dry.

A Delightful North Window.

It was a spacious one, else there might have been a different story to tell, and had it not been arranged with reference to the street and the passers, rather than to the inside effect, it must have been less beautiful than it was in actuality. Next the broad plate glass was an entire row of Geranium, *Mme. Sallerol*, with much white edging and variegation. Farther back, and quite far apart were a tall *Calla* and a large *Begonia* of the Castor-oil-bean type, if one may so express it. Among and around these, as a sort of carpet were many white Chinese *Primulas* of the best sorts. A handsome *Rex Begonia* swung in a basket at a central point, while vines clambered and trailed up the wall at the right and left. The waxen leaves of *Begonia Feastli* hugged and overran one large pot, and tall *Cloth-of-Gold Geraniums* backed the collection. The window was almost wholly a study in green and white. With plenty of light and space, every plant thrived royally, and passers-by made frequent halts and inquiries as to the secrets of the successful grower. That busy woman smiled a reply, to the effect that besides the alchemy of sunlight (not sunshine) and air, the only secret was adaptation of plants to necessary conditions.

Yellow in Hybrid Teas.

This is, of course, greatly to be desired. A new candidate, *Mlle. Helena Cambler*, is announced as a decided advance toward a true, yellow, hybrid tea. It is a more heavily charged with pink than some other sorts, being salmon with rose and apricot-yellow at first, and rosy flesh with deeper center when well opened. This hardly sounds so much like yellow as *Mme. Pernet Ducher*, which, though pale, is yellow, or creamy-yellow, throughout.

Eggs for Export.

"What a shame that we are still importing eggs into this country by the hundreds of dozens," protested a surface thinker, one day last week. This individual knew the one fact of import, but not the correlative fact that our reported exports of eggs are larger than our reported imports. Probably too no thought was given to the fact, that large numbers, both of exports and imports, are fancy stock for hatching purposes.

A New Emile de Girardin.

For years, the old *Geranium* standby, *Emile de Girardin*, was considered

unapproachable. Even of late, some firms have been bringing it out of the retirement whither it had been pushed by ambitious, new sorts. A new offering known as *Francis Perkins* finds its best grasp at public attention to be in its resemblance and claimed superiority to *Girardin*. It is announced as the best bedder (of this fine, bright, clear pink) known up to date, for our climate. Sun-resistance, prolificacy, and fine color for massing are its stronger points.

Color in Typical Fowls.

Many people who attend poultry shows feel—and many of them do not hesitate to say—that they have as good, or better, birds at home. Such do not realize that a bird may be excellent as to general appearance, but very faulty when closely scrutinized; nor do they remember, if indeed they ever knew, the part that purity of color plays in standard requirements. In *White Leghorns*, for instance, how many cocks do we see outside the shows that have not a tinge of yellow to the plumage? Yet it is the snow-white bird that takes the first prize, while if there are any feathers other than white in any part of the plumage, the bird carrying them cannot make its appearance in any standard show at all. Neither can it do so if it shows red earlobes, or shanks other than pure yellow in color.

In the *Buff Plymouth Rocks*, the best birds must not only be buff in outward appearance, but they must be of a rich, deep, clear buff, uniform throughout, except in the tail of the cock, which may deepen towards brown. The portion of the feathers which does not show must also be pure buff, and that clear to the skin.

The *Black Langshan* must not only be black, as the general observer sees it. If it shows white or grey in any part of the plumage except the foot feathering; if it have yellow skin, or even if the bottoms of the feet are yellow, it cannot be shown. But if it pass muster on all these points, and get in, the judge will inquire as to the color of its eyes, its beak, its comb, wattles, and earlobes, as well as of its feathers. And if he is to give it a first prize, he will want it to have, not only pure black outside feathering, but he will ask that the under color also be black, or dark slate. And he will not be thoroughly pleased with the bird, though every feather be black, unless a large proportion of the sections are finished with glossy, greenish sheen. If all this be true of birds of solid color, what shall be said when the standard requires one section of the feathers to be pencilled, others to be edged, others to be of solid color, and the under color to differ from all the rest, as in the case of some parti-colored breeds?

MYRA V. NORTA

NOW READY.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$2.00. 25 per cent. off to subscribers to American Gardening and Florists' Exchange.

This work contains nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work.

On heavy enamelled paper. Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8, Duane Street, P. O. Box 1697, New York City.

Quality in Sweet Corn.

It is most unfortunate that quality is so seldom considered in connection with sweet corn. The market demands fine "roasting" ears, neither too old nor too young, and so long as the husks keep a bright green color and the ears are large, it is rated as A1 corn and brings the top price. From the standpoint of profit, probably Stowell's Evergreen is the best corn to plant for market, but it is certainly inferior in quality. I had a small field of Squantum or Potter's Excelsior. The quality excelled that of any corn I ever raised, but it was difficult to get my customers to appreciate it. They seemed wedded to the idea of getting big ears. There is an ample field for missionary work in cultivating the taste for sweet corn, and we may yet see the announcement in our leading restaurants "Rhode Island Sweet Corn," as we now have Rockaway oysters.—G.

When to Move Roses.

I have ten fine large Rose bushes of Jacqueminot, John Hopper, and Marshall P. Wilder, which have grown so big that I shall be obliged to move them. Can these plants be transplanted without danger?—W. Y. W.

—The Rose bushes can be moved without the least risk when they are dormant. If you can find the soil in good condition and free from frost one day in December, transplant them; otherwise move the plants in very early spring. But if possible the first-mentioned season is the better one.

American Fruit in London.

Within nine hours after the docking of the American line steamship St. Paul, 4,408 packages of California fruit were delivered at Covent Garden Market, London, in splendid condition, and were all sold that morning. The California pears realized 4s. 6d. to 12s. per half box, blue plums were sold for 5s. 6d. to 6s. 6d. per half box, and yellow plums brought 8s. to 12s. per half box. The market was somewhat depressed on account of the quantity received.

Gooseberry and currant bushes should be transplanted in the fall.

There is a brisk demand for apples for Canada despite the duty.

BARGAINS

in PLANTS and BULBS for Winter and Spring Blooming.

Holland grown, largest size HYACINTH bulbs, 45c. a dozen, in separate colors.

For 50 CENTS we will send postpaid any of the following collections, each plant or bulb labeled.

No. 3.—13 assorted Double VIOLETS for winter blooming.

No. 7.—25 giant assorted PANSIES for winter blooming.

No. 10.—10 Everblooming ROSES for winter blooming, all different.

No. 11.—13 Everblooming ROSES for outdoor planting.

No. 12.—6 Everblooming ROSES and 6 GERANIUMS.

No. 20.—13 single and double HYACINTHS, labeled.

No. 30.—50 Giant FREESIA Bulbs.

No. 31.—8 LILIAM bulbs, all different.

No. 31.—50 assorted TULIPS.

No. 33.—6 large CARNATION plants, ready to bloom, all different.

Our Illustrated Catalogue of Bulbs and Plants will be mailed to any address upon application. Our aim is to please our customers and we seldom fail. Our prices are as cheap as consistent with first-class stock. If you want beautiful flowers, and lots of them for a small amount of money, see our catalogue. Write for it to-day. Satisfaction guaranteed.

A. B. DAVIS & SON, Percollville, Va.
ESTABLISHED 1866.
Mention American Gardening when you write.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.		General—Con.	
	A. B.		A. B.
American Agriculturist.....	\$1 00 \$1 85	Donahoe's Magazine.....	\$2 00 \$3 00
Breeders' Gazette.....	2 00 2 40	Electric Magazine.....	5 00 5 25
Country Gentleman.....	2 50 2 75	Electrical Review.....	8 00 8 20
Farmers' Advocate (Canada)...	1 00 1 75	Engineering Magazine.....	8 00 8 50
Farmers' Magazine.....	1 00 1 75	Forest and Stream (new only)...	4 00 4 20
Farmers' Review.....	1 00 1 90	Forum, The.....	8 00 8 60
Farm, Field and Fireside.....	1 00 1 50	Frank Harrison's Magazine....	5 00 1 40
Farm and Fireside.....	50 1 40	Frank Leslie's Popular Monthly	8 00 8 50
Farm and Home.....	50 1 40	Godey's Magazine.....	1 00 1 90
Farm Journal.....	50 1 30	Golden Days.....	8 00 8 35
Farm News.....	50 1 30	Good Housekeeping.....	2 00 2 70
Gleanings in Bee Culture.....	1 00 1 85	Harper's Bazaar.....	4 00 4 25
Home and Farm.....	50 1 45	Harper's Magazine.....	4 00 4 25
Indiana Farmer.....	1 00 1 85	Harper's Weekly.....	4 00 4 25
Mass. Ploughman, new.....	2 00 2 60	Harper's Round Table.....	2 00 2 50
Renewals.....	2 00 2 90	Home Queen.....	50 1 35
Michigan Farmer.....	1 00 1 60	Illustrated American.....	4 00 4 30
National Stockman and Farmer	1 00 1 85	Independent.....	8 00 8 60
Nebraska Farmer.....	1 25 1 85	Jenness Miller's Illus. Mag....	1 00 1 75
New England Farmer.....	2 00 2 50	Judge.....	5 00 5 20
Ohio Farmer.....	1 00 1 60	Judge's Library.....	1 00 1 85
Orange Judd Farmer.....	1 00 1 85	Ladies' Home Journal, The....	1 00 1 90
Pacific Rural Press.....	2 40 8 00	Ladies' Home Companion.....	50 1 45
Practical Dairyman.....	50 1 35	Ladies' World.....	35 1 30
Practical Farmer.....	1 00 1 85	Leslie's Illustrated.....	4 00 4 40
Prairie Farmer.....	1 00 1 85	Life.....	5 00 5 40
Rural New Yorker.....	1 00 1 80	Lippincott's.....	8 00 8 25
Southern Cultivator.....	1 00 1 85	Macmillan's.....	8 00 8 60
Southern Farm.....	1 00 1 85	McClure's Magazine.....	1 00 1 90
Southern Florist and Gardener	1 00 1 75	Munsey's Magazine.....	1 00 1 90
Strawberry Cultivist.....	50 1 35	Nation, The.....	8 00 8 30
Strawberry Specialist, new....	50 1 00	New England Magazine.....	8 00 8 50
Renewals.....	50 1 25	New York Ledger.....	2 00 2 50
Texas Farmer.....	1 00 1 75	Observer (Weekly).....	1 00 1 90
Texas Farm and Ranch.....	1 00 1 85	World (Tri-Weekly).....	1 00 1 75
Horticultural, etc.		North American Review, The...	5 00 5 50
Canadian Horticulturist.....	1 00 1 90	Notes and Queries.....	5 00 5 50
Garden and Forest.....	4 00 4 25	Observer, new only.....	8 00 8 25
Gardening (Chicago).....	2 00 2 50	Renewal.....	8 00 4 00
Meehan's Monthly.....	2 00 2 85	Outing.....	8 00 8 35
Vicks.....	50 1 35	Peterson's Magazine.....	1 00 1 85
Poultry.		Philadelphia Press (Weekly)...	1 00 1 85
American Poultry Advocate....	25 1 15	Phrenological Journal.....	1 50 2 25
Fancier's Review.....	50 1 85	Popular Science Monthly.....	5 00 5 65
Farm Poultry.....	1 00 1 50	Popular Science News.....	1 60 2 50
Ohio Poultry Journal.....	65 1 50	Puck.....	5 00 5 10
Poultry Herald.....	50 1 40	Puck's Library.....	1 20 1 95
Poultry Keeper.....	50 1 40	Puritan.....	1 00 1 90
Poultry Monthly.....	1 00 1 25	Review of Reviews.....	2 50 3 25
Reliable Poultry Journal.....	50 1 40	Scientific American.....	8 00 8 60
General.		" " Supplement.....	5 00 5 25
Advance (Cong'l) new.....	2 00 2 60	" " with.....	7 00 7 25
renewals.....	2 00 2 90	" " Builders' edition.....	2 50 3 10
American Field, new.....	4 00 4 25	" " inc. B'l'ds' edit.....	5 00 5 75
renewals.....	4 00 4 50	" " All 3 editions.....	9 00 9 25
American Kitchen Magazine...	1 00 1 75	Scribner's.....	8 00 8 60
American Machinist.....	8 00 8 20	St. Nicholas.....	8 00 8 60
Aquarium.....	1 00 1 75	Sunday School Times.....	1 50 2 10
Arena.....	8 00 8 60	Texas Siftings.....	4 00 4 25
Art Amateur.....	4 00 4 35	The Etude, new only.....	1 50 2 15
Art Interchange (with plates)...	4 00 4 35	renewals.....	1 50 2 35
Atlantic Monthly.....	4 00 4 30	The Outlook.....	8 00 8 35
Ave Maria.....	2 00 2 70	Toledo Blade.....	1 00 1 85
Babyhood.....	1 00 1 90	Turf, Field and Farm, new....	4 00 4 25
Baptist Missionary Magazine...	1 00 1 90	Renewal.....	4 00 4 60
Carpentry and Building.....	1 00 1 85	Womankind.....	50 1 20
Century.....	4 00 4 60	Young Ladies' Journal.....	4 00 4 60
Chicago Herald (Weekly).....	1 50 2 85	Youth's Companion, new only...	1 75 2 85
Chicago Inter-Ocean.....	1 00 1 80	Renewals.....	1 75 2 75
Chicago Weekly Times.....	50 1 40	Foreign.	
Christian Herald.....	1 50 2 15	Farm and Home.....	2 25 3 25
Christian Register.....	8 00 8 35	Field.....	10 50 11 00
Churchman.....	8 50 4 10	Garden.....	4 50 5 25
Colman's Rural World.....	1 00 1 85	Garden Work.....	2 50 3 25
Cosmopolitan.....	1 00 1 90	Gardener's Chronicle.....	4 50 5 25
Delineator (Butterick's).....	1 00 1 90	Gardener's Magazine.....	4 50 5 25
Demorest's Monthly Magazine...	2 00 2 60	Gardening, Illustrated.....	2 25 3 00
Detroit Free Press (Weekly)...	1 00 1 90	Gardening World.....	2 50 3 25
Domestic Monthly.....	1 50 2 15	Journal of Botany.....	4 75 5 25
Address all Orders to:		Journal of Horticulture.....	4 00 4 25
AMERICAN GARDENING, P. O. Box 1697, New York.		Kew Gardens Bulletin.....	1 50 2 25
		Revue Horticole.....	5 00 6 10

Henry Strawberry Plant Premiums

WILL BE

SHIPPED

UNTIL

FROST PREVENTS DIGGING

Premium Orders

WILL BE

HELD UNTIL

SPRING

WHEN SUBSCRIBERS

SO DESIRE

YOUR FORTUNE IN STRAWBERRIES!

The Strawberry King and his Remarkably Successful Career: How a Poor Boy Became Wealthy.

THROUGH one of those strange dispensations which often mock in real life the wildest imagination of the novelist, the publishers of AMERICAN GARDENING have become possessed of the story of the life and cultural methods of **Henry Jerolaman**, undoubtedly the **STRAWBERRY KING OF THE UNITED STATES**. We have prevailed upon Mr. Jerolaman to write the history of his life and a full description of his cultural methods, exclusively for the readers of AMERICAN GARDENING. Further than this and at our urgent solicitation we have prevailed upon him to make a contract to supply us **One hundred thousand plants of the HENRY STRAWBERRY**, to be used solely as premiums to subscribers to AMERICAN GARDENING. The Henry Strawberry has positively never before been advertised.

THE CONTRACT

Publishers American Gardening.

Gentlemen,

I hereby agree to furnish you within the next twelve months in quantities as ordered. One Hundred Thousand plants (100,000) or any portion thereof, of the Henry Strawberry, to be used solely as premiums to subscribers to American Gardening and not to be sold.

Witness

Thos D. Anthony.

(Signed)

Henry Jerolaman

The Best Berry of the Age.

Four Berries of the Henry, grown by Mr. Jerolaman, rounded a wooden quart measure. Individual berries were three-and-a-half inches through each way. Mr. Jerolaman's description of this wonderful berry in a recent issue of AMERICAN GARDENING has brought him hundreds of inquiries from the cream of the professional growers.

A GOLD MINE AT YOUR OWN DOOR.

"He who hesitates is lost." It is not likely that such an offer or such an opportunity will occur again in years. More than one strawberry grower in every town, village and hamlet can come into a good thing through practising the cultural methods and getting some of the plants which have made Mr. Jerolaman not only wealthy and well-known, but so wonderfully successful, by at once

Taking Advantage of Our Offer:

For \$1.00 (check or money order preferred) we will forward you, by mail, postpaid.

FIVE PLANTS ..Of the.. **HENRY STRAWBERRY**
Unequaled

And AMERICAN GARDENING One Year.

Present Subscribers are entitled to this Offer on renewal; if their subscription has not expired, it will be dated ahead.

Plants to be shipped this Fall or in the Spring, as you prefer.

OFFER EXTRAORDINARY For every new subscription you send us at \$1.00, we will forward you, postpaid, as a premium, Five Plants of HENRY STRAWBERRY; at the same time we will also send Five Plants to the party subscribing through you. Thus a club of 10 new subscribers entitles you to 50 plants of this wonderful Strawberry, as well as each individual subscriber to 5 Plants. This is a BIG OFFER to all who want to become larger holders of this wonderful Berry, never before advertised. Time is short, get to work to-day.

Address **Publishers AMERICAN GARDENING, P. O. Box 1897, New York.**

Trial Subscriptions

For \$1.00 we will send AMERICAN GARDENING on three months' trial (13 weeks) to four separate addresses, and as a premium, Five Henry Strawberry Plants to the one getting up the club. **HUSTLE.**

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 146.
COMBINED SERIES VOL. LI.

NEW YORK, OCTOBER 9, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

American Institute Fair Second Notice..... 700	Catalogues Received... 696	Home Plot, All About The 706	Soil, Fall Preparation of the 698	Watrous, C. L., Pres't Am. Pom. Society..... 698
Autumn Leaves..... 696	Chrysanthemums 696	Market Reports: N. Y., Phila. and Boston. 703 704	Sour Land..... 691	Window Garden..... 706
Barnyard Manure, Using 705	Fruit Garden..... 695	Obituary: Stiles, W. A. 698	Tulips 706	Illustrations.
Bean, Rogers' Lima Wax 697	Fruits of Experience... 697	Parks, Establishment of 694	Turnips 696	Bean, Rogers' Lima Wax 697
Big Berries for All..... 699	Greenhouse Flowering Plants, Winter..... 694	Pears, Succession of... 695	Vatican, Gardens of the 700	Greenhouse, A Cheap... 695
Blackberry Patch, Set- ting a..... 697	Greenhouses, Cheap.... 695	Poultry Notes 706	Vegetable Garden..... 696	Watrous, C. L., Portrait of..... 693
Canna Disease..... 700	Greenhouses, How to Heat..... 694	Private Gardeners..... 700	Violets for Spring..... 697	
			Water..... 716	



FIG. 194.—C. L. WATROUS. President, American Pomological Society.

[From a photograph taken specially for AMERICAN GARDENING]

Select Greenhouse Flowering Plants for Winter.

With tropical heat in the United States during summer time, we find conditions most favorable for the outdoor cultivation of a large number of plants, which must in a more temperate climate be nursed in greenhouses, or under sash outdoors. The greenhouse is one of the least attractive features of an American garden in summer time, but when autumn comes its charms increase, and it is never so interesting as when well-filled with autumn and winter blooming plants.

A remnant of a batch of tuberous Begonias remains, with a few seedlings yet to bloom; and these will furnish bright colors for some time to come. It will take a few weeks before the bulk of the plants which have been lifted gets established.

Browallia Speciosa Major.

Browallia speciosa major has proved, both in winter and summer, one of the handsomest and most floriferous plants of recent introduction. Its irregularly rotate flowers of deep indigo blue are an inch across, standing out singly from the axils of nearly every leaf. The plant itself is of neat bushy habit, growing and blooming from a foot to two feet in height. It probably is an annual in its native country (?); it is best treated as such. Although cuttings root easily, they do not make as good plants. Planted outdoors for the summer, it takes up easily. Last winter I managed to cross its near relative, *Streptosolon Jamesoni*, with it. This is a shrubby species with orange colored flowers, but the seeds failed to germinate. Kenneth Findlayson, with Dr. Weld, of Brookline, has been more successful with the reverse cross, and he obtained a dozen or more seedlings. So far they resemble the parent, *Browallia*.

Chironia Oxifera.

Chironia oxifera, another little-known plant, though not quite new, is likely to become one of our best pot plants for conservatory decoration at this season. It is sub-shrubby, and naturally makes a neat bush. The best way to treat old plants is to cut them back to secure fresh shoots from the stock. The whole plant assumes a glaucous hue. The leaves are small and lance-shaped. The bright rose, saucer-shaped flowers occur singly, on short stems, in the axils of the leaves. Quite an attractive feature of the flower is an upturned bunch of yellow stamens, characteristic of all melastomaceæ to which family it belongs.

Libonia Penrhosensis.

One of the prettiest winter flowering pot plants we have is *Libonia Penrhosensis*, a hybrid between *L. floribunda* and *Jacobinia Ghiesbreghtiana*. It has much brighter and deeper colored flowers than its parent. It is a little evergreen bush with dark, glossy, ovate leaves, densely arranged. The flowers come in little bunches towards the ends of the branches. They are lobate, arching outwards as in the *Justicias*, to which family it belongs. They open orange colored, changing to fiery red as the season advances.

Caryopteris Mastacanthus.

Caryopteris mastacanthus has established itself as a favorite for autumn flowers. It is a sub-shrubby member of the *Verbena* family, and a native of China. It is said to be hardy, but as far as our experience goes it is not quite so, being killed back so badly that wintered plants from frames make twice the growth that those left out do. They live, but are cut back to the ground. It has been called the blue *Spiræa*, though even this name will give but a faint idea of its appearance, except that its sky-blue flowers occur in bunches in the axils of its opposite leaves so densely as to give it a plume like appearance, and this effect is heightened by each flower having a fringed lower lip. An old plant or two, forced for the purpose of cuttings in spring time, will give hundreds of plants which will grow to a foot or eighteen inches high, making neat pyramidal bushes, and blooming well the same season. We are using it for bedding, and combined with scarlet *Salvias*, which

bloom at the same time, it is very effective. As a pot plant it is splendid for piazza decoration, at a season when there are few of its color.

Snapdragons.

Snapdragons have come into favor for winter flowers, and the wonder is they have been neglected so long. Very little heat is required to keep them in bloom. They will do quite well in a house where *Mignonette* is grown. Selected plants may be perpetuated by cuttings, and in this way some very fine varieties have been secured. Elijah Wood's Medium White is the best known, and from it I have obtained an equally beautiful yellow. An acquaintance has a strong-growing white flowered variety with spikes from three to four feet long. Individual plants of these he found with sweetly scented flowers, and these have been selected for perpetuation.

Streptosolon Jamesoni.

Streptosolon Jamesoni makes one of the finest shrubby greenhouse plants, especially when grown into standard form. It takes a year or two of careful training to get good heads. Plants with a clear stem of three feet droop back almost to the ground, and when covered with a mass of orange flowers it is remarkably effective. It will carry two crops in a season, with only a week or two between.

T. D. H., Mass.

The Establishment of Public Parks.

The importance of bringing together information concerning the establishment of public parks cannot be illustrated to better advantage than it is in a little publication that has recently come to hand under the above title and relating to the New York park system, which was prepared by Mr. Gherardi Davis of New York and read before the Historical Society of that city.

After making a brief statement as to the necessity of public parks in cities and the desirability of guarding them against encroachments, he gives the history of the park movement in New York from the first suggestion that was made in a letter published in the New York Packet in 1785 and addressed to the mayor and aldermen of the city, calling attention to the fact that "there is not in this great city one proper spot where its inhabitants can enjoy with convenience the exercise that is necessary for health and amusement."

He then goes on to give the history of Bowling Green, the Battery, and the various squares and parks of the city, from the time they were first suggested until they were acquired by the city and developed as public pleasure grounds, giving many interesting historical and other incidents connected therewith.

It is difficult for one unacquainted with such matters to realize the amount of careful investigation that is required to bring together and verify such facts and interesting incidents as are related in this pamphlet, which should be the forerunner of similar publications in other cities, for the subject is well worthy of the careful investigation of students in local history, and such facts and incidents as are here brought together are not found in any other publications with the exception of the fragmentary and disconnected records in park reports and occasional newspaper and magazine articles.

There has never been made until very recently a systematic effort to bring together in any of the important libraries complete sets of park reports. Some park commissions even have not complete sets of their reports in their own offices, and almost every park commission is unable to supply many of its back numbers.

The Park and Outdoor Art Association are bringing together as complete a set of park reports and other material relating to outdoor art as can be obtained. Information thus brought together will be of the greatest value to all persons who are interested in the park movement which has come to be such an important question in the development of American communities. WARREN H. MANNING.

How to Heat Greenhouses.

Rules for Calculation of Pipe Area, etc.

For a small house it will generally be preferable to use hot water. In order to secure an even and economical heat, the piping should be carefully adjusted to the requirements and the heater should be of ample size and of such a construction as will enable it to utilize it to the full with the least possible loss.

In order to estimate the amount of piping required for a greenhouse, one must know the number of square feet of glass in the roof and walls, and to this should be added about one-fifth of the area of exposed walls other than glass. This being ascertained, it will be an easy matter to estimate the number of square feet of piping required to heat the house to any desired temperature.

If the house be well built and not unusually exposed to high winds, the following rule will answer in places where the temperature seldom goes below zero, with ten below as a minimum: For a temperature at night of sixty degrees use one square foot of pipe for each three square feet of glass, and increase or decrease the amount of glass that can be heated, one-half of a square foot for each five degrees that the temperature is to be varied from sixty degrees. Thus, for fifty degrees one square foot of pipe will heat four square feet, while it will only answer to heat two square feet of glass to seventy degrees.

To carry the water through the house and provide radiating surface, wrought iron pipe with screw joints is now most generally used. For houses more than seventy-five feet in length it will be best to use two-inch pipe, but in smaller houses one and one-half inch pipe may be used for the returns. Except in very small houses the flow pipes should not be less than two inches in diameter, and in some cases they may be still larger. Let us suppose that we have a house fifty by twenty feet, with 1,575 square feet of glass in the roof, sides and ends (including also one-fifth of the wooden wall exposed). To heat it to sixty degrees it will require 525 square feet of pipe. As it requires about two feet of 1½-inch pipe to give one square foot of radiating surface, it will take 1,050 linear, or twenty-one runs, of that size to afford the desired temperature. Using 2-inch pipe, one linear foot will afford .621 square feet of radiating and nearly 850 linear feet, or seventeen runs, will be required. For a house of this length one flow will answer for four returns of the same size, but if it is one hundred feet long the number of returns should be reduced to two for each flow. It will then require for the house under consideration four flows and thirteen returns, when 2-inch pipe is used, and five flows and sixteen returns when using 1½-inch pipe. Another method would be to use 2-inch flow pipes and 1½-inch returns, when four of the former and sixteen of the latter will be necessary.

While all the pipes may be under the benches, on the walls, or in the walks it will be better to have only the returns there, and to place the flows overhead where they can be distributed upon the posts supporting the roof. It is often a good plan to have one of the pipes, either flow or return, upon each of the plates. For most purposes it will be best to use the downhill system of

pling, having the highest part of the flow pipes at the end nearest the heater, carrying with them a slope of one inch in ten or fifteen feet to the further end, where they can be connected with the returns, which should also slope toward the heater.

It will be necessary to either place an air cock at the highest part of each pipe or to connect each of them with the expansion tank, which should be considerably elevated. In this way we shall have what is called an open system, which will be best for small houses. In order to control the temperature it is a good plan to have valves upon a number of the pipes.

L. R. TAFT.

Cheap Greenhouses.

A greenhouse is indispensable to the man who intends to be first in market and secure the highest prices for his produce, and as an advertisement locally is worth more than the best newspaper ever published (although a progressive

permanent structure; self-feeding coal stoves can take the place of the more expensive methods of heating at the least expense of cost and labor. But! just here: did any one ever get anything honestly without labor? That labor question is, next to fertility and best seeds, the most important factor in gardening. A constant struggle with the survival of the "unfittest," weeds, bugs, etc., but the satisfaction of success is in knowing that the crop is as nearly perfect as is possible, and a little ahead of one's competitors. If all labor be hired the work will only be half done, or else the cost will absorb very nearly all the profit; the successful gardener does very nearly all the work himself, and it is no small amount either, for if not with his hands, it is by brains.

For a house without benches, the outside wall needs to be only twelve or fifteen inches in height, just enough to run a flue or pipes around. If built on the ridge plan, the apex should be 6 or 7 feet high in the middle; this will allow the house to be 30 feet wide, using 16

glass-bars with the pane of glass, to get the right width apart, and nail; do this with each bar, to overcome any inequality in size of bar; after all are on, close the ends of the house, put in the glass, and it will be ready for business.

Some of the advantages of such a house as here described are, its cheapness, it does not require any especial ventilation because not airtight, less danger of aphid or other insect enemies, and last but not least, being low, it can be covered with straw or leaves in case of extreme cold, saving a crop when more costly houses would lose by not being able to heat so much space. In case benches are wanted, the middle of the house can be used for that purpose. I have a house built on this plan, that has passed through zero weather, without losing the tenderest plants. The accompanying illustration shows it.

Md.

HENRY SNYDER.

The Fruit Garden.

Pears.—As the season for picking pears draws to a close, it is well for us to scan our record of what we have had to draw upon, and to see with what kinds we could easily have supplied the demand; also if there were any blank noted, to find the best kind to fill that blank. Possibly there are some varieties we would like to drop, say such as are coming in with others of better quality. Note such and graft them in spring with a better variety, or else replace with some fruit that will be of more service, bearing in mind that a surplus of fruit is always to be worked for.

Our season of pears began July 21 with Beurré Giffard, a sweet little fruit of short duration; this was followed with Manning's Elizabeth, also small and of short season, but a dainty picture pear very good for home use, tree a stocky grower, benefited by manure, being very productive when so treated. Directly after it is Dearborn's Seedling, a medium-size pear, light yellow with small dots, of fine quality. This with Petite Marguerite of a fine quality and longer season, will land us into the Souvenir de Congres and Bartlett season. It is surprising how long this season can be made by some judgment, in picking the best of the fruit twice a week, Buffum working in well with the late Bartletts if handled rightly, and it can be managed to extend its season for over a month. I said a good word for this pear in one of my earlier notes and I am using it now, September 30, to brighten up Sheldon, Seckle, and Flemish Beauty.

In this last I have touched on a tender spot; however handled, this can be but very seldom called a beauty in outward appearance, but with the help of Bordeaux, and early picking, it makes a fine eating pear.

Beurré Superfin is another peculiar pear, very productive, and very variable in flavor, and has to be picked, and eaten too, just at the right time, or nine out of ten will pass on it the verdict "poor," when it really should be very good.

For use in October we have Beurré Bosc, of very striking appearance, and flavor to match. It can be simply passed as a No. 1 pear. It was raised in 1807 and named Calebasse Bosc in honor of Mr. Bosc, a distinguished Belgian horticulturist. It was also sent to London under the name of Beurré Bosc, which name was retained to avoid confusion with the Calebasse, a pear of inferior quality. It, with Beurré Bosc we name Beurré d'Anjou, we have two of the very best pears for October.

Planting.—Push the work along and remember when planting large trees, that a heavy drenching of water will tighten the soil about the roots better than all the pounding, care being taken to fill in only enough soil to fill between or just cover the roots. Leave it until the water has drained away, then fill in without pounding.

J. HOLLOWAY, L. I.



FIG. 195.—A CHEAP GREENHOUSE.

gardener will keep a standing "ad" in the local papers).

Vegetable growing under glass has become an imperative necessity in order to compete with southern grown "truck." The avidity with which consumers buy the more or less stale, often half decayed stuff, and the prices they are willing to pay, can be utilized by any good gardener to his own advantage. Most persons have the idea that a greenhouse is a costly luxury, and requires an expert to manage one. But newer and cheaper methods are being brought into use daily, and any man or woman intelligent enough to grow good flowers or vegetables outside, is competent to run a greenhouse if so inclined. The thought has often occurred to me while looking at fine house plants in winter bloom, "What a splendid gardener that woman would make if she had proper facilities." They could have been had at a trifling cost. Glass is the principal cost in a cheap greenhouse, but with ordinary care it will outlast a lifetime; woodwork lasts two or three years, but it can be renewed more cheaply than the insect pests can be kept down in a more

foot strips and boards, without waste. The bars for glass can be grooved to slide the glass in, or lath can be nailed on, to form a resting ledge, and the glass lapped $\frac{1}{2}$ inch, or butted, and prevented from slipping by the double pointed tacks; lumber can be used in the rough, thus saving the expense of dressing. Posts for the ridge need not be heavy, and strips run lengthwise can be propped to prevent the bars from sagging, in fact the "house" is simply a huge cold frame, heated with fire heat. Any person that can drive a nail, can build the house.

A good plan where the winter is severe, is to cut a ditch around the inside of the wall, below frost line, to carry the pipes in, but then be sure to have an outlet for any water that might accumulate in the ditch.

To build, set the posts for the ridge just as for a fence, 8 feet apart; cut tops square, and spike on a scantling. Take a glass-bar cut to the right length, beveled end; nail flush to ridge, set board up on edge and nail bar on top. Tack the other end of board the same, having everything square, measure the two ends of

Autumn Leaves.

The casting of the leaf is not a sudden and quick response to any single change in environmental conditions, but is brought about with a complex interplay of processes begun days or perhaps weeks before any external changes are to be seen. The leaf is rich in two classes of substance, one of which is of no further benefit to it, and another which it has constructed at great expense of energy, and which is in a form of the highest possible usefulness to the plant. To this class belong the compounds in the protoplasm, the green color bodies, and whatever surplus food may not have been previously conveyed away. The substances which the plant must needs discard are in the form of nearly insoluble crystals, and by remaining in position in the leaf, drop with it to the ground, and pass into that great complex laboratory of the soil where by slow methods of disintegration useful elements are set free, and once again may be taken up by the tree and travel their devious course through root hairs along the sinuous roots, and up through million-celled columns of the trunk, out through the twigs to the leaves once more.

Why Autumn Leaves Are Colored.

The plastic substances within the leaf, which would be a loss to the plant if thrown away, undergo quite a different series of changes. These substances are in the extremest parts of the leaf, and to pass into the plant body must penetrate many hundreds of membranes by diffusion into the long conducting cells around the ribs or nerves, and then down into the twigs and stems. The successful retreat of this great mass of valuable matter is not a simple problem. These substances contain nitrogen as a part of their compounds, and as a consequence are very readily broken down when exposed to the sunlight. In the living normal leaf the green color forms a most effectual shield from the action of the sun, but when the retreat is begun, one of the first steps results in the disintegration of the chlorophyll. This would allow the fierce rays of the September sun to strike directly through the broad expanses of the leaf, destroying all within, were not other means provided for protection. In the first place, when the chlorophyll breaks down, among the resulting substances formed is cyanophyll (blue), which absorbs the sun's rays in the same general manner as the chlorophyll. In addition, the outer layers of cells of the leaf contain other pigments, some of which have been masked by the chlorophyll, and others which are formed as decomposition products, so that the leaf exhibits outwardly a gorgeous panoply of colors in reds, yellows, and bronzes that make up the autumnal display. From the wild riot of tints shown by a clump of trees or shrubs, the erroneous impression might be gained that the colors are accidental in their occurrence. This is far from the case, however. The keynote of color in any species is constant, with minor and local variations. The Birches are a golden yellow; Oaks vary through yellow-orange to reddish-brown; the Red Maple becomes a dark red; the Tulip tree a light yellow; Hawthorn and Poison-Oak become violet; while the Sumacs and vines take on a flaming scarlet. These colors exhibit some variation in accord with the character of the soil on which the plants stand.

Why the Leaves Fall in Autumn.

The plant is a most delicately self-regulating organism. It cannot increase the water-supply, but it may and does decrease the evaporating surface by casting or shedding the leaves, a reaction which it exhibits to other conditions as well. Like the true seaman, however, the plant does not shorten sail by cutting away its canvas, but, by a deliberate and well-timed series of processes, withdraws all of the substances from the leaf which may be useful to it back into its body before it discards the empty sheets of cells and woody fibres or the petiole andamina. Before proceeding to a description of the mechanism of leaf-fall it may be well to call attention to the popular

and erroneous idea that the coloring and casting of autumnal leaves are due to the action of frost. It is true that the phenomena of autumnal leaf-fall are due to low temperatures, but, as may be seen from the above, the defoliation of the plant is not a reaction to the cold, but is an adjustment to the limited water supply furnished by the chilled roots. The reduction of the water supply and the beginning of the processes leading to defoliation occur a long time before the temperature of the air is depressed to the freezing point or the formation of frost. The influence of low temperatures upon the plant is illustrated by the manner in which leaves of tobacco and melon plants blacken and die as the result of cool nights before the occurrence of frost. These plants transpire a relatively large amount of water from the broad leaves, and if the temperature of the soil descends to 40 degrees Fahrenheit, the roots are unable to take up the necessary supply of water, and the leaves are literally dried out, though they are incorrectly described as frozen or frosted by gardeners.—D. T. MACDOUGAL, in Harper's Magazine for October.

Chrysanthemums.

Buds Are Swelling Apace and so far as cultural methods go there will soon be little to do. Now is the time when varieties should be compared with previous years as to times of flowering, etc. A few notes are not much bother and are very useful for comparison.

Feeding.—Plants that have had much feeding will now take with safety liquid manure of almost any strength you like to give. Feeding should, however, be discontinued just as soon as the flower gets half way open or the petals will damp.

Benches should be kept only moderately moist now, and the flowers will finish much better in consequence. Don't dry them out by any means, but they do not now need the water they did a month ago.

The Atmosphere should always be dry and buoyant by nightfall and no matter how cold the night is, always leave on a little air at the top of the house. This will prevent the moisture from collecting on the petals, said moisture being always a fruitful source of damping. Give lots of air on bright days, and this will strengthen the neck of the flower and make it stand up stiff and sturdy. A weak-necked flower is disliked by every true chrysanthemum lover. It is an unnatural condition and any variety if properly grown and finished will hold itself erect.

Thrip may be making himself obnoxious just now. I don't know his full name though he is on visiting terms with me. He gets in the flower and manages to muss it up considerably in a short time. He seems to prefer whites and yellows, and if the flower looks stained and spotted he can almost always be found somewhere in the petals. Other times he will be found sitting on a bud waiting for it to show color so he can begin operations. C. TOTTY, N. J.

The Vegetable Garden.

Turnips.—The remark is often made that turnips can be grown only on low land; this evil can often be obviated by an application of lime plowed or dug into the soil. The trouble is caused by the larva of a small fly. To keep the garden clear of these, it is necessary to burn all refuse of turnips, especially those containing any of the maggots, thus destroying them. Such remnants of vegetables are often thrown to the hogs, or directly into the manure heap to rot, and everything does rot except the insects, and it proves to be only a comfortable home for them. When spring comes they are carefully carted back again to perpetuate the species in the garden.

As the Crops are Cleaned Away every fall, all refuse should be carefully collected and burned; this applies to all vegetation containing any trace of disease, as the blight on tomato vines,

mildew on pea haulm, asparagus disease, and so on; by burning all such rubbish, the habitations of insects and blights and eggs of insects are totally and irretrievably destroyed. It is a great mistake to dump such rubbish into the manure pile, as unquestionably this is the chief means by which these various diseases are perpetuated in the garden.

Sour Land.—Land that has a tendency to become sour and unhealthy will be benefited by a top-dressing of 1,000 pounds of fresh air-slacked lime per acre. This will not only correct any sourness in the soil, but will also kill many insect pests, and will aid in the decomposition of all vegetable matter the soil may contain, and thus improving its texture will benefit the crops. All land along the coast, or in close proximity to the salt air is particularly benefited by the application of lime.

Fall Work.—By proper attention and good work in the fall, better results can safely be expected the following year, than in the one passed. Land in an unhealthy and poor condition will never grow satisfactory crops, no matter how good the seed may be, how carefully sown, or what subsequent treatment may be. W. M. EDWARDS, Conn.

Catalogues Received.

[Readers are requested to mention AMERICAN GARDENING when writing for catalogues noted here. They are sent free to our readers except when otherwise stated.]

ALBERT M. HERR, Lancaster, Pa.—Price List of Pansy seed.

SCHLEGEL & FOTTLER, Boston, Mass.—Bulb Catalogue for Fall, 1897.

ALLEN L. WOOD, Rochester, N. Y.—Wholesale List of Nursery Stock.

A. & G. ROEBACH, Pemberton, N. J.—List of Plants and Rooted Cuttings.

J. M. THORNBURN & CO., New York.—Wholesale Trade List of Bulbs, etc.

SCHLEGEL & FOTTLER, Boston, Mass.—Wholesale Trade List of Bulbs.

THE PAGE SEED CO., Greene, Chenango Co., N. Y.—Bulbs, Plants and Seeds.

VICK & HILL CO., Rochester, N. Y.—Wholesale price list of bulbs, roots, etc.

P. J. BERCKMANS, Augusta, Ga.—Catalogue of Fruit and Ornamental Trees, Roses, etc.

E. H. KRELAGE & SON, Haarlem, Holland.—Bulb Catalogue for 1897, also List of Novelties.

PHOENIX NURSERY CO., Bloomington, Ill.—Wholesale Catalogue of Trees, Shrubs, Roses, etc.

FRED. W. KELSEY, 150 Broadway, New York.—Selected Hardy Trees, Shrubs, Bulbs and Plants.

WM. NELSON, New Orleans, La.—Price List of Trees, and a Practical Treatise on Peach-growing.

DINGEE & CONARD CO., West Grove, Pa.—Catalogue of Bulbs, Roses, etc., profusely illustrated.

SCHLEGEL & FOTTLER, 26 South Market St., Boston, Mass.—Autumn list of Bulbs, Seeds, Plants, Shrubs, etc.

JOHN LEWIS CHILDS, Floral Park, N. Y.—Illustrated Fall catalogue of bulbs, plants, seeds and requisites.

DANIEL B. LONG, Buffalo, N. Y.—Floral Art Catalogue. This is a new stock catalogue for the use of retail florists.

W. & T. SMITH CO., Geneva, N. Y.—General illustrated catalogue of fruit and ornamental trees, shrubs, roses, etc.

HULSEBOSCH BROTHERS, Englewood, N. J.—Wholesale and retail catalogue of choice Dutch bulbs, seeds and plants.

J. M. THORNBURN & CO., New York.—Annual Descriptive Catalogue of Bulbs and other Flowering Roots for Fall planting.

R. M. WIGNERS & CO., San Antonio, Fla.—Wholesale List of Amaryllis, Ornithogalum and Tubers; also, novelties in canna, etc.

HENRY W. GIBBONS, 136 Liberty street, New York.—Price List of Tempering Apparatus for Removing the Chill from Water Used for Syringing.

GEO. A. SWEET NURSERY CO., Dansville, N. Y.—Catalogue No. 2, classified list of Fruit Trees and Bushes, also Ornamental Trees, Shrubs and Vines.

S. TAPLIN, Detroit, Mich.—Circular regarding his new boiler, for which patents have been granted in America, Germany, Canada, Belgium, England and France.

ELLWANGER & BARRY, Rochester, N. Y.—General Catalogue of Fruit and Ornamental Trees, Shrubs, Roses, etc. Very complete, being one of the most valuable catalogues that comes to our desk.

FRUITS OF EXPERIENCE.

JOTTINGS FROM OBSERVATION.

If the young trees on your village lot are beginning to look dry, set the hose so that a spray of water will strike the underside of the leaves and let the water run for one hour to each tree. If there be only a few trees, spray one each day towards evening.

The person who is so smart as to do you a mean trick without any reason is not so sharp after all.

For the gardener who has a cow, horse, and chickens, it is as well to have all grain and other feed purchased and stowed away for the winter.

We should economize labor by doing all we can by machinery.

We must all have some of the Henry strawberry plants. (See premium offer.)

Sweet corn fodder for the cow should be cut before the leaves get too ripe.

We never want a man to plow for us unless his plowshare is kept sharp.

Rust eats up many dollars worth of tools each year.

away for use next summer, sorting out the soiled ones for kindling or vegetable plant boxes?

The failure of growing profitable crops of small fruits is often traceable to our neglect to give the necessary care.

The Swindle strawberry does not seem to come up to the claims made for it.

The weather has been extremely dry in southern Michigan up to this writing (September 16). Small fruits never suffered so much. If rain does not come soon some fruit plantations will be comparatively worthless.

As an experiment, we piled straw very thickly in the spaces of a few of the strawberry plants at least six inches deep and as close to the plants as possible to see what effect it would have during the dry part of the season. The foliage of the plants near the straw is twice as high and heavy as where not so treated.

Great damage is often done by bad pruning.

Use judgment in regard to how and what you plant.

It is claimed that alternate rows of cherries and plums cause the plums to be more fruitful.

Rogers' Lima Wax Bean.

Samples of this bean were lately submitted by the introducers, Messrs. Rogers Bros. It is a heavy cropper as is seen by the figure of the individual plant. We took 46 full-sized pods from one such, and left on many others. This bean is named Lima Wax, as it has bright, glossy foliage, and the bloom resembles the dwarf lima. The pods are very broad and flat of a most excellent rich quality. The plant is branching and vigorous, with an immense amount of foliage. When in bloom the plant is completely covered with flowering spikes, and as the pods form in clusters they sink beneath the dense foliage, which shields them from light showers, heavy dews, and hot sun, which is a protection against their spotting or rusting and becoming soiled, as compared with other sorts. They require thin planting (two beans being sufficient for a hill) on very rich soil.

The pods are the broadest of all wax bush beans, color transparent glossy lemon wax, having the yellow waxy appearance very soon after the pods are formed and when picked we find by actual test will retain their bright, attractive appearance for a long time and not become tough. Quality very tender, juicy, and flavor delicate. Seed small, oval, pure white. A delicious wax bean.

Setting a Blackberry Patch.

I have a patch that has been set some six or seven years of about one-quarter of an acre, and last year it yielded over 800 quarts. This spring it only gave us 170 quarts and most of the bearing vines had the leaves turn yellow and drop off. While the new growth to bear next year was green and nice looking. What is the cause of this dropping of the leaves? I want to transplant a portion of this patch and the question with me is, Will the roots of these plants taken up indiscriminately and cut into proper lengths, do to set the new patch?—G. W. A., Kas.

—The dropping of the leaves on fruiting blackberry canes often occurs, especially when a heavy crop has been raised the previous year. It is due to a lack of vitality which can be restored by scattering broadcast a liberal quantity of rotted barnyard manure in October, and during the winter hauling and scattering over this six to eight inches of old straw or marsh hay. The pieces of roots from these hills taken up this fall will do to start a new plantation, but roots from younger plants are preferred by nurserymen. Bury them, after being cut into proper lengths, in sharp sand below the frost line in a sheltered location, so that the ends of the roots will callus over, and when setting out in the spring, drop five to six pieces in each hill that you may have a good stand. Do not allow a particle of crust to form over the hill when the new shoots begin to push through the soil.—C. C. N.

Violets for Spring Flowering.

I should like very much to know how to raise Violets and handle them in frames for winter and early spring blooming.—G. A. K.

—It is now time to plant the Violets in frames, and the stronger the clumps are the better. Make the soil moderately rich, and arrange frames so that covering and protecting from frost will be made as complete as possible when necessary. A work which will treat on the cultivation of the Violet is on the press now and will be ready shortly.

Strawberries for Forcing.

(To A. H. D. and others).—Full information as to forcing strawberries, varieties, etc., will be found in our issue for June 5 of this year. We have no knowledge of Brandywine as a forcing berry.

The apple belt of Illinois is well defined. Governor John R. Tanner says. The apple counties of Illinois are Clay, Marion, Wayne, and Richland. Orchards do fairly in Jefferson, Effingham, Fayette, and Jasper are in the edge of the belt.

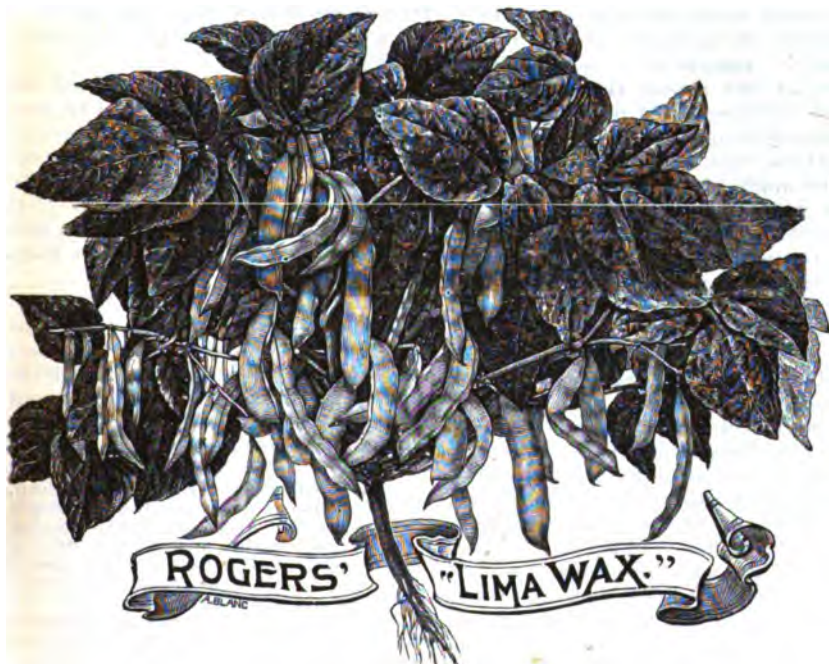


FIG. 196.—ROGERS' LIMA WAX BEAN.

We will get all the plowing possible done this fall ready for spring work.

Mexican strawberry seems to be a good grower, with very deep green foliage.

A dusting of air-slacked lime on the leaves is the thing for those slimy-looking insects called slugs.

The tide turns on many products; wheat is a good price now, but corn low in comparison; probably corn will be up to a good price in a year or two. The same is true also to a certain degree of many garden crops.

Our experience with the Golden Hubbard squash is that it is not as satisfactory as the old Hubbard.

Double working of Northern Spy, Golden Russet, and Talman Sweet apples seems to be a very satisfactory method in starting an apple orchard.

If you understand grafting and are intending to set out a plum orchard in two or three years, why not send to some of the nurseries and purchase a few hundred of one-year Marianna plum, and after they have made a satisfactory growth in the nursery row for say one more year, graft them in the row to any varieties you wish, and when three years are up, you will have a medium-sized tree of your own growing to transplant to the orchard?

Are the crates and berry boxes stowed

'It pays to layer strawberry plants especially if there is much dry weather during the latter part of the season.

Irrigation seems now to be commanding more attention from fruit growers than at any time in the past. There must be something beside the wind-mill; it cannot lift a volume of water sufficient to water an area of surface to pay; the new gas engine seems to be the most economical source from which to get the power necessary to throw a large stream, although the first cost of the engine is rather "hard on the purse."

The Jessica grape was of excellent quality this season, but it is too seedy.

A good crop of pears in Michigan; price low and demand poor for second grade, but first-class pears evenly graded are in brisk demand at paying prices.

CHARLES C. NASH.

Mildew and Spot on Outdoor Roses.

(To Mrs. J. L. E.).—The Roses are affected by black spot which is very prevalent this season. Burn diseased leaves.

Plants Named.

(To T. B. B.).—1. Panicum sanguinale, Crab grass. 2. Eleusine indica, Yard-grass.

(To J. L. B.).—Campanula isophylla.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY
A. T. DELAMARE PTC. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 214 Cortlandt. P. O. Box 1697.
REGISTERED CABLE ADDRESS
Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

WANTED.

Copies of AMERICAN GARDENING for March 20, 1897. Address the Publishers.

Fall Preparation "GARDENING," it has been remarked, "is a pious occupation, because it is a continuous struggle against adversity." However that may be, gardening is at times a discouraging business; no matter how carefully we may plant and sow, and attend to the growing crops, something is always liable to prove a failure. It is often discouraging to the owner of a garden, after spending a large sum of money, to find his expectations not realized. All this, however, can be largely avoided by proper attention to the fall work.

There is no more appropriate adjunct to a gentleman's country house than a well-planned and well-kept vegetable garden, containing a constant supply of fresh vegetables, and the success of this depends upon the competency and foresight of the gardener, and the nature and mechanical condition of the soil upon which the garden is placed. Any intelligent man can, after the first year, form a fair judgment of the condition of the soil and shape his course accordingly. All vegetables require organic manure, and this must be partially decomposed before it can be utilized by the roots of

plants. To do their best some vegetables require a great deal of manure, while others require but little.

For convenience in the preparation and manuring of the land all vegetables can be divided into two grand divisions—those requiring only fairly rich land, as peas, beans, tomatoes, melons, turnips, brussels sprouts, and those requiring very rich land, or those with good vigorous foliage, as asparagus, beets, cabbage, cauliflower, corn, egg plant, lettuce, radish, rhubarb, spinach, onions. The soil upon which these two divisions are intended to be grown, should be manured according to the requirements of each, and, for convenience in plowing, the items in each group should be grown together as much as may be practicable.

The first division needs more phosphoric acid and potash than nitrogen, as they have the faculty of absorbing sufficient of the latter from the atmosphere, and if too much manure containing nitrogen is added to the soil, large growth of tops will result with a corresponding decrease in the quantity of peas to be picked, or tomatoes to be gathered. Hence, at this season the ground intended for these should receive a meagre dressing of manure, with a liberal dressing of bone dust and potash, the latter can be applied in the form of wood ashes, and it is better to apply these as a top dressing in the spring, as if applied now, the potash will have leached away with the winter snow, but the bone dust (which can be supplied at the rate of from 500 pounds to 1,000 pounds per acre) will gradually dissolve, and by the time the roots are active the following summer, the phosphoric acid which is contained will be available for plant food. The ground then should be deeply plowed and left as rough as it is possible for the plow to leave it, thus its mechanical condition is improved by the action of the winter's frost and the air.

Ground for vegetables of the second division cannot easily be made too rich; it is therefore advisable to put the bulk of the manure on land intended for their planting. As phosphoric acid may be termed the builder of the framework of all plants, and this element being found chiefly in the bones of animals, and not in their manure, so it is advisable in all cases to add bone-dust on ground for this division also; then plow and leave as directed above. On shallow soil or on that of a heavy texture, it is an excellent plan to run a subsoil plow also, thus gradually deepening the soil, which tends better to hold moisture during hot, dry weather.

C. L. Watrous.

We take pleasure in presenting in this issue a portrait (Fig. 194) of the newly-elected President of the American Pomological Society; he is of New England stock, the first of the name having come from England with Governor Winthrop and settled near Boston about 1630. The subject of these present remarks was born in Cortland Co., N. Y., on January 13, 1837, on a farm. Having graduated from Cortland Academy, Homer, N. Y., Mr. Watrous entered the University of Michigan and passed through the scientific course. At the age of 17 he began teaching, and worked continuously as

teacher and student till the breaking out of the civil war. In September, 1861, he enlisted in the 76th N. Y. V. Infantry, raised a company, and being elected captain, served in that capacity till disabled by three bullets, on August 29, 1862 in the second battle of Bull Run. He was mustered out of service on December 29 of that year "for disability from gunshot wounds received in battle." He was thus not fit for further service during the war.

Turning his attention to the law he graduated from the University of Michigan Law School in 1865 and later in the same year settled in Winchester, Va., remaining there during reconstruction, and until 1868, during the time serving as prosecuting attorney and as U. S. Registering officer.

Giving up the practice of the law in 1868 by reason of broken health consequent upon the wounds received in the war, and other disabilities contracted in the army, and being advised that outdoor life was a necessity, he settled in 1869 at Des Moines, Ia., his present residence, and has ever since followed horticultural pursuits.

In 1872 Mr. Watrous was elected Director in State Horticultural Society, and has from then been an active worker in the body, serving many years as Director, and four years as President. He has also always been active in civil affairs, holding some minor offices, and serving in the State Legislature from 1884 to 1886.

In Horticultural Society work Mr. Watrous has been an active worker and has been identified with the American Nurseryman's Association from the beginning, serving twice as President, and for many years and still as President of its Protective Association. The horticultural literature of Northwest, has been freely contributed to by this gentleman, whose course has always been strongly advocating the origination and testing of American fruits instead of relying upon foreign ones. Having early tested hundreds of Russian fruits and found them in his experience unreliable, he has for many years protested earnestly against their wholesale recommendation and sale, spending more time and labor than any other one man in putting the facts before the people and has been a contributor to AMERICAN GARDENING.

He has been many years a working member of the American Pomological Society, and for the last six years First Vice-President, and was elected President at Columbus September 2d of this year.

A Grand Opportunity—Even if you are not very much interested in fruits, make a point of visiting the show at the American Institute, Madison Square Garden, New York City. If at all possible. For it is not often one has the opportunity of seeing and comparing some 75 varieties of Grapes, 80 of Plums, 50 of Pears, and 220 of Apples at so little expense and labor. Certainly the Geneva Experiment Station has staged an exhibit of which New York state may well be proud.

Death of W. A. Stiles.

It is with feelings of sincere concern that we have to announce the death of William Augustus Stiles, who, since the launching of the Garden and Forest, has so ably seconded Professor Sargent in its direction. Mr. Stiles, who was in his 61st year, died in Jersey City on Wednesday morning after a long and weary illness, and the news of his decease will strike with sorrow wherever he was known.

BIG BERRIES FOR ALL.

Being the Cultural Methods of Henry Jerolaman, the N. J. Strawberry King, Preceded by an Autobiography.

Continued from page 688.

Many important events in life arise from or depend upon one little word of only two letters, *if*. If Mr. Ogden Brown (my neighbor) had not come down to see me and bragged to me of his little garden patch of strawberries and if I had not immediately gone with him to see his patch while it was in full bearing, it is doubtful if Henry Jerolaman would ever have been known as a strawberry grower, and this story would never have been told.

As already stated, on coming home I made up my mind to have my whole field (as Mr. Brown called it) just like Mr. Brown's patch. At a glance I had seen just what was needed. In the first place it was the first cultivated patch of clean strawberries I had ever seen; and secondly, I saw that the rows must be at least one foot wide with plants, and then top dressed at least two inches deep. Mr. Brown had the whole path, about two feet wide, filled with coarse manure, and the spring rains had so worked it down in the soil that only the straw showed on the surface, thus keeping the fruit clean. The strawberries were lying literally in heaps on either side of the plants. After picking what strawberries I had on my patch, I found they were sandy, for no mulch had been given, not even the top dressing of manure, as Mr. Brown had done. As my berries were not clean, I did not get much more for them in the market than the Southern berries realized, although they were larger than those Southern berries.

During the following summer and autumn I kept my one-half acre of strawberries clean, that is, free from weeds. I did not increase my bed because I did not have the plants, it needing all that I had to fill up the bare spaces in the rows. By fall I had a respectable one-half acre of plants, and before frost set in I filled up all the paths close up to plants on either side with well-rotted stable manure (horse and cow mixed).

As soon as winter set in, December 1st, I covered all the plants with salt hay just deep enough to allow the plants to be seen through it.

In the spring (April 1st) I uncovered the plants and gave them a good cleaning by hoeing all the paths once a week, for oats and such like had come up in profusion. The first week in May I covered all the paths with clean salt hay, some of them were in full bloom, but I covered all manure close up to plants; this kept the fruit perfectly clean.

When the berries were ripe I took a small one-horse load to Newark, selling to Mr. R. Walters, a wholesale commission dealer, who paid me in net cash 30c. per quart and made an agreement to take my whole crop for the season, culls and all, at 30c. per quart net! Mr. Walters sold them to retail dealers, all of whom said they were the first clean strawberries (washed, some called them) they had ever sold. At the time I made this contract with Mr. Walters for 30c. per quart for all my crop, other strawberries were selling from 4 to 6c. per quart. Mr. Walters paid me that season for the berries on the one-half acre (that was all I had), over \$600. I had a good yield; all the one-half acre I thought was just as good as Mr. Brown's patch. I will state here that Mr. R. Walters is still living and if any one doubts the foregoing statement, why let him (or her) write to Mr. Walters who, with his brother C. Walters, to-day keeps a large commission house in Commerce street, Newark, N. J. Mr. R. Walters remembers my selling him that crop in 1872 for 30c. per quart net, for I would not trust him and he paid me as soon as each load was delivered. After paying for picking, manure, and all other expenses, I cleared about \$400 from the one-half acre, and here I desire to atone for a slight error made on page 667. It was in '73 I sold my first berries in New York City not in '72 as there stated.

My father and mother often came to see me, and during strawberry season they came almost every day, as they lived in Newark, having moved back from New York. Father often admitted to me that I had made more from one one-half acre than he did in any year from his whole farm; for at that time he had rented his farm for \$800 per year, and out of that paid the taxes.

For a number of years I controlled all the strawberries grown in my district, but in 1880 too many others started in the business and I lost my grip and I sold plants to all who came for them. Soon our spot was known in almost every state in the Union, and I think that I have sold plants into every state, but will say to all fruit growers that there is no profit in selling plants even at \$2 per 100, unless you set out a bed expressly for growing plants for sale, as in taking plants from a bed you destroy next season's crop. Good plants, like Henry, Mary, or Bubach, or even Sharpless, will pay more than 4c. each, if let to remain for fruit.

I seldom bother with selling plants now, as I can make more money with the strawberries. In 1873 I took the first load to New York, and in '74, '75, and up to 1880 I netted over \$1,000 per acre from strawberries or about \$4,000 per year, as I have never had or set out more than four acres. Even this four acres will take from 20 to 30 first-class pickers to attend to it properly, I may say first-class, for I never employ any other class; all my pickers are neat and clean.

Readers, I think I have told you enough of my history to make you understand what manner of man it is that attempts to instruct you in strawberry growing; there are several stories that could be told and which I would like to tell; each one points a moral, and it is just such stories that have made me what I am, industrious, with a first-class home; they would probably make you laugh but not much richer. I will not bother you with them, but will tell them to the Editor and if in some future issue he chooses to publish them, he can do so. Many will ask, Why did you write anything about yourself at all, for it looks to us as if you were trying to make others believe you were just a little smarter than the general run of people, and that you are blowing your own horn. The first is not my intention, the last is true, for I have blown my own horn ever since I worked for \$5 per month and board in that Brooklyn grocery store, and I can truly say that I have heard the echo from Maine to Florida and California, and I always expect to. There are several reasons why I wrote my sketch; one is that as I grow older I am afraid I am getting more selfish; that is, only giving away that which I do not need; this, I think, is all wrong; we should be always willing to help others if we can. Secondly it was to prove beyond all doubt that the old, old saying is true, every word of it, "Where there is a will there's a way," the lives of us all prove this. I have known many blind men and women to make money and get rich; I have seen a man born without arms shoot a gun with his toes much better than I can with both my arms; this man I saw shoot in a place of amusement in New York City last winter and tens of thousands have seen this man. If such a man can make money, then there ought to be a chance for every one, and there is. With industry and cleanliness there will always be health unless through accident, and where can you find a more healthful employment than strawberry culture?

In my next I will tell you all how long I keep a bed of strawberries in bearing without resetting the plants; also how they are grown in Florida and California if you wish.

Subscribers and agents desirous of securing a large stock of the Henry Straw-

berry for the coming spring should not relax in their efforts to obtain new subscriptions to AMERICAN GARDENING. The names can be sent in right along, and as each one is received a credit will be duly entered up to the party forwarding them.

SPECIMEN LETTER.

(From a subscriber in New York State to Mr. H. Jerolaman.)

Dear Sir—I received the plants in splendid shape. In fact, they are, without exception, the finest and strongest plants I ever had, and if the berries are anything like the plants in regard to perfection, you cannot speak any too much for them. I have transplanted them to their new home, and have tried to give them a fitting one; a piece of ground in which I had planted peas, and fall and spring spaded in manure and kept it clean and under good cultivation, so the soil is fit for my greenhouse, so mellow and fine, so with good care I expect good results. I have read your articles in AMERICAN GARDENING; they are excellent and contain many good points. Although I have taken the papers that have been issued previous to AMERICAN GARDENING for the past 20 years, I have learned more common sense in the suggestions you have given than in most all of the rest put together, particularly in regard to setting out plants. The trouble with many like myself would be in either planting them too shallow or too deep, or in covering the crowns, and thereby getting a lot of spindly plants. Keep the good work going, and let me thank you for your kindness in sending me such fine plants. I have bought plants many times, but never received such fine ones. —F. SIBSON, N. Y.

Setting Out Strawberry Plants.

Readers who are to receive premium plants of the Henry are asked to observe the caution now given. Of course each one wants all the plants to grow, therefore see to it if the ground be dry to wet each plant with at least one cupful of water every other day until rain comes. If the weather be hot, shade them with a board, putting bricks or stones under each end to keep it off the plants. There is no reason why any one should loose a single plant.

The Henry Strawberry is Controlled Exclusively by American Gardening.

Mr. Jerolaman wishes it to be distinctly understood that he is not a nurseryman, but is a fruit grower; it is not his business to sell plants. Hitherto he has disposed of a few plants in order to have the variety generally tested. For the future, however, the Henry Strawberry plants will be distributed only as premiums through AMERICAN GARDENING.

Plants will be delivered from now onward through the month of October, or until the ground freezes, which in the place where the plants are growing is not until December. Mr. Jerolaman always sets out plants for himself until the middle of November, and in some seasons even up to the end of that month.

In the case of Hans Jensen vs. the Griswold Seed Company, Judge Holmes, of Nebraska, holds that the property of the plaintiff is his homestead and that it may not be seized to satisfy any claim the defendant may have. A sale made was vacated but judgment was given to Oscar Baralles. The value of the property is \$200.

The peach crop in the Southern Ulster, N. Y., fruit belt is the largest since the big yield in 1880 and the grape crop is the most abundant the growers have known in years.

The peach growers of Maryland have called a convention. They probably want to find out why people don't believe their annual announcement that the peach crop is a failure, says the Syracuse Post.

W. & D's.
CELEBRATED SURE CROP.
MUSHROOM SPAWN.
8 LBS. FOR \$1.00.
Lilium Harrieh, Roman Hyacinths, Freesias,
Paper White Narcissus, Callas,
Etc., Etc.
Special PRICES on application.
WEEBER & DON,
Seed Merchants and Growers,
114 Chambers St., — N. Y. CITY.

Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and
Dealers in Cut Flowers

50 West 39th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Com-
mission. Best market prices guaranteed.

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send
10 cts. for Mrs. Theodora B. Shepherd's

New Catalogue of Rare and Beautiful
Flowers.

Many New Begonias, New Cosmos,
Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California.
Mention American Gardening when you write.

....GREAT....

Horticultural Exposition

FLOWERS, FRUITS, VEGETABLES.

AMERICAN INSTITUTE FAIR

Madison Square Garden, New York.

NOW IN PROGRESS

Will Continue to Oct. 23.

\$5000 in Cash Prizes, also Medals, Cups,
Diplomas and Certificates.

For particulars apply to

DR. F. M. HEXAMER,

Madison Square Garden, New York.

Mention American Gardening when you write.

PRICE LIST FOR

Exhibition Stationery

1000 Entry Forms	\$2.75
Two Exhibitor's Books	2.00
Two Glass Books	2.50
Six Judge's Books	3.00
500 Entry Cards	3.50
500 Pastors (assorted)	1.00
Total	\$14.75

Secretaries of Horticultural, Agricultural,
or any other form of competitive show, are
invited to write us for full particulars.

It is freely conceded that the system we
have adopted saves time, temper, trouble,
worry and expense.

The clerical work of every exhibition, large
or small, should be run on business lines, and
you will find this system the best, the easiest,
least expensive, and most satisfactory. Ad-
dress correspondence

A. T. DE LA MARE PTG. & PUB. CO. Ltd.

P. O. Box 1607, New York.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent
appointments and movements are requested to
forward particulars of the same for publica-
tion in this column. No charge is made.

David Fraser lately of Mahwah, N. J.,
has accepted the position of head gar-
dener to W. H. Frick, Esq., of the Car-
negie Steel Co., at Pittsburgh, Pa.

F. Sander & Co., St. Albans, England,
will hold their annual fall Orchid sale at
Cleary & Co.'s auction rooms, 60 Vesey
street, New York, Friday, October 15.

T. Patch, recently plant foreman for the
Pitcher & Manda establishment at Short
Hills, N. J., has been appointed to take
charge of the beautiful estate of J. T.
Williams, Esq. at Stamford, Conn. Mr.
Patch begins his new duties to-day, Octo-
ber 9.

As a general rule the daily newspapers
are charmingly unreliable on horticultu-
ral topics. It is interesting in this connec-
tion to see the Inter-Ocean (Chicago, Ill.)
has a sound article on Cannas with good
illustrations of the best varieties. The
only gross blunder was "stone head" for
stove heat!

Herman F. Krause, a well-known land-
scape gardener, died at his home, Fair-
mont avenue, Jersey City, from debility,
incident to old age, on September 27.
Mr. Krause was also a topographical
engineer. In 1856 he submitted plans to
the commissioners for Central Park, and,
though they were not adopted, they were
adjudged second best. As a result he
was employed as a topographical
draughtsman at the Park, which posi-
tion he held for ten years, and was after-
wards made chief of the topographical
draughtsmen of Central Park. Deceased
was born in Saxony in 1817. He came
to this country in 1854, and resided in
New York up to 1879, when he removed
to Jersey City. Two sons survive him.

Hartford, Conn.

The Horticultural Society held its ex-
hibition here September 23 and 24, and
was a very successful affair. Awards
were as follows:

Greenhouse and stove plants—Best dis-
play, owned by exhibitor three months,
not less than 20 named varieties, W. B.
May and T. J. McDonald; Palms, best
collection, W. B. May; Ferns, W. B. May;
variegated Caladiums, R. Patchet;
Dahlias, J. Albiston and Mrs. A. Trask;
Asters, J. Albiston; Crotons and Dracæ-
nas, W. B. May; tuberous-rooted Begonias,
Mrs. A. Trask; cut flowers, S. J. Al-
biston; best collection of wild flowers,
William Henderson; best collection of
vegetables, W. B. May and G. Minge;
beets, R. Patchet, H. Butler and W. Hen-
derson; carrots, W. Henderson; turnips,
E. Elmer; cabbages, H. Butler and G.
Minge; celery, G. Minge. All other prizes
were captured by R. Patchet, G. Minge,
A. C. Sternberg, H. Butler, E. Elmer, C.
O. Purinton, and A. Trask. A Chrysan-
themum exhibition will be given in Put-
nam Phalanx Hall, November 9, 10,
and 11.

The Gardens of the Vatican.

The gardens of the Vatican are famous
the whole world over for their beauty
and their size, and therein the Pope enjoys
what fresh air and exercise he has been
able to obtain since he has been the pris-
oner of the Vatican, and, contrary to
general anticipation, there is very little
difficulty to be experienced in obtaining
admission, though a special license has to
be obtained, which can be obtained from
the chief guide, the grounds being reached
from a grille on the basement of the
sculpture galleries. From this grille
stretches a handsome terrace, bordered
on the right by a fine hedge of Arbutus;
on the left by a sunken garden set with
Aloes and Yuccas and Orange trees on
pedestals almost as thick as they can
stand, which presents a very curious
effect. The terrace terminates in a dense
shrubby, untrimmed since it was
planted, and overhung by tall trees.
Here are kept some macaws. A little dis-

tance beyond, in a copse, was a bricked
court, some 20 feet or so below the level,
wherein are kept half a dozen mouflons.
Leaving the dismal shrubbery at the foot
of a broad walk rising gently between a
row of young plane trees and a very high
bank. Upon the other hand were plane
trees, with clumps of Italian reeds here
and there. Passing along a variety of
bits of garden, the Pope's Walk was
reached, a promenade of some 200 feet in
length. In summer it is shaded by a lofty
bank for the most part of the day, and
so remains comparatively cool in the eve-
ning. Further on from the Pope's Walk
is the vineyard, which covers about an
acre. There is a deer park, ostriches and
pelicans are kept in an enclosure, and
there is a fair quantity of poultry.—
W. N. B., in Gardeners' Magazine.

The Canna is Threatened.

A dangerous Canna disease, a fungus
that quickly destroyed various species,
was recorded as long ago as 1884 when
it was noticed at San Paulo, in Brazil.
Quite recently an account of the destruc-
tion of Cannas, by what proves to be the
same fungus, *Uredo cannae* (Winter), has
been received at Kew from Mr. J. H.
Hart, superintendent of the Botanic Gar-
dens, Trinidad. Diseased leaves are at
first thickly studded with minute, yellow-
ish spots; this appearance is quickly fol-
lowed by blackening and death. The
disease does not appear to have reached
Europe or the U. S. as yet, and great care
should be exercised in receiving living
plants, as the fungus, which is a close
ally of the Hollyhock rust (*Puccinia mal-
vacearum*), if once introduced, would, in
all probability, render impossible, for a
time at least, the cultivation of Cannas.

White Plains, N. Y.

The Westchester County Horticultural
Society held a very successful exhibition
of plants and flowers in a tent provided
for their purpose at the County Fair,
White Plains, September 27 to October 2.
F. R. Pierson Co., Tarrytown, exhib-
ited a fine group of Palms, Mr. George
Barton, gardener for J. D. Laying, Mt.
Kisco, had a collection of Dahlias and
flowering Begonias. Mr. A. L. Marshall,
gardener for J. B. Dutcher of Pawling,
exhibited a fine collection of seedling Can-
nas, including the new America, also
some fine specimens of Coleus. Mr. J. H.
Crane of Mt. Kisco had some fine Palms.
Mr. John Gerry, gardener for W. B. Dic-
kerman, Mamaroneck, a pair of Pandanus
Veitchii; Samuel Kerr, gardener for Brad-
ford Rhodes of Mamaroneck, a collection
of Palms; Mr. James Wood, Mt. Kisco, a
display of French Marigolds; Mr. James
Hopkins of Armonk, some Hydrangea
paniculata; Mr. F. M. Carpenter, Dah-
lias; Mr. H. A. Spavins, Mt. Kisco, a col-
lection of 20 varieties Rex Begonias and
seedling Canna Mrs. J. B. Dutcher.

New York.

The Horticultural Exhibition at Mad-
ison Square Garden, given by the Amer-
ican Institute, continues, as the time goes
on, to be an unqualified success. The
Dahlias of the first week have given way
this week to a more varied line of cut
flowers. Exotic plants of rare value are
also noticeable. Fruits are abundant and
of excellent quality, and the same can be
said of vegetables.

Plants.

One of the chief attractions of the
show is a fine plant of *Dracæna Sandera-*
ana with 22 growths exhibited by Wil-
liam Duckham, gardener to D. Willis
James, Esq., Madison, N. J. The Insti-
tute's medal of excellence was granted to
this superb exhibit. Mr. Duckham also
gained first honors for six stove and
greenhouse plants, and second for three
Rex Begonias, also first for specimen
Palm, entering what is probably one of
the rarest Palms in the country, viz., *Co-
cos Bonnetii*.

Mr. G. Hale, Bellport, L. I., was a suc-
cessful exhibitor and staged a very at-
tractive group of foliage plants includ-
ing some well-colored pieces of *Alocasia*
macrorrhiza. Mr. Hale secured first also
for three specimen *Dracænas*. Mr. A. Wel-

ing, Brooklyn, secured first honors for Rex Begonias with three excellent plants, among which Fuerst Bismarck was one of his best.

Special exhibits of plants came from James Dowlen, gardener to L. H. Terrell, Seabright, N. J.; N. Butterbach, gardener to C. N. Bliss, Oceanic, N. J.; and H. Kettell, gardener to S. Loeb, Seabright, N. J. Mr. Dowlen had two grand Ferns; his piece of *Nephrolepis exaltata* Bostoniensis was over seven feet in diameter. The special feature of Mr. Butterbach's display was in the fact that they were all grown in Jadoo fibre. This same exhibitor also secured first prize for six table plants.

Among trade exhibitors were F. R. Pierson Co., Tarrytown, N. Y., and Siebrecht & Son, New Rochelle, N. Y. The first-named had a charming group of plants arranged in front of the stage, and a large number of Bay trees distributed about the hall. This firm also secured first honors for *Araucarias*, *Ferns*, and *Pandanus*. To the second named firm went first honors for six *Ferns*, six *Dracenas*, and a special for a group of ornamental foliage plants.

Cut Flowers.

The class for amateurs brought out three exhibits, all of which were of the highest order of excellence. Mr. Hale secured first and Mr. Dowlen second, Miss Ida French receiving a special. Mr. Dowlen covered himself with glory in a special display of *Coxcombs* and other *Celosias*, in all over 30 distinct varieties. For this he was awarded a diploma. A. Weising exhibited seedling *Cannas*.

In the professional classes John Lewis Childs, Floral Park, was first with even a better lot of miscellaneous cut flowers than he staged last week, and certainly his special exhibit of *Gladioli* was finer. W. K. Peacock also outclassed his previous efforts with two grand tables of *Dahlias*.

Fruits.

The feature here was the display of hothouse grapes. Mr. W. Turner, gardener to William Rockefeller, Tarrytown, secured first for the best collection, with five kinds, two bunches of each. His best bunches were Madresfield Court, and Muscat of Alexandria. It is questionable if ever better berries of the first-named have ever been seen on our show boards; Mrs. Pince, Barharossa, Black and Hamburg made up the balance of his collection.

For the best two bunches of white grapes, W. Scott, gardener to Mrs. F. C. Eastman, Tarrytown, was first with Buckland Sweetwater, superbly colored, also large in berry and bunch. Mr. Nichols, gardener to Mrs. J. B. Trevor, Yonkers, was a close second with two fine bunches of Muscat of Alexandria.

For the best two bunches of black grapes the judges awarded equal first to W. Scott and D. McIntosh, gardener to Howard Gibb, Islip, L. I., the last-named staging two high-colored, well-finished bunches of Alicante, while Mr. Scott had two grand bunches of Black Hamburg, a little over-ripe.

Ellwanger & Barry, Rochester, N. Y., and C. C. Corby, Montclair, N. J., were the largest exhibitors of American grapes, and the New York State Farm at Geneva makes a most remarkable display on which further comment will be made. Apples and Peaches are also well represented, but at time of going to press, the awards were not made.

Vegetables.

These are not so numerous as last season, but what is lacking in quantity is more than made up in quality. A special display of 64 kinds shown by J. Dowlen makes what is certainly as neat and clean a lot of vegetables as was ever staged by a gardener, and contained a marvelous assortment. With this, as with other vegetables, the awards at time of writing were not known.

The full list of awards made at the first week's display, of which the report appeared in our last issue is as follows:

Dahlias (professional class)—Not less than 100 varieties, not less than six blooms of each; first, W. P. Peacock, Atco, N. J.; second, H. F. Burt, Taunton, Mass. Fifty varieties: First, H. F. Burt;

second, W. P. Peacock. Twenty-five varieties: First, W. P. Peacock; second, H. F. Burt; extra to G. H. Hemling, 620 Hamburg avenue, Brooklyn, N. Y. Ten varieties: First, W. P. Peacock; second, H. F. Burt; certificate to G. H. Hemling; special prize to Lothrop & Higgins, E. Bridgewater, Mass. Display of singles, not less than 100 flowers, W. P. Peacock. Display of Cactus varieties, W. P. Peacock. Display of Pompon Dahlias: First, W. P. Peacock; second, H. F. Burt; certificate, Lothrop & Higgins.

Dahlias (amateur class)—Not less than 100 varieties, Rev. C. W. Bolton, Pelham, N. Y. Fifty varieties: First, D. Wilson, Orange, N. J.; second, Rev. C. W. Bolton. Twenty-five varieties: Rev. C. W. Bolton. Ten varieties: First, W. H. Smith, Maplewood, N. J.; second, Rev. C. W. Bolton. Cactus Dahlias, Rev. C. W. Bolton. Pompon Dahlias, Rev. C. W. Bolton.

Gladiolus—Collection of not less than 50 varieties—For 25 varieties and for 10 varieties, John Lewis Childs in each case.

Miscellaneous cut flowers—Collection of hardy flowers not to include *Roses* and *Carnations* (amateurs): First, J. W. Duncan, gardener to W. H. S. Wood, Greenwich, Conn.; second, A. Herrington, gardener to W. H. McK. Twombly, Madison, N. J.; (professionals), J. L. Childs.

Wild flowers—Collection correctly labeled with their botanical and English names: First, A. Herrington (64 species); second, Miss Ida C. French, Springfield, N. J.

Special awards—Collection of flowering and berried shrubs, J. W. Duncan. Display of Dahlias in pots, medal of excellence and diploma for display of blooms, C. W. Ward, Queens, L. I., N. Y.

Carl Blomberg (gardener to Oakes Ames, Esq.), North Easton, Mass., for a display of 103 species of wild flowers (diploma). Display of Water Lilies (medal of merit). *Nymphaea cœrulea striata* (first-class certificate). *Nymphaea cœrulea Eastoniensis* (first-class certificate).

William Turner (gardener to William Rockefeller) Tarrytown, N. Y., Pitmas-ton Duchess Pear grown in pots under glass (special prize).

G. H. Hemling, 620 Hamburg avenue, Brooklyn, N. Y., vase of Dahlias with Ferns arranged for effect (special).

Medal of merit was awarded to F. R. Pierson Co., for display of *Cannas*; also a first-class certificate for new scarlet *Canna*, Tarrytown, for intense color, free flowering qualities and general usefulness; also first-class certificate for specimen plants of *Nephrolepis Bostoniensis*; diploma for group of ornamental foliage and decorative plants.

Diploma for collection of Bay Trees—Siebrecht & Son, 409 Fifth avenue, City.

Stand of letter work and patent pot-holder, W. C. Krick, 1287 Broadway, Brooklyn.

H. Spavins, Mt. Kisco, N. Y., exhibited new seedling *Dahlia*, Mrs. J. B. Dutcher.

Hereafter the plants in the public squares of Philadelphia will be distributed among the schools when the fall season begins. It was formerly the custom to give the plants to anyone making application for them, special days being set aside for the distribution.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and, therefore, requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

INCUBATORS. Self-regulating. Catalogue free G. A. SINGEN, Cardington, O.
Mention American Gardening when you write.

AGENTS WANTED, by the **CELESTINE** GENEVA Nurseries, established 1866. Good Pay. Success ensured to Workers. Address **W. & T. SMITH, GENEVA, N. Y.**
Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE...
Ornamental Trees, Evergreens and Plants. Prices never so low. Japan Ivy, 2 1/2 ft., strong, \$2.00 per 100. MONTROSE NURSERY, Montrose, N. Y.
Mention American Gardening when you write.

JAPAN PLUMS Large stock of best varieties at low rates. Full assortment of Trees and Plants. Get our prices before ordering elsewhere. Catalogue free. Established 1899. 150 acres. **THE GEO. A. SWEET NURSERY CO.,** Box 1848, Danville, New York.
Mention American Gardening when you write.

Steel Wheels
Staggered Oval Spokes.
BUY A SET TO FIT YOUR NEW OR OLD WAGON
CHEAPEST AND BEST
way to get a low wagon. Any size wheel, any width tire. Catal. FREE.
ELECTRIC WHEEL CO., Quincy, Ill.
Mention American Gardening when you write.

OUR NURSERY STOCK
is grown on the banks of the Hudson River. It is first-class. Prices are low. 50 acres of **FRUIT TREES,** Plants, Vines and Ornamental Stock to sell. 1897 Catalogue free.
T. J. DWYER, Cornwall, N. Y.
Mention American Gardening when you write.

We are ready to fill your order for **PEACH TREES**
Guaranteed free from Yellow, Root, or San Jose Scale. State Inspectors certificate with each order. All standard varieties including Elberta, Emma, and Triumph. Also Pear, Plum, Apple, and other Trees and small Fruit plants. Catalogue on application.
CHAS. WRIGHT, Seaford, Dela.
Mention American Gardening when you write.

LET 'ER ROLL.
Do you know of any wire farm fence that is having constantly increasing sales, after being on the market ten years? We do, just one. Think about this.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write.

Webster's International Dictionary
Invaluable in the Home, School, and Office.
A thorough revision of the Unabridged, the purpose of which has been not display nor the provision of material for boastful and showy advertisement, but the due, judicious, scholarly, thorough perfecting of a work which in all the stages of its growth has obtained in an equal degree the favor and confidence of scholars and of the general public.
The One Great Standard Authority.
So writes Hon. D. J. Brewer, Justice U. S. Supreme Court.
GET THE BEST.
Send for specimen pages to **G. & C. MERRIAM CO., Publishers, Springfield, Mass.**
Mention American Gardening when you write.

There is Not a Home in the Land

But calls for a yearly Calendar.

Every family tries to get one or more; generally more.

There are Calendars and Calendars

Some are good, some bad, most of them indifferent.

There Will Not be a Calendar Issued for 1898

To exceed in artistic elegance, finish, beauty of designs and effective coloring, the one we to-day offer as a premium to every subscription to AMERICAN GARDENING received before December 31, 1897.

EVERY SUBSCRIBER IS ENTITLED TO ONE

AND CAN EASILY EARN TWENTY.

OUR magnificent **Rose and Girl 1898** six sheet Art Calendar, two months to a sheet, each sheet $8\frac{1}{2} \times 11\frac{1}{2}$ inches, is superbly lithographed in eleven colors, and printed on hammered paper; the whole tastefully tied with silk bow—undoubtedly a work of art fit for the most elegant home, and as handsome a Calendar as was ever published. Each one of the six designs presents a distinct type of female loveliness and a fresh study in roses, the coloring on each sheet being rendered in harmony with the design. There is not a line of advertising on the Calendars to detract from their value. They will not be sold by us for less than \$1.00 each.

Description

Who is Entitled to a Calendar?

EVERY SUBSCRIBER renewing before December 31, 1897, enclosing Five Cents additional to pay packing and postage.

EVERY NEW SUBSCRIPTION—To induce people to test the value of AMERICAN GARDENING we will send the Calendar absolutely free to every name received direct not previously on our mailing list. Remit \$1.00 for A. G. 12 months.

EVERY ONE sending us a club of Four 3-month trial subscriptions at twenty-five cents each, will get a Calendar, free as a premium, by return mail.

EVERY NEW name sent in by an agent.

NOTE.—We have ordered manufactured for us a large stock of these superb Calendars in the endeavor to have sufficient supply for all demands, but will not guarantee to fill orders after supply is exhausted. Therefore, order yours now.

Special to Agents A copy of our Art Calendar to show people will clinch the argument and obtain the subscription. Bona fide Agents will be mailed one copy, securely wrapped, on receipt of only Twenty-five cents (one-fourth its value.) Armed with this superb Calendar we misjudge human nature greatly if any ordinary mortal cannot secure a big list of new subscriptions every day. Every new subscriber you send us gets a Calendar by return mail.

We Pay Agents

Every new subscription at \$1.00 entitles the agent to **Five of the Wonderful Henry Strawberry Plants**, to be delivered next Spring. Thus 100 new subscriptions would secure agents 500 plants; a possession worthy of your consideration. Every new subscriber taken by agent will receive one of our Art Calendars free by return mail.

Agents who do not want the Henry Strawberry Plants can retain as their payment **20 cents in cash** on each subscription they take, or will be credited **twenty-five cents** on any book, magazine or publication they wish to obtain through us.

Address all
correspondence

AMERICAN GARDENING, P. O. Box 1697, New York.

REMIT BY P. O. or EXPRESS MONEY ORDER.—IT IS SAFEST.

WHOLESALE MARKETS.

New York.

The recent Jewish holiday has had its effect upon the fruit and vegetable market which has been rather quiet in consequence, but at the same time prices have held firm.

Mushrooms are just beginning to come in and the price is unsettled, very few sales being made at \$1.

Hothouse tomatoes had not appeared on the New York market up to time of going to press, but it is expected that they will have arrived before next report reaches our readers. Near-by hothouse grapes are rather dull and of poor quality; foreign stock is looked for during the month, and this will be of the usual good quality.

The potato market has had a drop, prices had advanced too rapidly and were at too high a figure to last, consequently the quotation of \$3.25 of last week has given place to \$2 or \$2.25 this week.

Native grapes are very low; they can hardly pay the grower at present figures. On Monday eight carloads were sold off by auction, large baskets realizing 10¢ to 11½¢, small ones 6¢ to 7½¢. This auction business has let loose a large lot of stock which is sold on the streets, and has cut into store trade.

Onions are in large supply, and the market is somewhat easier.

The general tone of the apple market seems to be somewhat easier; dealers have become pretty well stocked up with high-priced fruit which has not moved at all freely from second hands, and they are now disposed to hold off; on positively fancy apples previous quotations are maintained, but on average offerings there is some weakness and slight shading of prices. There is no material change in the market for pears; the Bartlett's offering are still of a wide range of quality, condition, and value, some lots being in bad order; other kinds are selling at previous quotations. Quinces dull but not plenty, \$1.50@2. Plums are quite plenty and moving slowly at a wide range of prices.

Apples—Soft red, table sorts, fancy, d.-h. barrel, \$3.50@4; soft red sorts, fair to prime, per barrel, \$2@3; Fall Pippin, hand-picked, per d.-h. barrel, \$2@2.50; Twenty-Ounce, hand-picked, per d.-h. barrel, \$2.25@2.75; King, hand-picked, per d.-h. barrel, \$2.25@3; Ben Davis, per barrel, \$2.25@3; Greening, hand-picked, per d.-h. barrel, \$1.50@2.25; Baldwin, hand-picked, per d.-h. barrel, \$1.50@2.25; mixed varieties, fair to good, per barrel, \$1.75@2; mixed varieties, poor to fair, per barrel, \$1@1.50; Jersey, winter, open heads, \$1@1.25; Crab apples, per barrel, \$2@4.

Peaches—Maryland, fancy Salway, per carrier, \$1@1.50; Smocks, per carrier, \$1@1.25; Clings, per carrier, 75¢@1; Jersey, extra, selected, yellow, per basket, 65¢@1; extra selected, red and white, basket 60¢@75¢; choice, per basket, 40¢@50¢; Western New York, per carrier, 75¢@1.25; up-river, carrier, 2 pony baskets, 60¢@1.

Pears—Bartlett, large, clean, per barrel, \$2.50@3.50; Seckle, per barrel, \$2@4; Beurre Bosc, per barrel, \$1.50@2.50; Sheldon, per barrel, \$1.50@2; Beurre d'Anjou, per barrel, \$1.25@1.75; Beurre Clairgeau, per barrel, \$1.25@1.75.

Grapes—Delaware, up-river, per 24-pound case, 50¢@75¢; western New York per small basket, 9¢@11¢; Niagara, up-river, per 24-pound case, 50¢@60¢; western New York, per small basket, 9¢@10¢; per 20-pound basket, 30¢; Concord, up-river, per case, 40¢@45¢; western New York, per small basket, 7½¢@8½¢.

Wine grapes—White kinds, in trays, per pound, 1½¢; Delaware, in trays, per pound, 2¢@2½¢; black kinds, in trays, per pound, 1¢@1½¢.

Plums—French prune, per 8@10-pound basket, 25¢@35¢; German prune, 8@10-pound basket, 20¢@30¢; Gage and Reine Claude, 8@10-pound basket, 15¢@20¢; Damson, per 8@10-pound basket, 12½¢@25¢.

Nuts—Receipts of chestnuts are more liberal and prices show a decline. Hickory nuts are not plenty but there is very little demand for any important quantity except at very moderate prices.

Chestnuts—Northern, per bushel, 60 pounds, \$8; southern, per bushel, 60 pounds, \$7@8; hickory, per bushel, 50 pounds, \$1.50@1.75.

Only a few cauliflowers, and these largely of inferior quality. Celery steady for fancy large but trade quiet and medium and small move slowly. Cabbages firm for choice stock. Tomatoes continue in light supply and steady. Russia turnips firm for prime quality.

Cauliflowers—Fancy, per barrel, \$1.75@2.25; poor to fair, per barrel, \$1@1.50.

Celery—Choice to fancy, large, per dozen, 25¢@40¢; fair to prime, per dozen, 15¢@20¢; small and poor, per dozen, 8¢@12¢.

Corn—Per 100, 75¢@1.25.

Cabbages—Jersey and Long Island, per 100, \$4@6.

Cucumbers—Shelter Island, per barrel, \$1.50@3; selected, per 100, 75¢@1.

Lima beans—Jersey, Potato, per bag, \$1@1.25.

Parsnips—Per barrel, \$1@1.25.

Peppers—Jersey, red, per barrel, \$1@1.25; Jersey, green, per barrel, 60¢@90¢.

Squash—Hubbard, per barrel, 75¢@1.25; Marrow, per barrel, 60¢@75¢.

Turnips—Russia, Canada, per barrel, 75¢@90¢.

Boston.

Peaches are nearly over, some near-by stock bringing \$1@1.75 per basket; Hudson River 75¢@1.50, according to size of basket and quality of fruit.

The recent frosts advanced the price of tomatoes. Fancy outdoor stock, when it can be found, easily brings \$2 a bushel, with common grade \$1@1.50, while hothouse sells \$6@7 a bushel. We forget from one year to another oftentimes, but it seems as if these present offerings of hothouse tomatoes are about the best we ever saw.

An easier feeling exists on apples, owing partly to warmer weather, partly to heavier receipts, and partly to the different qualities the purchaser finds in a car of apples. One barrel seems to have been put up by a first-class packer, and perhaps the next one opened will contain more or less No. 2s. Western Spies or Ben Davis \$2.50@2.75; Jonathans \$3.25@3.50; Greenings take a range of \$2.25@2.75.

Cantaloupes and watermelons show up each morning and meet but a limited demand at any price.

Hothouse grapes take a range in price 25¢@50¢ a pound; demand limited. Native stock pony baskets, Delawares, 12¢; Concord, 10¢; Wordens, 9¢; Niagaras, 15¢; a fair quantity of the 10-pound basket Concord showing up this week, bringing 15¢.

The colder weather makes a little healthier call for celery, but price is unchanged, 75¢@1.25 a dozen. Artichokes not quite as firm, \$1@1.25 a bushel.

No change in beans; agricultural \$1 a bushel; Sievas \$1.50@1.75; limas \$1.50.

Cauliflower is excellent, clean as a whistle, apparently people not using very much. Selling 8¢@15¢, according to size of head. Onions very firm at \$2.25 a barrel.

Hothouse cucumbers are just perfect and are having good liberal sale, \$4@6 per 100.

Cranberries much higher; take a range of \$5.50@6.50 per barrel; \$2@2.25 per bushel crate.

Peppers move slowly at about 50¢ a bushel, while egg plants take a range of 50¢@75¢ for the same quantity.

Squash pies getting into line and with the lighter yield of near-by squash, creating a very healthy demand, \$1@1.25 for Marrow per barrel; Hubbard \$1.50; Turbans or Bay State, \$1.50.

Pears are in good condition and wanted: Seckles \$1.50@2 a bushel; Sheldons \$1.25@2; Congress \$1.75@2.25; Bartlett's \$1.75@2.25.

Mint hangs around 40¢ a dozen bunches. Very light call for lettuce; quite large supply offered; the only im-

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advertisement, and each initial, or a number, counts as one word. No cuts or display type allowed.

RASPBERRY and Strawberry plants. Chas. C. Nash, Three Rivers, Michigan.

GLASS a wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 466 W. Broadway, New York.

CUTHBERT raspberry plants. \$3.75 per 1000. Taylor blackberry plants, \$1.00 per 100. Order now. John Dinmore, Jeff. Co., Fernwood, Ohio.

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolia, Rhododendron, Asaleas, etc. Branch of the Horticultural Company, Boekoop, Holland.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

CALIFORNIA Privet make the finest ornamental hedge, and are perfectly hardy. Fine large plants grown at seashore, two years old, \$3 per hundred. Cash with order. References, First National Bank, Asbury Park, N. J., State Banking Co., Newark, N. J., Atlantic Coast Nursery, James H. Cornell, Proprietor. Office, 606 4th Ave., Asbury Park, N. J.

CELERY, blanched with paper tubes; five thousand in use for the fourth time this season, celery and onions grown together; fifty cord of bunch onions, three hundred bushels of dry onions, one hundred cord of celery to the acre, one dollar's worth at a stand without moving. Combination is the word, not rotation; no second hand, no copy, no old fogey; full information given; price one dollar. Richard Branson, Box 451, Syracuse, N. Y.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

Business Cards.

C. D. Zimmermann, Buffalo, N. Y. Horticulturist. Landscape Gardener. Plans and estimates furnished.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

We PAY CASH each WEEK the year round, if you sell Stark Trees. Outfit free. STARK NURSERY, LOUISIANA, Mo., Stark, Mo., Rockport, Ill., Knoxville, N. Y. Mention American Gardening when you write.

GROW BISMARCKS IN POTS

Wonderful Midget Bismarcks bear beautiful large Apples in Pots or Garden when two years old. \$1.00 each. CRIMSON RAMBLER ROSES. Magnificent Climber for Porch, \$3.00 each, prepaid. Send for beautiful colored Lithographs giving descriptions. Address, Manhattan Nursery Co., 47 U Day Street, New York.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs.

&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION.

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

mediate demand being for salads or to adorn meat orders; sells 12c. a dozen heads. Parsley about 50c. a bushel. Cabbage holding their own 4@5c. a head. Carrots \$1@1.25 a bushel. Beets or turnips 40@60c. a bushel.

Very little change in potato market from last week; receipts are ample; prices range from 70@80c., the stock from Maine being about the poorest ever offered in this city; the quality from western New York or from Michigan or from Minnesota seems to be all right, and so far has given satisfaction. It is quite evident that New England must look west of the Hudson River for eating potatoes.

Sweet potatoes are in moderate supply, good demand, \$2@2.25 a barrel.

The first "sweet Sops" ever seen on this market arrived last week from Jamaica. It is believed they are an article that will be wanted in this market. Encouragement can also be offered for Alligator pears from the same country which have been coming here for about a month.

There was picked in the old town of Acton last week about 80 quarts of luscious strawberries. Your readers will remember this town was heard from on "April 19, 1775," and it was within a few rods of the spot where the patriots shed their blood, that these berries were grown. Another man in luck, was a farmer on the Hudson River who sent us 32 quarts of nice red strawberries; wholesale price for each of these lots about 50c. per quart; retailer varied his figures according to his customers.

Philadelphia.

The market has been very good this past week, being well cleaned up every day. Supplies of apples have been light and there is a good demand for choice fruit, prices of which are strong. Peaches are in fair supply and quiet. Pears have been fairly liberal in supply, but business in fresh receipts has been somewhat restricted by liberal offerings of cold-storage Bartlett at low figures. Grapes have been in good supply, the market is quiet, and prices easier.

Apples—Jonathan, per barrel, choice and fancy, \$3@3.25; Maidens' Blush, per barrel, choice, \$2.50@3; Gravenstein, Black Detroit, and Twenty-Ounce, per barrel, choice, \$2.75@3; mixed varieties, choice, \$2@2.50; fair to good, \$1.25@1.75.

Peaches—Mountain fruit, per 6-basket carrier, choice, \$1.25@1.50; per five-eighths bushel basket, choice, 75c.@\$1; per five-eighths basket, fair, 40@60c.; per 20-pound basket, choice, 65@75c. small clingstones, 20-pound basket, 25@30c.

Pears—Bartlett, per barrel, \$2.50@3; per bushel keg, \$1@1.25; Seckel, per barrel, \$3@3.25; per one-half barrel, \$1.50@1.75; Louise Bonneper barrel, \$1.50@2; per one-half barrel, 75c.@\$1.

Grapes—Hudson River, per 20-pound case, 40@50c.; N. Y. Concord, per 5-pound basket, 6@7c.; per 10-pound basket, 12@13c.; N. Y. Delaware, per 5-pound basket, 9@10c.; Niagara, per 5-pound basket, 9@11c.

Cranberries—Cape Cod, choice, per barrel, \$3.50@6; medium as to size and color, \$4@4.50; per crate, \$1.50@1.75.

Quinces—No. 1, per barrel, \$2.50@3; No. 2, per barrel, \$2@2.25.

Beets—Local, per 100, \$1@1.75. Celery, choice, per dozen, 80@40c.; fair, 15@20c. Corn, Jersey, per 100, 75@90c. Cabbages, per 100, \$2.50@3.50.

Lima beans.—Per 100 pounds, \$2@2.50. Green peas, Marrows, per bushel, \$1.25@1.35; fair to good, 75c.@\$1.

Onions—Jersey white, Per barrel, \$1.75@2; per bushel, 60@70c.; yellow, per barrel, \$1.25@1.50.

Potatoes—Receipts have been light and market has been stronger. Choice, per barrel, 85@90c.; fair to good, 70@75c.; Jersey, per five-eighths basket, 45@50c. Jersey sweets, per five-eighths basket, 30@35c.

PEACH TREES, \$3 P-R 100.

All kinds of Trees and Plants CHEAP. Cat. FREE. RELIANCE NURSER & CO., Box 1410, Geneva, N. Y. Mention American Gardening when you write.

ARMSTRONG & McKELVY
Pittsburgh.
BETHEA-BAVLEY
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAIRBANKS
Pittsburgh.
ANCHOR
Cincinnati.
EISENSTEIN
ATLANTIC
BRADLEY
BROOKLYN
JEWETT
ULSTER
UNION
SOUTHERN
SKIPMAN
COLLIER
MISSOURI
RED SEAL
SOUTHERN
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALEM
Salem, Mass.
CORNELL
Buffalo.
KENTUCKY
Louisville.

DON'T be penny wise and pound foolish by buying the "just-as-good mixtures," "so called White Lead," or other substitutes for Pure White Lead.

In painting, the cost of labor so far exceeds the cost of material that the best only should be used. The best is Pure White Lead (see list of brands which are genuine) and Pure Linseed Oil.

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors for also cards showing pictures of twelve houses of different designs painted a various styles or combinations of shades forwarded upon application.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All our pots from 7 in. and upwards have our Patent Eductor Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bait Pans.

THE WHILDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.

BRANCH WAREHOUSES: Kearney and Westside Avenues, JERSEY CITY, N. J. Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

**GLASS FOR GREENHOUSES, GRAP-
ERIES, CONSERVATORIES, GLASS
HOTHOUSES AND HOTBEDS. GLASS
VANHORNE, GRIFFEN & CO.,
Importers of French Glass. 40 to 48 VESTRY STREET,
Cor. GREENWICH ST. NEW YORK.**

Mention American Gardening when you write.

A BARGAIN
ONLY \$1.60 We have made arrangements to furnish **THE OHIO FARMER** of Cleveland, O., and **AMERICAN GARDENING**, both papers, one year, making a total of 104 great papers, for only \$1.60.

THE OHIO FARMER is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the **LEADER** of the Agricultural Press of America. A 30-page, 30-column paper **EVERY WEEK** in the year: can lose **THE VERY BEST WRITERS** that money can produce: a strong, fearless defender of the agricultural interests of this country and **CLEAN** in both reading and advertising columns. **IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE.** Present subscribers can order this combination at once and have their present term of subscription to **AMERICAN GARDENING** extended for one year. New subscribers to **THE OHIO FARMER** will receive the rest of this year free. Address all orders, **AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.**

**The True AROMA, FLAVOR, LUSCIOUSNESS and
...HEALTHFULNESS of the...**

STRAWBERRY

Is known only to the gardener who planting the very best varieties, allows them to ripen to perfection under his own tender care. We grow the Large, Superb, Highly Flavored, Highly Colored Table Varieties, and will deliver plants anywhere on the continent fresh as when dug.

Practical Treatise Telling How to Grow Them to perfection and how to Turn a Pretty Penny with your surplus berries, free to buyers.

Illustrated Catalogue and copy of the Strawberry Specialist, a monthly journal devoted to Strawberry culture, free to all. 14th year.

CONTINENTAL PLANT CO.

Strawberry Specialists,

KITTRELL, NORTH CAROLINA.

O. W. BLACKNALL, President and General Manager.

Mention American Gardening when you write.

Using Stable Manure.

Can you suggest any preparation of stable manure, so that it may be used in large quantities on a large market garden, without danger of breeding ground maggots, wire and cut worms? I have run a large market garden on very light, sandy soil for five years. For the first three years I used stable manure made the winter previous, and have only been able to get about one-third of a crop of onions, beets, carrots and cabbage. For the past two years I have used phosphate, and although I have not been much troubled with the worms, which seemed to be bred or attracted by the manure, my soil is so light and sandy that phosphate does not seem to take the place of manure. By mixing my manure with other things or by some preparation of it, can the germs which seem to exist be killed, and should I be able to obtain a better crop?—SUBSCRIBER.

—If the manure were well-rotted before being put on the soil, the trouble would probably be lessened. Dissolved rock phosphate might be scattered through the manure pile at the rate of 50 pounds to the ton during the rotting process; it would prevent loss of ammonia and perhaps make it unpleasant for grubs. If the manure were hauled onto the garden during the winter and scattered evenly over the surface, there would be no material loss of manurial value and the alternate freezing and thawing would tend to destroy the grubs and worms.

Organic matter in a light, sandy soil is a most important ingredient and in market gardening, about the only way to secure this organic matter is by applying manure. However in the methods sometimes advised for the proper preparation of this manure, as much time and labor must be spent as the increase in the crop is worth. Plowing the garden in the fall and scattering the manure as it is produced is all that I can suggest, and it may prove entirely effective.—JOHN FIELDS.

SOME BARGAINS IN CLUBS

FOR

Men, Women and the Young.

Ohio Farmer, a giant among the agricultural weeklies, and American Gardening, The two, one year, For \$1.60.

Farm, Field and Fireside, a 32 to 40 page weekly Farm and Family Journal, the best of its class, and American Gardening, The two, one year, For \$1.50.

Country Gentleman. This weekly amply covers the field its title indicates. Every country gentleman should subscribe to it. And American Gardening. The two, one year, For \$2.75.

Farm Journal, the "little giant" of monthly journalism in matters agricultural, and American Gardening, The two, one year, For \$1.25.

Farm Poultry (semi-monthly), and American Gardening, The two, one year, For \$1.50.

Poultry Monthly and American Gardening, The two, one year, For \$1.25.

Above is your choice of two most excellent poultry magazines. And nearly every one of our readers keeps poultry. Why not subscribe to both? The two poultry papers and American Gardening, one year, For \$2.25.

Meekhan's Monthly, a horticultural stand-by, and American Gardening, The two, one year, For \$2.85.

Harper's Magazine, as good as ever; none better among the literary monthlies, and American Gardening, The two, one year, For \$4.25.

Ladies' Home Journal, an unrivaled monthly for women, the standard in its class, and American Gardening, The two, one year, For \$1.90.

Youth's Companion, of Boston. At the head of all journals for both boys and girls, and read by the elders, too. And American Gardening, The two, one year, For \$2.85.

NOTE.—Above rate for new subscriptions only. Club, in renewal, \$2.75.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.		General—Con.	
	A. B.		A. B.
American Agriculturist.....	\$1 00 \$1 85	Donahoe's Magazine.....	\$2 00 \$3 60
Breeders' Gazette.....	2 00 2 40	Eclectic Magazine.....	5 00 5 25
Country Gentleman.....	2 50 2 75	Electrical Review.....	3 00 3 20
Farmers' Advocate (Canada)....	1 00 1 75	Engineering Magazine.....	3 00 3 50
Farmers' Magazine.....	1 00 1 75	Forest and Stream (new only)...	4 00 4 25
Farmers' Review.....	1 00 1 90	Forum, The.....	3 00 3 65
Farm, Field and Fireside.....	1 00 1 50	Frank Harrison's Magazine.....	50 1 40
Farm and Fireside.....	50 1 40	Frank Leslie's Popular Monthly...	3 00 3 50
Farm and Home.....	50 1 40	Godey's Magazine.....	1 00 1 90
Farm Journal.....	50 1 25	Golden Days.....	3 00 3 35
Farm News.....	50 1 90	Good Housekeeping.....	2 00 2 70
Gleanings in Bee Culture.....	1 00 1 55	Harper's Bazaar.....	4 00 4 25
Home and Farm.....	50 1 45	Harper's Magazine.....	4 00 4 25
Indiana Farmer.....	1 00 1 85	Harper's Weekly.....	4 00 4 25
Mass. Ploughman, new.....	2 00 3 60	Harper's Round Table.....	2 00 2 50
Renewals.....	2 00 2 90	Home Queen.....	50 1 85
Michigan Farmer.....	1 00 1 60	Illustrated American.....	4 00 4 30
National Stockman and Farmer	1 00 1 85	Independent.....	3 00 3 60
Nebraska Farmer.....	1 25 1 85	Jennens Miller's Illus. Mag.....	1 00 1 75
New England Farmer.....	2 00 2 50	Judge.....	5 00 5 20
Ohio Farmer.....	1 00 1 60	Judge's Library.....	1 00 1 35
Orange Judd Farmer.....	1 00 1 85	Ladies' Home Journal, The.....	1 00 1 90
Pacific Rural Press.....	2 40 3 00	Ladies' Home Companion.....	50 1 45
Practical Dairyman.....	50 1 35	Ladies' World.....	25 1 30
Practical Farmer.....	1 00 1 85	Lealle's Illustrated.....	4 00 4 40
Prairie Farmer.....	1 00 1 85	Life.....	5 00 5 40
Rural New Yorker.....	1 00 1 80	Lippincott's.....	3 00 3 25
Southern Cultivator.....	1 00 1 85	Macmillan's.....	3 00 3 60
Southern Farm.....	1 00 1 85	McClure's Magazine.....	1 00 1 90
Southern Florist and Gardener	1 00 1 75	Munsey's Magazine.....	1 00 1 90
Strawberry Cultivist.....	50 1 35	Nation, The.....	3 00 3 60
Strawberry Specialist, new.....	50 1 00	New England Magazine.....	3 00 3 50
Renewals.....	50 1 25	New York Ledger.....	2 00 2 50
Texas Farmer.....	1 00 1 75	" Tribune (Weekly).....	1 00 1 90
Texas Farm and Ranch.....	1 00 1 85	" World (Tri-Weekly).....	1 00 1 75
Horticultural, etc.		North American Review, The.....	5 00 5 50
Canadian Horticulturist.....	1 00 1 90	Notes and Queries.....	5 00 5 50
Garden and Forest.....	4 00 4 25	Observer, new only.....	3 00 3 25
Gardening (Chicago).....	2 00 2 50	Renewal.....	3 00 4 00
Meekhan's Monthly.....	2 00 2 85	Outing.....	3 00 3 85
Vicks.....	50 1 85	Peterson's Magazine.....	1 00 1 85
Poultry.		Philadelphia Press (Weekly)....	1 00 1 85
American Poultry Advocate.....	25 1 15	Phrenological Journal.....	1 50 2 25
Fancier's Review.....	50 1 35	Popular Science Monthly.....	5 00 5 65
Farm Poultry.....	1 00 1 50	Popular Science News.....	1 60 2 50
Ohio Poultry Journal.....	35 1 50	Puck.....	5 00 5 10
Poultry Herald.....	50 1 40	Puck's Library.....	1 20 1 95
Poultry Keeper.....	50 1 40	Paritan.....	1 00 1 90
Poultry Monthly.....	1 00 1 25	Review of Reviews.....	2 50 3 25
Reliable Poultry Journal.....	50 1 40	Scientific American.....	3 00 3 60
General.		" Supplement.....	5 00 5 25
Advance (Cong'l) new.....	2 00 2 60	" with.....	7 00 7 25
Renewals.....	2 00 2 90	" Builders' edition.....	2 50 3 10
American Field, new.....	4 00 4 25	" Inc. B'l'ds' edit.....	5 50 5 75
Renewals.....	4 00 4 50	" All 3 editions.....	9 00 9 25
American Kitchen Magazine.....	1 00 1 75	Scribner's.....	3 00 3 60
American Machinist.....	3 00 3 20	St. Nicholas.....	3 00 3 60
Aquarium.....	1 00 1 75	Sunday School Times.....	1 50 2 10
Arena.....	3 00 3 60	Texas Siftings.....	4 00 4 25
Art Amateur.....	4 00 4 35	The Etude, new only.....	1 50 2 15
Art Interchange (with plates)...	4 00 4 35	Renewals.....	1 50 2 35
Atlantic Monthly.....	4 00 4 30	The Outlook.....	3 00 3 85
Ave Maria.....	2 00 2 70	Toledo Blade.....	1 00 1 85
Babyhood.....	1 00 1 90	Turf, Field and Farm, new.....	4 00 4 25
Baptist Missionary Magazine....	1 00 1 90	Renewal.....	4 00 4 60
Carpentry and Building.....	1 00 1 85	Womankind.....	50 1 30
Century.....	4 00 4 60	Young Ladies' Journal.....	4 00 4 60
Chicago Herald (Weekly).....	1 50 2 35	Youth's Companion, new only.....	1 75 2 35
Chicago Inter-Ocean.....	1 00 1 80	Renewals.....	1 75 2 75
Chicago Weekly Times.....	50 1 40	Foreign.	
Christian Herald.....	1 50 2 15	Farm and Home.....	2 25 3 25
Christian Register.....	3 00 3 85	Field.....	10 50 11 00
Churchman.....	3 50 4 10	Garden.....	4 50 5 25
Colman's Rural World.....	1 00 1 85	Garden Work.....	2 50 3 25
Cosmopolitan.....	1 00 1 90	Gardener's Chronicle.....	4 50 5 25
Delineator (Butterick's).....	1 00 1 90	Gardener's Magazine.....	4 50 5 25
Demorest's Monthly Magazine.....	2 00 2 60	Gardening, Illustrated.....	2 25 3 00
Detroit Free Press (Weekly)....	1 00 1 90	Gardening World.....	2 50 3 25
Domestic Monthly.....	1 50 2 15	Journal of Botany.....	4 75 5 25
		Journal of Horticulture.....	4 00 4 85
		Kew Gardens Bulletin.....	1 50 2 25
		Revue Horticole.....	5 50 6 10

Address all
Orders to

AMERICAN GARDENING, P. O. Box 1897, New York.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

The Large Poultry Raiser.

If the large raiser of poultry has one point of value to the community above all others, it is an object lesson. The dabbler and the small utility man are alike prone to think that there is little for them in the experience of the man that is "in deep." This is just where they make a mistake. Their own practices, if in error, may make so little difference in the purse that they will go on for years at a loss, simply because the matter seems scarcely worth looking into. But in poultry rearing and handling, if anywhere, it is the little things that tell. To the big grower, the little things so large a combined story that he must know every loss and stop it, or go under. It will pay well to inquire into the ways of the large grower, if one is so fortunate as to have opportunity.

Deterioration.

A prominent writer in the Country Gentleman makes the affirmation that the Leghorn breeds are deteriorating to such an extent that it is to-day the exceptional flock that are great layers. Their natural and useful qualities have been sacrificed to form and feather. Doubtless the same might be said and with more show of reason of the Plymouth Rock, for the Rock is exceptionally hard to breed to weather. Yet I have never yet seen a man who would give up the Leghorns, once having had them, unless he especially desired a large carcass. And the second choice, on the farm, is almost invariably the Plymouth Rock, when that favorite has given first place to the Leghorn.

Balancing Poultry Feeds.

There is a real amount of talk in these days about scientific feeding of fowls to induce regular laying. The foundation idea of this is to so balance the food stuffs that compose the ration that they shall be just fitted to produce so much yolk, so much white, so much shell as is needed. This must be done, too, without interfering with the perfect digestibility of the ration. The proper ratio of nitrogenous to fat-forming items in the feed is supposed to be about 4 or 5 to 1. Any one who will take the trouble to learn the percentages of each in the grains, etc., available to himself, can feed scientifically. And, too, it is very easy to vary, for experiment, a ration thus definitely made up. Lacking the desire to do this work for himself, one may now buy feeds scientifically mixed according to the latest formulas.

Winter Quarters.

Exhibitors of fancy poultry often come to the place where they find it necessary to hinder the production of eggs. They accomplish this by systematically moving the birds from one pen to another. It is a fact that such removals discourage laying for a time. Yet those who are almost painfully anxious for eggs ignore this fact, neglect to get the pullets early into winter quarters, and take it out in grumbling because the fowls don't lay. The majority may know that removals are said to hinder laying. If they do not believe it, they would be wise to make at least one experiment in the direction of early housing for winter. Other facts might, however, affect the result. For instance, if early housing thus meant confinement, when otherwise the birds might be at large, the question might become one of a choice of evils. But, in justice, the hens should be condemned for neither evil.

Water as a Medium of Plant Growth.

"There can be no life without water" is the statement with which a certain popular dietetic teacher begins his arguments for free use of water. In the plant world the affirmation is no less true. Indeed, water and air alone form a sufficient medium for considerable development in numbers of plant individuals. The Joint plant, or Wandering Jew, as the Tradescantia is often called, may, in good light, furnish a whole season's pleasure to those who must have "green

things growing," yet cannot compass pots and soils. Nasturtium, too, will give greenery, and often bloom as well. Water Cress, of the same family, has the same pleasant trait as its cousin, while the Coleus will give fine coloring other than green. The measure of satisfaction is likely to correspond with the measure of sunlight. Shade will give growth, but of a weak and spindling sort. Sunshine generally means greater thrift. Sometimes matters can be greatly improved late in the season by taking new cuttings, and beginning afresh.

Araucaria excelsa.

To the many individuals who are pleased by absolute symmetry, doubtless there is not another plant with more character than the Araucaria. As a decorative plant, it bears the name of being one of the most serviceable in the entire list. Its price has long been almost prohibitive as touching the average purses, but this season small plants are being offered at the low rate of 60 cents a piece. They are much better worth it than many of the more fleeting, though apparently cheaper subjects. A. excelsa glauca has, as its name indicates, a bluish bloom which gives it distinction. This variety is more rare, and, as a matter of course, more expensive, than the first.

Rose Color in Tulips.

The fortunate ones who have no trouble in forcing Tulips in the window will find that the rose-colored sorts often have a double measure of delight in store for the raiser. Aside from being among the most beautiful and chaste of the Tulips, they take on an added beauty under artificial light. Indeed, there is

scarcely a plant of any kind which contains a hint of rose, that does not light up well at night. This is a point which exhibitors at the floral shows may well consider, and it is of moment, too, to the window grower who makes her plant (with faces turned roomward) a part of the evening's delight. Among Tulips with tints of pink are Marillo (rose, with white), Duke of York (rose, white-edged), Rosa mundi (rose and white), Rose Gracie (fine, bright pink), which is considered by some to be the finest of all, and the rose-colored Duke van Thol.

A Rustic Begonia.

It was rustic only in the sense that it was country reared, but queenly in fact. It stood in an angle formed by two northeast corners of the house through out the summer, and will be removed this week to a wide north window, which it will have all to itself. Nor is this generosity as to space to be freely credited to that spirit in the owner, for the plant simply demands it. The tall specimen had to be cut back and in, even last spring, because it had thrown itself beyond the large window on every side. And this while four out of five plant lovers are groaning over the difficult, though lovely B. metallica. An absolutely thrifty, fully clothed specimen of Begonia metallica, standing, as this one does, over a shelf in its stockings, must be an incredible marvel to the average window gardener. But the man of the house says: "If the plant comes into the parlor again this winter, I shall stay out!" He is tired of giving it room, tired of lifting it, and even of visitors' raptures over its size and beauty.

MYRA V. NORT.

A Child's Recovery

FROM PARALYSIS AND SIX YEARS OF CONVULSIONS

Little Fannie Adams, of Umatilla, Cured of a Dreadful Malady A Cure of Unusual Interest—A Reporter Investigates.

From the Lake Region, Eustis, Fla.

For some time past the Lake Region has been receiving reports from Umatilla, Fla., of an almost miraculous cure that had been effected in the case of Fannie Adams, a daughter of A. J. Adams, of that place, and last Saturday a representative of this paper made a trip to Umatilla for the purpose of determining the authenticity of the same.

The family live a short distance from the village, where it was found that the people were cognizant of the cure which had been effected, and were rejoicing with the family in their new found happiness. The father, A. J. Adams, is a hard working honest farmer from east Tennessee, and the family came to Florida four years ago in the hope that a change of climate would be of benefit to their afflicted child. Much of their earnings have gone for doctors' bills, whose services proved unavailing. The representative was greeted by Mrs. Adams, from whom he gained the story of her great trial.

Fannie, the youngest child, was born in east Tennessee, and was seven years old on the third day of February, 1897. When ten months old she was stricken with paralysis, which affected the entire left side. This stroke of paralysis was followed by convulsions, and from the time little Fannie was ten months old, until February, 1897, there was not a single day or a night that she did not have spasms of the most distressing nature. Not a single convulsion, but always three or four, and sometimes as high as ten in one day.

The family was all broken down with care, and Mrs. Adams states that for one year she did not go into her kitchen to superintend her household work. All the fingers of the right hand of the little girl are enlarged and misshapen, caused by her biting them during the fearful suffering. The case baffled the skill of the best physicians, and they were frank to say that they could not determine the cause,

or prescribe a remedy to aid the afflicted child.

But what a change now in that household; for little Fannie has recently been released from her six years of agony, which brings the light of happiness to the faces of the parents.

In January, this year, Mrs. Adams, who had purchased some of Dr. Williams' Pink Pills for Pale People for her fourteen-year-old daughter, determined to try their effect upon little Fannie. After three or four doses, she noted an improvement and she then told the father what she had done. He at once went to the village and bought another box, and up to this time six boxes have been used. The first pills, Mrs. Adams states, were given in January, the latter part, and certainly not earlier than the fifteenth of twentieth, and the child had her last convulsion on February 3d, nearly three months ago. Her general condition has improved in every way, and it was not a month after the first pills were taken when she began to walk without assistance.

The pills were bought at the drug store of Dr. Shelton, in Umatilla. In answer to the question, did he, to his personal knowledge, know that the remedy had benefited Fannie Adams, as was stated by her parents, the doctor said that he was a regular practicing physician, and as such was loth to recommend any proprietary medicine, but still he was ready to do justice to all men, and he did know that Dr. Williams' Pink Pills for Pale People had benefited Fannie Adams, and also volunteered the information that he knew of other children in the village who had been benefited by their use.

Dr. Williams' Pink Pills for Pale People are sold by all dealers, or will be sent post paid on receipt of price, 50 cents a box or six boxes for \$2.50 (they are never sold in bulk or by the 100), by addressing Dr. Williams' Medicine Co., Schenectady, N. Y.

\$5 Hand Bone, Shell, and Corn Mills for Poultrymen. Daisy Bone Cutter. Power Mills. Circular and testimonials Free.
WILSON BROS., Easton, Pa.
 Mention American Gardening when you write

CYPRESS
 IS MUCH MORE DURABLE THAN PINE.
CYPRESS SASH BARS
 UP TO 32 FEET IN LENGTH OR LONGER.
GREENHOUSE
 AND OTHER BUILDING MATERIAL.
 Send for our Illustrated Book "CYPRESS LUMBER AND ITS USES."
 Send for our Special Greenhouse Circular.
THE A. T. STEARNS LUMBER CO.,
 NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

POT YOUR PLANTS IN
JADOO FIBRE
 WATER YOUR PLANTS WITH
JADOO LIQUID

And they will thrive during the Winter.

Particulars and Prices on Application to

THE AMERICAN JADOO CO.,
 813 Fairmount Ave.,

PHILADELPHIA, PA.

Mention American Gardening when you write.

SHERIDAN'S
 CONDITION
POWDER
 WILL MAKE HENS LAY.

It will keep your chickens strong and healthy. It will make young pullets lay early. Worth its weight in gold for moulting hens, and prevents all diseases.

Large Cans Most Economical to Buy.

Sold by Druggists, Grocers and Feed Dealers.

It is a powerful Food Digestive.

Therefore, no matter what kind of food you use, mix with it daily Sheridan's Powder. Otherwise, your profit this fall and winter will be lost when the price for eggs is very high. It assures perfect assimilation of the food elements needed to produce health and form eggs. It is absolutely pure. Highly concentrated. In quantity costs less than a tenth of a cent a day. No other kind is like it.

If you can't get it send to us. Ask First
 Single pack, 10 cts. Five \$1. Large two-lb. can \$1.50. Six cans, \$8. Exp. paid. Sample "BEST POULTRY FEED" free.
L. S. JOHNSON & CO., 23 Custom House St., Boston, Mass.
 Mention American Gardening when you write.

Potash

Free

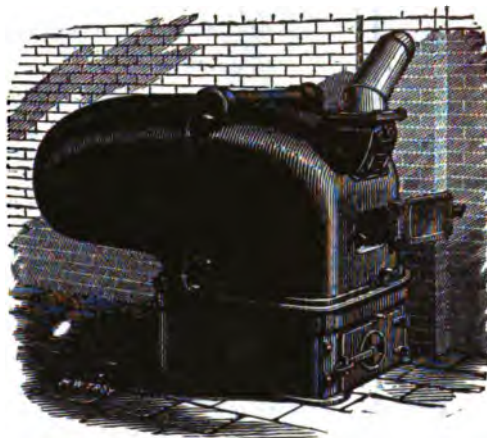
ant, must not be stinted. Send for our books mentioned below.

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write

GREENHOUSE HEATING AND VENTILATING,
 Horticultural Architecture and Building.



SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write

Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

FIVE PATTERNS OF BOILERS
 NINETEEN SIZES

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

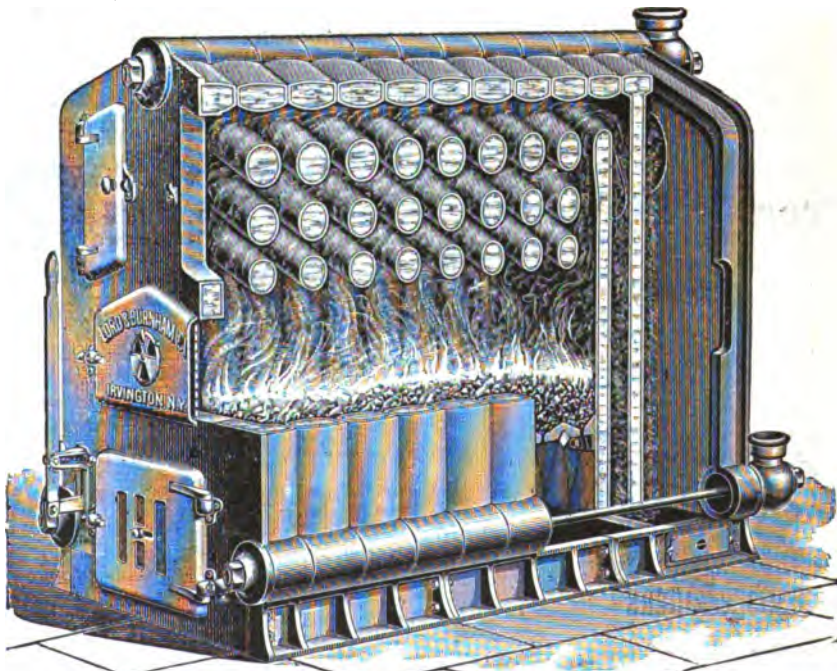
Iron Frame Benches with the "Perfect Drainage Bench Tile" or Slate Tops.

LORD & BURNHAM CO.,

Horticultural Architects and Builders and Manufacturers of Heating and Ventilating Apparatus.

(Established 1856.)

Plans and estimates furnished on application for Heating and Ventilating Apparatus erected complete, or for material only. Highest Awards at the World's Fair.



NEW SECTIONAL HOT WATER HEATER.

Specially adapted to large ranges. Will heat up to 16,500 feet of glass. Highest economy. Moderate cost. Also heaters for smaller work. Send six cents postage to New York office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
 160 FIFTH AVE., COR. 21st ST.

GENERAL OFFICE AND WORKS:
 IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

Henry Strawberry Plant Premiums

WILL BE

SHIPPED

UNTIL

FROST PREVENTS DIGGING

Premium Orders

WILL BE

HELD UNTIL

SPRING

WHEN SUBSCRIBERS

SO DESIRE

YOUR FORTUNE IN STRAWBERRIES!

The Strawberry King and his Remarkably Successful Career: How a Poor Boy Became Wealthy.

THROUGH one of those strange dispensations which often mock in real life the wildest imagination of the novelist, the publishers of AMERICAN GARDENING have become possessed of the story of the life and cultural methods of **Henry Jerolaman**, undoubtedly the **STRAWBERRY KING OF THE UNITED STATES**. We have prevailed upon Mr. Jerolaman to write the history of his life and a full description of his cultural methods, exclusively for the readers of AMERICAN GARDENING. Further than this and at our urgent solicitation we have prevailed upon him to make a contract to supply us **One hundred thousand plants of the HENRY STRAWBERRY**, to be used solely as premiums to subscribers to AMERICAN GARDENING. The Henry Strawberry has positively never before been advertised.

THE CONTRACT

Publishers American Gardening.

Gentlemen,

I hereby agree to furnish you within the next twelve months in quantities as ordered. One Hundred Thousand plants (100,000) or any portion thereof, of the Henry Strawberry, to be used solely as premiums for subscribers to American Gardening and no other sale.

*Wm. M. Wilson, Jr.
Publisher, Am. Gardening, South St.
New York, N.Y.*

(Signed)

Henry Jerolaman

The Best Berry of the Age.

Four Berries of the Henry, grown by Mr. Jerolaman, rounded a wooden quart measure. Individual berries were three-and-a-half inches through each way. Mr. Jerolaman's description of this wonderful berry in a recent issue of AMERICAN GARDENING has brought him hundreds of inquiries from the cream of the professional growers.

A GOLD MINE AT YOUR OWN DOOR.

"He who hesitates is lost." It is not likely that such an offer or such an opportunity will occur again in years. More than one strawberry grower in every town, village, and hamlet can come into a good thing through practising the cultural methods and getting some of the plants which have made Mr. Jerolaman not only wealthy and well-known, but so wonderfully successful, by at once

Taking Advantage of Our Offer:

For \$1.00 (check or money order preferred) we will forward you, by mail, postpaid.

FIVE PLANTS ..Of the.. **HENRY STRAWBERRY**
Unequaled

And AMERICAN GARDENING One Year.

Present Subscribers are entitled to this Offer on renewal; if their subscription has not expired, it will be dated ahead.

Plants to be shipped this Fall or in the Spring, as you prefer.

OFFER EXTRAORDINARY

For every new subscription you send us at \$1.00, we will forward you, postpaid, as a premium, Five Plants of HENRY STRAWBERRY; at the same time we will also send Five Plants to the party subscribing through you. Thus a club of 10 new subscribers entitles you to 50 plants of this wonderful Strawberry, as well as each individual subscriber to 5 Plants. This is a BIG OFFER to all who want to become larger holders of this wonderful Berry, never before advertised. Time is short, get to work to-day.

Address **Publishers AMERICAN GARDENING, P. O. Box 1697, New York.**

Trial Subscriptions

For \$1.00 we will send AMERICAN GARDENING on three months' trial (13 weeks) to four separate addresses, and as a premium, Five Henry Strawberry Plants to the one getting up the club. **HUSTLE.**

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 147.
COMBINED SERIES VOL. LI.

NEW YORK, OCTOBER 16, 1897.

5 CENTS A COPY
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

American Institute Fair Third Notice..... 714, 718	Chrysanthemum Ex- hibitors, To..... 711	Grape, Campbell Early, 715	Poultry Notes..... 720, 721	Tennessee Exhibition Notes..... 720
Autumn Flowering Shrubs..... 721	Chrysanthemum So- ciety of America..... 718	Greenhouse, Heating A. 717	Private Gardeners..... 718	Window Gardening 720
Bed, An Ornamental..... 711	City Shade Trees..... 713	Home Plot, All About The..... 720	Readers' Notes..... 715	
Bulbs, Our Supply of..... 711	Died..... 715	Market Reports: N. Y., Phila. and Boston. 722-723	Rotation..... 715	Illustrations.
Cannas, Wintering..... 717	Exhibitions, Coming..... 711	Peach, Dr. Black..... 715	Societies, Notes of..... 718	Celery, Storing For Winter..... 712
Celery, Storing for Win- ter..... 712	Fruit at American In- stitute Fair..... 714	Plum, Gold..... 715	Sow and Mealy Bugs... 717	Chrysanthemum, Fun- gous Diseases Of The
Chrysanthemum Dis- eases..... 706	Fruits Received..... 715	Plum, Juicy..... 715	Stiles, The Late A. W... 712	700, 710, 711
	Gardener, The..... 718	Poison Ivy, Hot Water for..... 715	Strawberries, Fertil- izers for..... 717	Stiles, The Late A. W... 713
		Tea, Japanese..... 713	Strawberries in La..... 715	

Fungous Diseases of the Chrysanthemum.

There are several fungous diseases of chrysanthemums, the oldest known and very common one being the mildew or *Oldium*. This consists of fine, cobwebby filaments that are confined to the surface of the leaf and give it the appearance of being dusted with flour. It is less destructive than most of the other kinds of chrysanthemum diseases.

The leaf spot is one of the leading troubles of the chrysanthemum, and first appears in small brown spots upon the foliage, which increasing in size cause the death of the leaf. The illustration, Fig. 199, is made from a leaf by sun printing and shows the location of the fungus (*Septoria Chrysanthemi* E. & D.) by the dark patches that are generally along the irregular margin of the leaf. Fig. 198 gives a view of the microscopic structure of the fungus. A spore-bearing cavity is seen to the right imbedded in the substance of the leaf in which long slender bodies, the spores, are produced in great numbers shown more enlarged to the left. These spores, unlike many other kinds, are made up of several cells placed end to end. Badly blighted leaves have their surface covered with these spores that have oozed from the small openings into the spore cavities and may be carried by water at spraying time to other leaves and plants, and thus spread the disease.

The Bordeaux or other remedy falling upon these spores kills them either when they are freshly issued from the diseased spot or after they have been carried to the surface of a healthy leaf. All badly diseased leaves should be removed and burned so as to destroy all germs of the parasite.

A second form of blight is shown in Fig. 197, where three plants are seen as they were photographed full length. The fungus causing this distressing condition of the chrysanthemum was discovered only a few years ago, and bears the long name of *Cylindrosporium Chrysanthemi* E. & D. It is a more rapid grower than the *Septoria* previously considered, and the affected plants are often stricken down so that they can make no blooms. The discoverer, Mr. Dearness of London, Canada, describes the general appearance of the trouble as follows: "The fungus can be easily recognized by the dark blotches usually about half to three-quarters inch in diameter. In these blotches are found the spore heaps or pits and beyond them the leaf turns yellow; not long afterward the whole leaf shrivels and is drawn downward to the stem." This condition of things is well seen in Fig. 197 where an almost entire collapse of the foliage is shown.

Some varieties are much more susceptible than others to this *Cylindrosporium*, and growers will need to take careful notes upon this feature of the trouble and be guided accordingly.

A single leaf that is badly blighted with the blight in question is shown in Fig. 200. The large dark spots are located with order, and the remaining portions having lost the character

istic green color, the leaves present anything but a healthy appearance.

There are other fungi that interfere with the growth of chrysanthemums, as for example, one that attacks the cut-



FIG. 197.—THE CYLINDROSPORIUM CHRYSANTHEMUM BLIGHT.

tins and causes a large percentage to damp off before the roots and buds start into growth.

Last, but not least, there is a genuine rust, probably *Puccinia Tanacetii*, D. C., that has made its appearance upon the *Chrysanthemum* during the past season in an alarming extent, and of which the first announcement was made in *AMERICAN GARDENING* for October 2, page 682. One florist has written me that he may lose his whole crop. This rust appears upon the foliage in numerous small chestnut spots, somewhat raised above the skin, through which the fungus has pushed itself and produced the heaps of oval brown spores. In general appearance it is not unlike the rust upon *Carnations* to which it is closely related; but here is no reason to suspect that they are identical.

This rust is a fungus that establishes itself all through the plant before it begins to produce the rusty spots, and there is but little hope of relief in spraying. The better method will be to pick off all affected leaves and burn them.

The remedies perhaps have been treated sufficiently in describing some of the diseases, but here are some remarks that apply to all cases that may serve as a concluding paragraph. In the first place the stock from which *Roses* and *Chrysanthemums* are to be propagated should be of the very best. Here, as with other plants, a weak, densened plant may be expected to produce its kind when cuttings are taken from it. There is in the second place much to be done in the study of varieties and their susceptibility to fungous diseases. If there is a predisposition, so-called, to disease, the grower should, if possible, know it and turn aside from such sorts. For example, the *Chrysanthemum Golden Wedding* has been swept off by disease in many places successively for years, and growers should rank this otherwise superior sort accordingly. In the third place, the blighted parts when they first appear and are few in number should be picked off and burned.

As a last resort as here mentioned, but not in fact, is spraying; and if the grower is to use a fungicide it is wise to begin with it early and spray faithfully until blooming time. The Bordeaux is the standard mixture, and is made with varying proportions of the ingredients, but the following is satisfactory: sulphate of copper, six pounds; lime, five pounds; water, 60 gallons.

Dissolve the sulphate in a few gallons of water; slake the lime and add a few gallons of water to it, dilute both to hold the total amount, and unite, stirring constantly. If a limeless mixture is preferred that the foliage may be kept nearly natural, it may be made by dissolving five ounces of carbonate of copper in three quarts of ammonia and adding 50 gallons of water. The carbonate may be added to the ammonia, and the mixture diluted as desired for use. While not quite as effective as the Bordeaux, this fungicide has the advantage of not coating the plants with lime.

In writing the above notes the author has drawn liberally upon his previous published observations as found in the various reports of the New Jersey Experiment Station, an address upon "Fungous Diseases of Ornamental Plants," before the Massachusetts Horticultural Society, and an article upon "Fungous Diseases" in *The American Chrysanthemum Annual* for 1895. The cuts are from the same sources; figures 197 and 200 by permission of the American Florist.

BYRON D. HALSTED, Experiment Station, New Brunswick, N. J.

One hundred plants of the wonderful *Henry Strawberry* are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

Notes From the Tennessee Exposition.

The law of the natural progress of man from rudeness to convenience, from convenience to elegance, and from elegance to nicety, is powerfully illustrated in the Tennessee Centennial, where the triumphant works of art, architecture, and agriculture, of the present day stand out in bold contrast with the conveniences and achievements of the pioneer of a century ago.

If the refinement of a people is to be

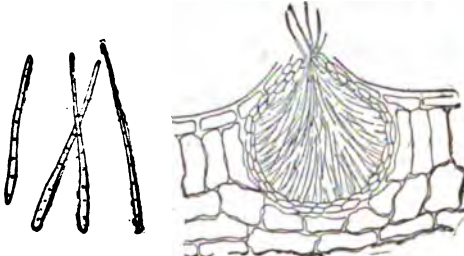


FIG. 198.—CHRYSANTHEMUM LEAF SPOT FUNGUS MAGNIFIED.

measured by the flowers they cultivate, then here we have an index to the highest type of civilization, for nowhere within all the industries represented are the lines of progress more conspicuously drawn than in horticulture.

Exposition Park is a magnificent tract of highly blue grass land. It is delightfully elevated; shaded with trees of mature growth, and watered by natural springs—strikingly adapted to the fancy of the landscape gardener.

Mr. Joslyne, superintendent of the grounds, has ably proven his ability as an artist. The beautiful lakes have been



FIG. 199.—CHRYSANTHEMUM LEAF SPOT.

constructed, the walks planned, the flower beds laid off, and the trees planted in a way that happily unites beauty and utility. Greater diversity within the same space and with the same means is hardly possible; with every different view a new and entirely distinct plan presents itself, and the idea of monotony is no where suggested.

Some idea of the extent of this work may be had by giving the quantity of plants used. Throughout the ground there are 380 flower groups, comprising more than 16,000 *Roses*, 30,000 *Cannas*, 50,000 *Coleus*, 50,000 *Alternantheras*, 20,000 *Vincas*, 4,000 *Geraniums*, 2,000 *Tuberoses*, 2,000 *Caladiums*, and an endless variety of other plants in proportion.

A most impressive view of both landscape and floral gardening presents itself to the visitor immediately, as he passes under the stately arches of the main entrance. One instinctively pauses by the old mill-wheel on the bridge that spans Lake Katherine and admires the beautiful reflections from her placid bosom, the overhanging boughs and branches, and looks out with rapturous eye through the stately trees that stand like sentinels on her banks, to the magnificent grounds and buildings of the beautiful "White City," appearing in the immediate distance.

Reluctantly passing through the lovely woodland, laden with fragrance of the *Heliotrope* and *Tuberose*, and afire with *Cannas* and *Coleus*, and bearing to the left, we come immediately in front of the Mexican building. Looking from here to the northwest, the brightest and most delightful picture on the grounds is effectively presented to our view. Here is a space of several acres laid off and planted in a manner highly commendable to all concerned. Just in front is a large triangle of two-year-old *Roses* in variety by Messrs. Joy & Son, which have been a mass of bloom from early spring. To the right *Canna* beds by the Centennial Company are in the lead; to the left is a beautiful lawn interspersed with *Palms* and *Rubber trees*.

Taking the central walk to the juncture of the avenues leading from the Woman's History, Auditorium, and Government buildings, we find the stately electric fountain, within itself a most unique and imposing work of art and worthy centerpiece to the rivalling collections which surround it. From its middle and lower basins are *Water Lilies* shown by Mr. Moulder. Representatives of every color and species from every clime are presented in effect more striking than words can picture and illustrates with force the ascendancy of water gardening, or systematic horticulture without the use of hoe or hose.

Around the fountain is a gorgeous flower bed 200 feet in diameter, cut in sections by the walks. The principal beds are by F. R. Pierson Co., and consist of *Hydrangeas*, *Palms*, *Roses*, and similar bedding plants tastefully edged with *Coleus* and *Achyranthes*.

Leaving the fountain and looking to the right is a beautiful lawn extending down to the auditorium and front to Gourd Arbor. In this are three large circular and oval *Canna* beds, varying in size from 50 to 80 feet, exhibited by the Pierson Co. Near the fountain in this section is a *Cactus* bed 75 feet across that contains some rare, magnificent specimens and, like the *Water Lilies* just passed, command applauding remarks from every passer by. Looking to the left is a large green lawn bordered by 50 leading commercial varieties of *Roses* by Dingee & Conard. To the front is the famous Gourd Arbor, or "lovers' bower." Here the weary rest and the pensive dream under the shade of the mingled foliage of every variety of gourd known in the South. It is a delightful spot to every lover of comfort, as well as every lover of romance, while to the "knightly gallant" and the "queen of coquetry" it has proven a sweet trysting place. "So Jonah was exceeding glad of the gourd," may be truly adapted to every weary pilgrim who enters here.

Crossing the Gourd Arbor from the Electric Fountain, the grounds around the History building meet our eyes. Quite a distinction between this and the beds we have just left, for about the fountain it is a massive array of crowded plants and showy colors, as if space were at a great premium, while here the extensive green is sparsely dotted with modest beds of *Heliotrope*, *Petunias*, and such things as seen around a suburban or country home. On the lower side of the large lawn reaching toward the Auditorium is a fine bed of *Bananas* and other tall tropical growing plants. On the upper lawn towards the Children's building is a beautiful 75-foot bed of *Cannas*, centered with *Ricinus* and edged with *Caladiums*.

Back of the Woman's, Children's, and Administration buildings is an exquisite wooded lawn, with chair swings and settees which prove a most inviting place through these long hot days.

From the main entrance of the Auditorium extends the Grape Arbor. It is covered with an endless variety of wild and cultivated vines, and in general appearance is not unlike the Gourd Arbor. On both sides of this arbor is a lovely sward of green and in the center of each plot is a 100-foot Canna bed edged with Caladiums.

The most striking display of tropical bedding plants is the exhibit of the Plant System in front of the railway exhibits. It seems that an half acre of the most luxuriant variety garden in south Florida might have been dug out in a body and transplanted here. Cabbage Palmettoes 20 feet high, waving with Spanish Moss, magnificent Palms, Araucarias, Jessamines, with numerous tropical foliage and flowering plants never seen bedded in the North, are growing in one luxuriant bouquet. Oranges, bananas, pineapples, lemons, and other semi-tropical

name, meet the admiration of every passerby and stand to evidence his skill.

On Capitol avenue the most attractive spot is the little grotto in front of Rialto. Wild flowers and Ferns growing around the cave whence issues a spring which feeds a miniature lakelet for another exhibit of Mr. Moulder's Water Lilies.

In the State agricultural exhibit in front of the Agricultural building on a four-acre farm, may be seen growing every variety of Indian corn, sorghum, hemp, lute, millet, flax, clover, alfalfa, grasses for grazing and hay, and all other agricultural products common in Tennessee. Three-fourths of an acre are planted to tobacco. Uncle "Scot" Walker, whose life has been spent in the tobacco patch is here continually showing the visitors how to grow and cure the weed. Uncle "Ned" Wood, a veteran cotton grower, whose kinky head now begins to reflect the color of an open pod, has charge of an acre of this crop, and says he never grew finer cotton in Georgia. Uncle "Ned" takes great pride in showing his large plants, some of which he says now have 224 "squares and bolls."

Chrysanthemums.

Intending Exhibitors will do well to be getting out their schedules and looking up the dates of the shows. [A list of forthcoming exhibitions, so far as we have been informed, is given on page 719.—Ed.] Make a careful study of the classes and remember one or two reasonably sure prizes are better than trying to get the whole show. Send in your entry to the secretary in good season to facilitate his work; he has plenty of troubles of his own without your adding to them. While most shows are about a week earlier than usual, flowers seem at present a week later and consequently more of the earlier varieties will be brought into competition. All this is as it should be. A better show can undoubtedly be got up about the first week in November, as the great bulk of varieties are in flower at that time. Chrysanthemum cranks will soon be in their glory and no one is more of a Chrysanthemum crank than I; some are born to Chrysanthemums and others have Chrysanthemums thrust upon them, but all alike get bound captive with their fetters of beauty, even the Rose grower (who in this section is pretty numerous) and who bewails and belittles our queen, cannot resist, try as he may, and in some corner of his house you will find a few plants he has not the heart to throw away.

Reader, you may not be a professional grower, and your stock may consist of half a dozen plants in the back yard, but you can get the fever just as well notwithstanding. While most fevers will pull you down, the Chrysanthemum fever only elevates and lifts you up and makes you see life through a halo of pink, gold, and white. There are no blue Chrysanthemums, and there should be no blue Chrysanthemum lovers, and if the notes in previous issues have instilled into you a love for the Golden Flowers, or have helped you to grow them this year any more successfully than in the past, they have not been in vain, and with the fond hope that such has been the case, this present series draws to a conclusion. Let the results decide! C. TORRY, N. J.



FIG. 200.—CHRYSANTHEMUM LEAF BLIGHTED BY CYLINDROSPORIUM.

Our Supply of Bulbs.

To the Editor of American Gardening.

Speaking of bulbs, page 680, "Xeno" voices the correct ideas. Why can we not grow our own bulbs along the Atlantic coast just as well as in Holland? Simply because we don't try! Professor Massey is experimenting in North Carolina, and I am awaiting his report very anxiously—if it ever comes. Of course it is for the benefit of North Carolina people, and it may be held exclusively for their benefit; time will tell.

I am not precisely a "nurseryman," but may be some day, and would certainly like to have "Xeno's" address. I take great interest in "experimenting" in all forms, and am quite successful. Four years ago I started with two "offset" roots of a specially fine Calla, and have over 2,000 roots now in all stages of growth and sizes, besides selling upwards of 200 blooming plants during the last two seasons.

It is certainly a shame for any seller of plants to "substitute." This is the prime cause of so many seedsmen and nurserymen having the name of rogues and frauds besides causing such confusion in the names of varieties. It often occurs in my trade that certain varieties are diametrically opposite in color, habit, etc., to the true type, especially so in the newer, well-advertised kinds, and this not only in flowers, but in seeds as well, and I am sorry to say, bearing the name of well-known firms. Why it is so, I am unable to say; there are so many loopholes of escape that it is impossible to bring home indisputable truth.

My soil seems especially adapted to the Calla, and they can be sold very low at a fair profit, I believe, and the more extensive the crop the cheaper. I would like to know the average prices at wholesale for blooming size. Can you inform me.—HENRY SNYDER, Oxford, Md.

An Ornamental Bed.

To the Editor of American Gardening.

I do not expect the ornamental bed I am going to describe will meet the wants of "D. U. X.," whose enquiry on page 678 suggests this letter, but perhaps some one else will get an idea.

This bed has in the center nine dwarf Cannas (Charles Henderson); around these were planted the tubers of the spotted Calla about three inches apart; next the bulbs of pink Zephyranthes, and next the dwarf Geranium. Mme. Salieri. The spotted Callas and Zephyranthes blossomed at the same time early in the season. One of the Cannas died near the center of the bed, so I put in a plant of Cosmos and kept it pinched back even with the Cannas, and it was a beautiful bed, the dark scarlet blossoms of the Canna with the fine feathery foliage of the Cosmos was very pleasing, and the leaves of the spotted Calla, even when there were no more blossoms were very handsome, and the pink blossoms of the Zephyranthes just above the green and white Geraniums made a fine border.—W. H.

fruits are seen maturing fruits as at home. The beds are artistically edged with sea-shells and rocks and everything is kept in prime condition, displaying an unwritten advertisement for the undeveloped South.

On the island in Lake Watanga, front of the Negro building, is a flower bed worthy of special notice. It is 200 feet long, covering the whole island. In the center is a large, showy bed of Coleus surrounded by a large urn of Palms. Next are Crotons—every variety known, together with several new ones never before exhibited. Near the water are growing Cannas, Caladiums, Typhas, Callas, and other sub-aquatic plants.

Lily Lake, near the Transportation building, contains the Water Lily exhibits of Gus B. Moulder and of Joy & Sons. One or more hardy Water Lilies grown together with Victoria regia and other tropical sorts are furnishing thousands of blooms to attract the passing throngs.

If Mr. Joslyn, the gardener, has a preference above the grounds around the History building, it is the sun-ray bed on the southeast end of the Forestry building. Six thousand Coleus arranged in the novel style which suggested the

Storing Celery.

What is the best way to keep celery through winter? I have always put it in trenches one foot wide in the lot and covered it with dirt and cornstalks, but it does not keep. I have a good dry gravel bottom cellar to my house where there is no furnace; why would it not be a good plan to pack the celery in sand in this cellar? I have the Red Rose, Boston Market, Giant Pascal, and Golden Self-Blanching.—T. M.

—This is a pertinent and seasonable question, and being of general interest at this time, it will not be inappropriate to reply to it at some length.

In a dry, cool cellar as described above, it will be possible to keep celery for about two months after putting it in. Any that may be required for use later than that, had better be left outside in trenches. In a cellar that is fairly light, celery will sometimes keep longer than just stated if small and sown late, and not blanched outside before placing it there. Dig up the plants carefully, with all the roots available, stand it upright against the wall about four to six inches apart, one row at a time—then cover the roots with sandy loam or sand. Then proceed again as before by placing another row of plants and cover with sand and so on until the quantity required is placed, or space is utilized. Keep the rows six inches apart, as if too close together they will heat up and commence to rot immediately. Air should be admitted as much as possible whenever the weather is not too frosty.

Celery for winter should not be blanched, only just enough for immediate use, as it will quickly blanch as soon as stored away in its winter quarters. It is well to bear in mind that unblanched celery will withstand several degrees of frost without any bad effect, but blanched celery is very susceptible to frost; for this reason it should be stored much earlier than the other which had better be left out until near Thanksgiving, or as late as possible, according to the weather outlook. The best time to put it in is from October 20 to November 20, according to latitude and section of country.

Last fall being so open and mild, a great deal of celery was put in a month too soon, consequently it did not keep as long as it otherwise would have done. We made this mistake last year, and the lesson taught will not be forgotten, as our celery was out by February 1, when it should have kept until April 1. There are so many influences working against the gardener, that when a slight frost comes he gets nervous and cannot feel contented until all his crops are stored away safely.

It is a better policy at the first appearance of hard frost to store away one-half the crop, leaving the other half growing outside as long as it is possible to do so. Frequently we experience two or three weeks of fine weather after the first frost that is sufficient to damage the blanched celery, but not the unblanched.

Trenches one foot in width and as deep as the tops of the plants, make a very convenient and safe plan for winter storage. In these pack the celery not too close, if they have a ball of earth and good roots, the latter will not need be covered with sand, leave exposed to the weather as much as possible, and cover with some light material before frost; taking this off again in the morning, if the temperature is above 35 degrees, as colder weather approaches, heavy covering is necessary.

Some air space should be allowed between the tops and the covering. For this purpose old boards or pea brush may be used laid over the celery, to hold up the covering.

If the new way of growing celery in rows on the level is prevalent, an excellent plan, to have fine celery late in winter, is to cover it just where grown. If three or four rows of celery at 15 to 18 inches apart are left, then as cold weather is near, make a rough roof over it by laying boards or sticks upon supports, upon these place a quantity of old cornstalks, then cover with leaves, salt hay or strawy manure, enough to keep out the frost, or any spare 6x8 hotbed sash may be used instead, these if laid across

and covered with straw, etc., will keep out frost and water successfully. This method is well worth trying, as the best flavored celery will be secured, since it retains that peculiar nutty flavor found in well-grown celery.

A few years ago, after filling the trenches and cellar we had some 300 rather small plants left over, we did not like to throw them away, although they were not needed. On the north side of an outhouse in an entirely out-of-the-way corner was a trench 1½ feet wide by 2 feet in depth. Into this we finally set the plants Thanksgiving week, and about a foot above the plants we nailed a rough roof of old boards, and covered it with a foot of soil, and strawy manure and rubbish were thrown upon it to exclude all frost. The plants were then left and forgotten all about until April 1, when the manure was being turned over to rot for spring use, but most of it was still frozen hard. It was nearly May when the celery pit was opened, and every root had grown and blanched out into fine medium-sized celery, and very toothsome. This supply lasted until within a few days of June, and was very highly appreciated. W. M. EDWARDS, Conn.

As it has a seasonable bearing, we reproduce herewith an article which was given in an earlier issue:

"After testing the various methods of storing celery for winter use, I am con-

essential to late-keeping celery, viz., a late growth." I. L. POWELL.

The Late W. A. Stiles.

William Augustus Stiles, whose death was briefly noted last week, was a Park Commissioner of New York City, and managing editor of Garden and Forest.

Mr. Stiles was born at Wantage, N. J., in 1837. He graduated from Yale College in 1859, and later taught in his father's school, Mount Retirement Seminary. Subsequently he spent several years in California as a young man, and was for a time a member of the engineering corps of the Union Pacific Railway. Later he dropped into politics. He was a Republican, and ran for Senator in 1880 and '83, but was defeated both times. He filled the office of Clerk in the New Jersey State Senate in the years 1882-'84-'85, and was at one time United States gauger in New York City. Drifting into journalism, he became a member of the staff of the New York Tribune, and acted in the capacity of agricultural editor of the Philadelphia Weekly Press. In 1888 he became managing editor of Garden and Forest, under Professor C. S. Sargent by whom that journal is still conducted.

Mr. Stiles was appointed a park commissioner for New York City, by Mayor Strong in 1895, in which office he rendered valuable service, having given the subject of park making careful study.



FIG. 201.—SUCCESSFUL STORING OF CELERY.

vinced that, for my own purpose, at least, the one I herewith describe is best. I use Giant Pascal and New Rose for winter, and plant three rows close together (six or seven inches apart), and the plants about the same distance apart in the rows. The ground is heavily manured before planting and the plants are kept well watered and cultivated. They are given but one slight earthing up until slight frosts set in. Stakes are then driven in along the two outside rows, giving the tops a slight inclination towards the central row, and having the tops of the stakes about level with the tops of the celery. Earth is then banked up about two-thirds of the height of the plants and made firm. A ten-inch board is then set against the stakes on each side, and the earth is banked to a level with the top of the boards. Two more boards are nailed together at right angles to one another and these are placed over the top.

"Some straw is placed alongside of the rows and is put over the boards during a sharp freeze. In mild weather both straw and boards are removed entirely. This is all the protection that will be needed until severe winter weather sets in, when the whole bank may be covered with leaves, straw, and litter of any kind. The accompanying sketch may present a clearer idea of this method.

"The point that appeals most strongly to my fancy is the fact that the plants are stored just as they grew and that they are able to continue growing, not having been disturbed at the roots, thus giving them the opportunity of making what is

His name has been prominently before the public recently in connection with his determined opposition to the adoption of the proposed plans of the Botanical Garden as submitted and amended by the Botanical Society.

The deceased showed early the traits which have characterized his brilliant career. When but a boy he developed a great love for reading, and in his youth associated himself with men of strong intellectuality. He studied botany in his younger days, and gratified his tastes in this direction in later life. He was a polished writer, his style being pure, direct and clear, and he grasped with an easy familiarity the most difficult problems.

As a public orator and post-prandial speaker he was a great success, his marked individuality shining forth in all his utterances. Deceased was never married.

Mr. Stiles was a member of the City Club, Yale Alumni Association, University Dining Club, Century Club, and New York Press Club.

Fruits Named.

(To T. M. H.)—The red apple is Haas; the green one Fall Pippin.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

City Shade Trees.

(Concluded from page 682.)

Another tree worthy of a city place is *Plantanus occidentalis*, a showy tree in many ways, excepting the short period in early summer, when in some places the dropping of diseased foliage occurs, otherwise it is a broad attractive tree in foliage, and by reason of the irregular shedding of portions of the bark from the trunk and main branches, when the light yellow patches on the ashen-gray round give the trees a peculiar appearance. These trees flourish best on a low moist situation.

The American Elm brings to mind a tree scene by artificial light; in the old town of Plymouth, Mass., where this magnificent tree makes a canopy through which gleams countless stars, and we thought then, this cannot be eaten. It is a perfect street tree. But the road here is not water-proof by any means. Yet we can find some very decent specimens of it in our squares, not forgetting the fine specimens found about New Haven, Conn., and one growing on the

this was nothing unusual, and judging by the flourishing condition of the trees at the time would appear to be unnecessary work. Yet in the park of Babelburg Palace, slight depressions were formed in the sward about many of the large trees. Here were the finest trees of the Golden Poplars it has been our good fortune to see and from the prominent position in which they stood, could not well be overlooked by the most ordinary visitor, as looking from one of the palace fronts down a broad vista toward the river Havel, these trees stood out like pillars of gold against the backing of Purple Beech by the river. This is wandering somewhat from the city shade trees, but the sight of these has often been recalled to mind by smaller specimens. We remember seeing these trees used a great deal in Vondel Park, Amsterdam, but there it was overdone. The tree does not live long in this country, but it could be used advantageously while young to brighten up some of the dull, dusty corners in the city parks.

A few others of this family are first-rate city trees, that is, they will stand

If in sunny spots more of our native Dogwood (*Cornus Florida*) were used, it would add rustic beauty to many otherwise stiff sections.

Coming to evergreens those that will make a fair showing are indeed scarce. First may be placed *Pinus austriaca*, stiff and of rugged growth, but not very long-lived. The Scotch Pine (*Pinus sylvestris*) does well, but takes on that decided pine characteristic—dying of the lower branches in a few years.

Pinus Mughus is useful as a dwarf, being little more than a large bush.

Pinus strobus (White Pine) is very good, and when old makes a grand sky line, and at such times has been called The Palm tree of the North.

In Spruce, *Abies alba* and *Abies canadensis* are about the best.

These notes are intended for small squares, in the dense centers of population, well knowing that to wander through and see the variety used in Central Park, New York, and Prospect Park, Brooklyn, these spoken of would seem a ridiculously small number. But the majority of people for which such city parks are needed, have not to spare either the 10 or 15 cents to reach the great parks nor yet very often the necessary time. Therefore, it is believed that half a dozen good shade trees within one-quarter of a mile are far superior for bodily comfort than a park with a thousand specimens located two or three miles away, and which can only be reached by the many toilers once a year, or on high days and holidays. J. H.

Japanese Tea.

Several months ago, the Japanese Tea Guild sent to this country a special commission, composed of Mr. S. Mitsuhashi, President of Shizuoka Prefectural Assembly, and Mr. J. Ohara, member of Japanese Parliament, to investigate the condition of the Japanese Tea trade in the United States and Canada and to co-operate with Mr. T. Furuya and Mr. T. Mizutany, the American representatives of the Japanese Tea Guild, in giving publicity to the merits of Japanese Teas and the method of preparing them for drinking which would insure the best results.

Mr. Furuya and Mr. Mizutany are planning to open Tea Bazaars in many of the principal cities in the United States and Canada, where ladies can enjoy a cup of fine Japanese tea made by experts, and at the same time receive instructions which will enable them to make it equally well at home. More than half the tea consumed in the United States and Canada is of Japanese growth, yet, the majority of Americans apparently do not understand how to prepare it so as to develop the delicious qualities which it contains. It is believed by these gentlemen that, when Americans are in possession of the secret of making good tea, the consumption in this country will fully equal that of Europe in proportion. The Japanese government has appropriated a large fund to aid the Japanese tea growers and tea merchants in prosecuting this educational work, and it is hoped that American ladies will be apt students.

Moving the Great Grain Crop.

The wheat crop of the United States for this year of 1897 is estimated at 500,000,000 bushels, one of the largest crops on record, and fortunately for the farmers the European demand has raised the price, and is sending the golden grain eastward at an unprecedented rate. Over 200,000,000 bushels will be demanded by the Old World, says Harper's Weekly, and the shipment of this enormous bulk is taxing the capacity of the railroads and grain-carrying vessels on the lakes, of canal boats and ocean steamers to the fullest extent.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

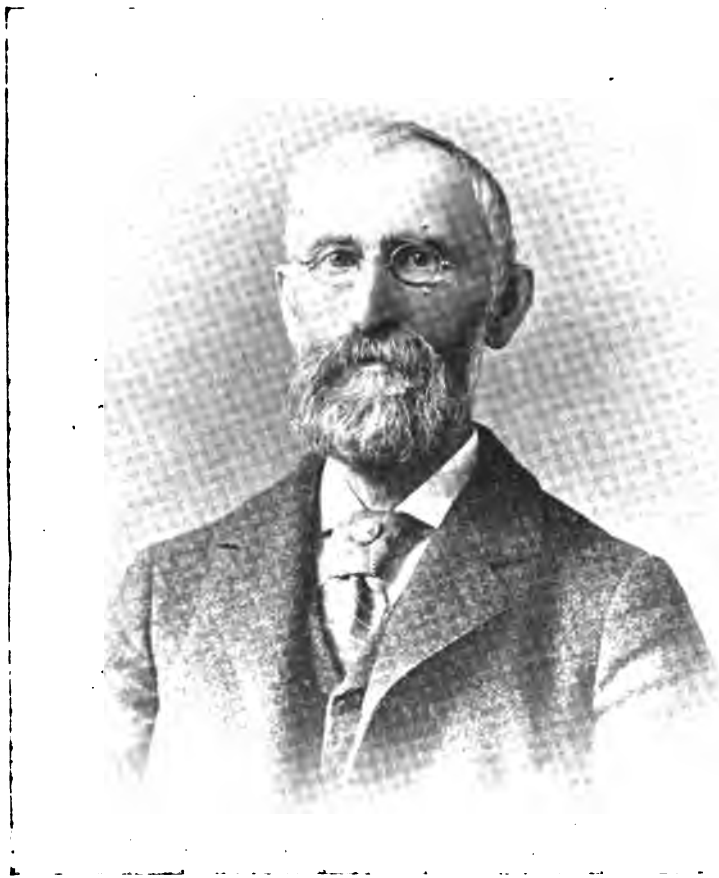


FIG. 202.—THE LATE W. A. STILES, MANAGING EDITOR GARDEN AND FOREST.

highway at Glen Cove, L. I., measures trunk $15\frac{1}{2}$ feet in circumference at 3 feet from the ground; at 14 feet it divides in two immense limbs, which spread in all directions, making a circle of 96 feet in diameter, and combining in one the two important qualities, majesty and grace. It is one of the most easy trees to transplant, and will grow well with no more attention than is given to the majority of city trees.

The number of these trees used in European cities is surprising. In Brussels the principal trees were American Elms or *Plantanus orientalis*. We noted a very pretty effect in one of the small squares here which was planted entirely with *Pinus campestris* var. *horizontalis*.

In Berlin, Germany, the Linden holds sway, and the amount of attention paid to the trees in the way of labor was a revelation to me; great trees on the street would have depressions formed about them to receive the water given them, and later would be filled in and matted over, by what could be learned

considerable smoke and dust and grow vigorously, as such we may name *Populus grandidentrata*, *P. tremula*, *P. nigra*, and *P. Bollana*, this last being of a close columnar habit and with foliage of a refreshing shade of dark green on the upper side, and silver-white beneath.

Sophora japonica is a good tree for city work with light-colored foliage.

The *Allanthus* that has fallen from grace because of the offensive odor of the flowers can be used to good purpose, if cut down almost to the ground every year; treated in this way, in a position backed by foliage of a dark green it will hold its own against almost any of the plants used for sub-tropical effects.

Catalpa bignonioides and *Fraxinus americana* are excellent trees. The former is very showy when flowering in July, atoning then for the considerable litter made by the falling long seed-pods in late spring.

Several of the *Magnolias* are good city trees, *M. conspicua* being perhaps the best with its wealth of blossoms in May.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1894.

PUBLISHED BY
A. T. DE LA MARE PTO. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.

REGISTERED CABLE ADDRESS
Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MACILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 35 cents per square line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

The Henry Strawberry.

Arrangements have been made whereby a bountiful supply of these plants will be ready for spring delivery to subscribers and agents, and in this connection we beg to call the attention of our readers to our generous offer of these plants in another column. We do not think that a more liberal offer has ever been made than the one now advertised, whereby the agent or worker sending us in a club of ten new names, at \$1 each, becomes entitled to 100 Henry Strawberry plants, while five plants will be sent postpaid to each person in his club. This offer will not apply to a club of less than ten. It may be a very long time before such an offer of such a plant can be made again. The wonderful success which has accompanied our premium offer this fall, in the short time at our disposal to advertise it, leads us to believe that the orders for the Henry Strawberry next spring may exceed all anticipations; however, we have planned for a large supply for delivery and trust to be able to meet all demands upon us. Mr. Jerolaman's series of articles is now being placed in pamphlet form, and copies will be mailed free to all who desire to use same in the canvas for new subscriptions.

All the premium Henry Strawberry plants due to date, have been shipped, except where a request has been made to hold them till spring, and judging by the unsolicited acknowledgments received, they are giving immense satisfaction. In order to reduce weight and hinder excessive transpiration some of the leaves are cut off before shipping, this is especially beneficial during a hot spell, and readers can rest assured all is done for the best.

Fruit at American Institute Fair.

The fruit display from the New York Experiment Station, Geneva, at the American Institute Fair, was the focus point for all fruit growers; to it they turned for help regarding the knotty points on nomenclature, and to admire the splendid samples. There is as much beauty here as in the flowers and we spent a few very interesting hours there, held not by the display only, but also very much by the verbal expressions heard concerning it by those interested and those that were not.

The apple display came in for the lion's share of comment, and it is hard on the Geneva people, but very pleasant for the fruit industry, to overhear that three-fourths of those growing apples could beat the station specimens in size (no doubt but that distance lent enchantment to the size in some cases), but no one was heard to remark that he had more kinds, which may be some comfort to the Geneva station, and induce them to stage 280 kinds next year, and possibly mark on the cards, the approximate season of ripening at Geneva. This on the plums would have made the exhibit much more interesting.

On entering the hall an attractive feature was a display of fruits from P. J. Berckmans, Augusta, Ga., which made a rare collection for the Northern man and comprised guava, persimmon, pomegranates, in several varieties; silyphus, also a new quince Pineapple, and sample of Campbell's Early grape, and some immense Kieffer pears fully four times the size of ordinary Kieffer. On the same table were several glasses of guava jelly. Looking around for the Geneva exhibit, we found that it had overflowed from a large room given, and the 50 varieties of pears now made a side show. The most noticeable of these was a plate of Souvenir de Congres, some wonderful fruits before which Bartlett must bow (for size), for they looked as if two pounds would be about the right weight. Next door, as it were, our good-for-ever mite of a Seckel bobs up, and a short distance away a namesake, Bart Seckel, having the same shining cheek, but about three times the size. One would have liked to have been able to learn more about its flavor. Many of the old favorites could be seen, with a sprinkling of good-for-nothing-but-show varieties, as Dramyo and Mdme. von Seibold; but here in all its glory was Flemish Beauty, whose dress was so clean that some one had tried to call it by another name, because they could not see the freckles on her face. Making a right-handed turn we found ourselves among the apples, plums, and grapes.

As 180 plates of grapes were no joke to examine in the time at disposal, we decided to stand off and pick out the most promising to the eye and found such to be: in white, Duchess, Niagara, and Moore's Diamond; in red, Lindley, Lucile, Delaware, Brighton, Poughkeepsie, Salem, and Catawba; in black, Concord, Worden, Clinton, Barry, and Eaton. This exhibit struck us as not up to the usual standard in size of bunches, they also being damaged quite some, unavoidable, no doubt, when staging so many varieties at this late date.

But the plums were truly a grand effort; just think of one place being able to stage 81 kinds in the month of October! Still working against time, we began in the same way as with the grapes, until one of the "bosses" came in and invited us to become acquainted with the plum flavor, and it was great, but not all in the big fellows, for of all, a small Gage named Tobias came out A1 in flavor; Grand Duke, large black, is one of the best flavored, and odd in having quite a neck; Duane's Purple is good; Chabot, a red, is of very fine flavor; Coe's Golden Drop is too firm yet to have much flavor, but is A1 when dead ripe.

But to return and sum up the eye notes: in black, by appearance, Quackenbush, Arch Duke, Grand Duke, and Diamond; in red or purple, Duane's, Pond's Seedling, Bon de September, and Chabot; in green-gold, Yellow Egg, General Hand, Coe's Golden Drop, and Luccumb Nonesuch. The foregoing ranking in size and appearance in order as given.

Burbank was a plum of fine appearance once, but too far gone now to try the flavor of it. There was a number of native kinds, the best, perhaps, being Hawkeye, a light mottled red, of good quality. A large number of crab apples was shown which, with the large kind, made a goodly show of 220 varieties, among which the most attractive are: Tufts, Beltgilemer, Alexander, Wolf River, Pumpkin Russet, Northwestern Greening, Bellordooskoe, and Hartford Rose.

Certain it is that all visitors to the Fair (and all my readers living within a reasonable distance should become such) will feel when they leave, that it has been time profitably spent, and that they will return again before the close. For somewhere among the varied collection of fruits, flowers, machinery, and articles useful and useless, can be found something that will interest everyone any day this month.

Proposed Botanic Garden for Phila.

At the meeting of Councils' committee on city property, September 22, Dr. William Pepper, on behalf of the Philadelphia Commercial Museum, made a request that 40 acres of ground along the west bank of the Schuylkill be transferred to the institution, to be used as a botanical garden. This plot of ground was dedicated for park purposes by an ordinance of Councils on July 6, 1883, but has lain useless. Dr. Pepper said that a museum of science and arts is to be erected near here at a cost of \$2,500,000, ground having been broken for one wing of the building, and it is desired to make the botanic garden an adjunct to the museum. The matter was referred to a sub-committee.

Texas Truckers.

The Truck Gardeners' Association for Nueces, San Patricio and Aransas met at Rockport, September 18. There was a general discussion of topics of interest to the market gardener generally and to shippers of vegetables in particular.

A proposition from the San Antonio and Aransas Pass Railway with regard to reduction of rates and promptness in dispatching vegetables, in ten carload lots, was read, discussed and finally accepted.

Next year each county will have a competent agent from the county, under salary, on the ground to receive and deliver goods shipped by any member of the association. Special attention will also be paid to packing, so that the goods will be packed in first-class shape.

Fruits Received.

Gold Plum.—A sample fruit of this has been received from the introducers, Messrs. Stark Bros., Louisiana, Mo. This plum is one of those procured by Luther Burbank from his crossing of Roblison and Abundance, and he himself said of it: "The best plum I have ever produced." The introducers claim that Gold plum bears well wherever natives bear, and in all truth, the evidence offered by well-known horticulturists supports the claim. It should be a very useful variety. In flavor we are inclined to think it will pass muster, but the one fruit sent was bruised in transit, so we cannot speak positively, on that point. The color is most attractive and is of rich yellow-red hue, with yellow flesh.

Juicy Plum.—This is another of Burbank's raisings from the same cross as the Gold, and has lately been referred to in these columns (see page 665). It is well named, being very full of juice, so much so as to surprise one on biting into the fruit. In flavor it is of medium quality. The samples examined were sent by John Lewis Childs, Floral Park, N. Y.

Satsuma Plum.—This, like many others of the Japanese plums, is not a very satisfactory one for eating out of hand. We lately received specimens from E. & J. C. Williams, Montclair, N. J., and decided to put them to a cooking test, and now think that Satsuma is a grand plum for canning. The beet-like red flesh gives a handsome rich color and the slight astringency is an added charm to the flavor. We will can all the Satsumas we can get.

Chabot was another plum sent by Messrs. Williams; it was the true Chabot—a clingstone—and is a first-class eating fruit.

Grape Campbell Early has already been alluded to in these pages, and lately the introducer, George S. Josselyn, Fredonia, N. Y., favored us with some bunches of the fruits. The accompanying letter stated they were from one-year-old vines planted in 1895. The clusters were very large, and, as regards flavor, too much can hardly be said for Campbell Early; it is that of the Concord with a blending of the European Muscat Hamburg. The variety fruits with Moore Early and having a tough skin keeps and ships well; the berries also hang well on the bunch.

Peach Dr. Black.—Our correspondent, Charles Wright, Seaford, Del., kindly sends a sample fruit of this new late peach. It was not fully ripe, but had been pulled for fear of storms, but it had sufficiently matured to enable us to form a high opinion of its merits. This variety ripens at least two weeks later than Bear's Smock and takes on a high color. The flesh is yellow, melting; free-stone; flavor pleasantly sub-acid and altogether it appears to be a valuable late peach, especially for the South. The specimen was received October 4.

Died.

W. C. Wilson.—A once noted florist and gardener passed away on Saturday, October 9, in the person of W. C. Wilson, of Astoria, Long Island. For many years the deceased ranked as one of the most prominent men in his profession, but of late years, owing to reverses in business, but little has been heard of him. Two years ago his large plant was entirely sold out; since when he has been in the employ of H. Dryer, Woodside, L. I. He was the oldest living florist.

Fearing Burr, formerly of the seed firm of M. & F. Burr, of Boston, died at his home, Hingham Centre, Mass., October 4, in his 82d year. In 1865 Mr. Burr published a work entitled "The Field and Garden Vegetables of America," and in the same year wrote "Garden Vegetables, and How to Cultivate Them."

AMERICAN GARDENING is always a welcome visitor to my office. I have to show my friends the many good things it contains every week. Wishing you every success, I am. —DR. T. R. CLARK.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multiplicity of counsel there is wisdom and safety. Write us often.

Hot Water for Poison Ivy.—Will you allow me to mention another remedy for the effects of Poison Ivy (Rhus toxicodendron)? It is simply hot water, as hot as can be borne. It may not work with all, scarcely any remedy does, but the man who told me of it had tried about every other remedy, and by accident discovered the benefit of hot water. Now as soon as he discovers that he has been poisoned he applies the hot water with a sponge or cloth. The first application stops all itching for a while. A few repetitions of the application stop it completely.—W. H. H.

Where Can I Learn?—Will you or some of the readers of AMERICAN GARDENING give me some information? I have come into possession of a small place in the country, and intend to spend my time working among my flowers, fruit, and vegetables, but do not want to be at the mercy of my gardener. Therefore I would like some training in care of greenhouse, flower and vegetable gardens. Is there any place where I can go to get such a training, and on what terms? Or have I to go through the hard school of experience to learn what I want to know? I am not altogether green, as I am a farmer's daughter, and my early years were spent in my flower and vegetable garden, but I am not anywhere near up to date, and know nothing about care of glass houses. If any one can give me any information on this point I shall be much obliged.—H.

—The requisite knowledge can only be had by experience.—Ed.

Strawberries in Louisiana.—I have better success with plants set late in the fall. The ground spaded deep with plenty of old, well-rotted manure and mold from yard sweeping and ashes, and the best plants I ever had were set out with a trowel. I stuck the trowel half way, then pressed back and forth wide enough for the roots to go in without crowding. Then with the back of the trowel I firmed the soil well, and just let them alone, only pulling out the biggest weeds. I have planted, trying to spread the roots, but I think I did not get them deep enough and when dry weather set in they dried out. Last spring I did not gather a pint of berries; it rained, and all rotted. When we get the "Henry" berries we will only want five for "a mess."—MARGARET E. CAMPBELL, Louisiana.

Raspberries.—Frank C. Dowd, in issue of October 2, page 680, asks what to do with the Columbian in regard to pruning young "trees," he calls them. Evidently he has strong plants that are capable of bearing a large crop of fruit. Such plants should be trimmed high, five or six feet; staked and tied up closely, lateral shoots clipped from two to four inches from cane, according to number of branches; soil barely scratched, just enough to kill weeds, and mulched with coarse stable manure for the winter, covering the ground well out from the hill. In case of a dry spring, a barrel of water placed so as to leak over a space of ten feet around each plant, just enough to keep the soil well moistened (not wet) will be pretty apt to give a satisfactory crop.—HENRY SNYDER, Md.

A Review of the Season in Kansas.—The season just coming to a close has been a very discouraging one to the grower of fruits and vegetables on account of its extreme dryness. We had it very wet until the first week in April, then we had no rain, only, very light showers until about July 1, when we had a good rain, and we have had none since

in sufficient quantities to thoroughly soak the ground; consequently everything has suffered, especially in fruits and vegetables. Celery especially has suffered; it will be almost a total loss. My own especially is a complete failure. We of this country should be prepared to irrigate, as there is scarcely a season but irrigation would be beneficial. Strawberries and blackberries were badly damaged. Raspberries were a pretty good crop, the rains mentioned coming just at the right time to save them. The Bubach stood the dry weather the best of any strawberry I had.—D. H. B., Kansas.

The Wilson Blackberries.—Can you or some of your readers inform me in regard to Wilson's Early and Wilson, Jr., Blackberry, as to size, earliness, quality, productiveness and hardiness in comparison with the Early Harvest?—D. H. B., Kansas.

Another New Strawberry, The Loyd.—Seeing you give space for the description of anything new in the horticultural line I would say that we have a new strawberry that was fruited in 1897. It was seen by a great many of our best strawberry growers and it was pronounced to be the best variety ever seen growing here; the plant is perfect in every respect, one of the most healthy, no sign of rust or disease about it, and makes a good bed of plants; in fact, so much was, and is, thought of it that last spring the demand for plants was so great that it could not be supplied, and the coming season is likely to be the same; it is not in the hands of nurserymen yet and is not likely to be in any catalogue the next season. It was found growing on a piece of new ground a few years ago by a Mr. Loyd near the Maryland and Delaware line; it is dark red and shaped like the Sharpless. The blossom has some pollen but needs fertilizing with some other variety. It is a great acquisition to our list of varieties; in fact, any variety that will excel the Bubach is no common strawberry. In conclusion I will say that the Loyd is a new berry of sterling worth, about the same season as Bubach; it's a real bonanza in the strawberry line.—C. HOWARD, Md.

—We regret our correspondent did not send us fruit in the proper season.—Ed.

Rotation.—Answers to "G.", page 680. Rotating crops to get the most off of the land is intensive management. If the soil is in proper condition, it will remain friable and light enough to plant in alternate rows, enabling one to get an extra crop during the season, several combined crops can be planted in the same row, with other single crops alternately, thus doing most of the planting at one time; for instance, beans and parsnips or carrots, together in same row, 24 inches wide, onion sets between; or radish broadcast, onion sets, and strawberries alternately in rows 24 inches, making 12 inches between any two rows; or early cabbage, with a berry plant between, berries to occupy the land after cabbage is off; or peas and potatoes in same row, four feet apart, early sweet corn alternate; when peas and potatoes are off, tomato or late cabbages take their places, when corn is off, turnips; scarlet clover or rye to follow, broadcast. A study of time required to mature crops for marketing, will suggest many other combinations for rotation.—HENRY SNYDER, Md.

Specimen Tree Wanted.—By way of your valuable paper I wish to get the opinion of some expert in landscape gardening, what tree to plant in a prominent but exposed situation in front of my house. It would be a single specimen on the lawn and I should like to have something extra nice, some tree that has a moderate height and draws the attention of passers by. Will a Weir's cutleaf maple fill the bill or would a Salisburia adiantifolia, Allanthus, or red-flowering Horsechestnut be more recommendable. Ground is excellent and the house is isolated, out of town, that is not exposed to the disadvantages of a city street.—SOUTH MICHIGAN.

There is Not a Home in the Land

But calls for a yearly Calendar.

Every family tries to get one or more; generally more.

There are Calendars and Calendars

Some are good, some bad, most of them indifferent.

There Will Not be a Calendar Issued for 1898

To exceed in artistic elegance, finish, beauty of designs and effective coloring, the one we to-day offer as a premium to every subscription to AMERICAN GARDENING received before December 31, 1897.

EVERY SUBSCRIBER IS ENTITLED TO ONE

AND CAN EASILY EARN TWENTY.

OUR magnificent **Rose and Girl 1898** six sheet **Art Calendar**, two months to a sheet, each sheet $8\frac{1}{2} \times 11\frac{1}{2}$ inches, is superbly lithographed in eleven colors, and printed on hammered paper; the whole tastefully tied with silk bow—undoubtedly a work of art fit for the most elegant home, and as handsome a Calendar as was ever published. Each one of the six designs presents a distinct type of female loveliness and a fresh study in roses, the coloring on each sheet being rendered in harmony with the design. There is not a line of advertising on the Calendars to detract from their value. They will not be sold by us for less than \$1.00 each.

Who is Entitled to a Calendar?

EVERY SUBSCRIBER renewing before **December 31, 1897**, enclosing Five Cents additional to pay packing and postage.

EVERY NEW SUBSCRIPTION—To induce people to test the value of AMERICAN GARDENING we will send the Calendar absolutely free to every name received direct not previously on our mailing list. Remit \$1.00 for A. G. 12 months.

EVERY ONE sending us a club of Four 3-month trial subscriptions at twenty-five cents each, will get a Calendar, free as a premium, by return mail.

EVERY NEW name sent in by an agent.

NOTE.—We have ordered manufactured for us a large stock of these superb Calendars in the endeavor to have sufficient supply for all demands, but will not guarantee to fill orders after supply is exhausted. Therefore, order yours now.

Special to Agents A copy of our Art Calendar to show people will clinch the argument and obtain the subscription. Bona fide Agents will be mailed one copy, securely wrapped, on receipt of only Twenty-five cents (one-fourth its value.) Armed with this superb Calendar we misjudge human nature greatly if any ordinary mortal cannot secure a big list of new subscriptions every day. Every new subscriber you send us gets a Calendar by return mail.

We Pay Agents

Every new subscription at \$1.00 entitles the agent to **Five of the Wonderful Henry Strawberry Plants**, to be delivered next Spring. Thus 100 new subscriptions would secure agents 500 plants; a possession worthy of your consideration. Every new subscriber taken by agent will receive one of our Art Calendars free by return mail.

Agents who do not want the Henry Strawberry Plants can retain as their payment **20 cents in cash** on each subscription they take, or will be credited **twenty-five cents** on any book, magazine or publication they wish to obtain through us.

Address all
correspondence

AMERICAN GARDENING, P. O. Box 1697, New York.

REMIT BY P. O. or EXPRESS MONEY ORDER—IT IS SAFEST.

Some Questions Answered.

Heating a General Greenhouse.

Will you say how I shall arrange the heating pipes for water in a greenhouse, 12x30, with boiler room 10x12, attached, using 1 1/4-inch pipe? Would a two-horse power upright boiler be sufficient? The outside benches are 30 inches, central bench 42, walks between, 20 inches. Flowers and winter vegetables to be grown, and mushroom beds under benches.—COLUMBUS.

—The requirements for flowers and winter vegetables vary to such an extent that it will be impossible to pipe a house so that a temperature suited to all of them can be secured. Thus cucumbers and Roses will require about twice as much radiation as Violets and lettuce. If the walls are not very much exposed and if the glass is all in the roof and ends, a two-horse boiler with a grate 15 inches in diameter should be able to heat to 60 degrees such a house as is described. I should supply radiating surface by means of two 2-inch overhead flow pipes and ten 1 1/4-inch returns under the side benches.—L. K. TAFT.

Araucaria excelsa.

Does this need a sunny or shady place, and what size does it attain in this country?—READER.

—Araucaria excelsa is perhaps the most extensively grown of any of the Araucarias, and is probably the most easy of cultivation. The most desirable location is the coolest part of the greenhouse. What it likes most is a cool, damp atmosphere. Trade growers who handle large quantities shelter the plants during summer in temporary shelters made of slats arranged two or three inches apart. In the winter they give them a glass house and maintain a temperature of about 43 to 45 degrees. Good sound loam and sharp sand is all the soil needed. As the plant is grown only in a greenhouse here, it has to be kept to the size of the house. In its native haunts it attains a height of 150 feet.

Fertilizing Strawberries.

(a.) Is hen house manure and ashes good for strawberries?

(b.) Are ashes better without being leached, or are they better after they are leached?

(c.) I have prepared my ground and have put cow manure in drill and broadcasted also. My rows are three feet apart. I thought I would broadcast with hen house manure and ashes.—J. C. HUTCHINS, Ga.

—Hen house manure and unleached ashes mixed with cow manure and top-dressed one foot wide on each side of plants would be best, as otherwise if plowed or spaded in, would be apt to burn roots of plants, top-dressed would grow a fine crop. Must be at least two inches deep.—H. JEROLAMAN.

Sow Bugs and Mealy Bugs.

Will you kindly advise me whether "sow bugs" and "mealy bugs" are the same? I am troubled very much by what is commonly called "sow bugs," gnawing the young cucumber plants in my greenhouses. What can I do to prevent it? They hide between the side planks of the bed and the dirt in the daytime and do their work at night.—W. F. PRESTON, Ill.

—No! Sow bugs and mealy bugs are very different. The mealy bug is hardly ever more than one-eighth of an inch in length, is soft and covered with a white mealy-like substance—hence the name. This is a pest of certain decorative plants and very troublesome to dislodge. The sow bug or the wood louse is a much bigger creature with a hard shiny shell of a slaty color. Your statement that these intruders attack your cucumbers is not in accordance with the general understanding of the habits of the sow bug, for though some practitioners stoutly maintain that the sow bug devours young plant growth, the entomologists will have none of it. For our own part it has never been sufficiently demonstrated that the sow bug eats the living tissues of plants.

Wintering Cannas.

Cannas which are at present in the beds, will need attention now in regard to winter storing. As soon as the foliage is caught by frost, cut down the tops, leaving six inches of stem; lift the roots and place them on the floor of a barn or some such place to dry and ripen up. After that they may be stored in a light airy cellar or (where a great many thousands do get stored) under the greenhouse bench. The last-named spot is not an ideal one for storing, as there is always a big risk of rotting, and very frequently there are varieties that will not keep at all when so treated.

Wherever the roots are stored a sharp lookout needs be kept upon them to see that they are all right, otherwise in the spring the grower may find himself minus his favorite sort.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and, therefore, requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION wanted, as head gardener, competent and experienced commercial vegetable grower; hothouse and outdoor operations. Married; say what wages paid. Head Gardener, care American Gardening.

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advert., and each initial or a number, counts as one word. No cuts or display type allowed.

RASPBERRY and Strawberry plants. Chas. O. Nash, Three Rivers, Michigan.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

HEADQUARTERS for the Loyd Strawberry Plants; conceded to be the best ever seen in this section; also Miller Raspberry plants. Prices low. C. Howard, Two Johns, Md.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

BLANCHING CELERY with paper tubes. Celery and onions cultivated in the one drill at the same time. No transplanting, no shoveling dirt, combination and continuous crops from June to November, ten years' practice. Full information one dollar. Richard Branson, Box 451, Syracuse, N. Y.

CALIFORNIA Privet make the finest ornamental hedge, and are perfectly hardy. Fine large plants grown at seashore, two years old, \$3 per hundred. Cash with order. References: First National Bank, Asbury Park, N. J.; State Banking Co., Newark, N. J.; Atlantic Coast Nursery, James H. Cornell, Proprietor. Office, 606 4th Ave., Asbury Park, N. J.

Success

Engenders

Success!

Take our Advice:

Advertise

in the only

Successful

Weekly

Horticultural

Newspaper

Published

American Gardening

Subscribe

to a

Newspaper

which will make you

Successful

in your

Life's

Pursuit

American Gardening

W. & D's.
CELEBRATED SURE CROP.
MUSHROOM SPAWN.
8 LBS. FOR \$1.00.
 Lithum Harriah, Roman Hyacinths, Freesias,
 Paper White Narcissus, Callas,
 Etc., Etc.
 Special PRICES on application.
WEEBER & DON,
 Seed Merchants and Growers,
 114 Chambers St., N. Y. CITY.
 Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and
 Dealers in Cut Flowers
 56 West 39th St., NEW YORK CITY.
 Solicit Shipments of Cut Flowers on Com-
 mission. Best market prices guaranteed.
 Mention American Gardening when you write

We are
 ready to
 fill your
 order for
PEACH TREES
 Guaranteed free from Yellowa, Rosette, or San
 Jose Scale. State Inspectors certificate with
 each order. All standard varieties including
 Elberta, Emma, and Triumph. Also Pear,
 Plum, Apple, and other Trees and small Fruit
 plants. Catalogue on application.

CHAS. WRIGHT, Seaford, Dela.
 Mention American Gardening when you write.

...GREAT...

Horticultural Exposition

FLOWERS, FRUITS, VEGETABLES.

AMERICAN INSTITUTE FAIR

Madison Square Garden, New York.

NOW IN PROGRESS

Will Continue to Oct. 30.

\$5000 in Cash Prizes, also Medals, Cups,
 Diplomas, and Certificates.

For particulars apply to

DR. F. M. HEXAMER,

Madison Square Garden, New York.

Mention American Gardening when you write.

PRICE LIST FOR

Exhibition Stationery

1000 Entry Forms -	\$2.75
Two Exhibitor's Books -	2.00
Two Glass Books -	2.50
Six Judge's Books -	3.00
500 Entry Cards -	3.50
500 Pastors (assorted) -	1.00

Total - . . . \$14.75

Secretaries of Horticultural, Agricultural,
 or any other form of competitive show, are
 invited to write us for full particulars.

It is freely conceded that the system we
 have adopted saves time, temper, trouble,
 worry and expense.

The clerical work of every exhibition, large
 or small, should be run on business lines, and
 you will find this system the best, the easiest,
 least expensive, and most satisfactory. Ad-
 dressed correspondence

A. T. DE LA MARE PTG. & PUB. CO. Ltd.

P. O. Box 1607, New York.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent
 appointments and movings are requested to
 forward particulars of the same for publica-
 tion in this column. No charge is made.

A. Van Leeuwen has been engaged as
 gardener to Mr. Maxwell, Rockville,
 Conn.

Northampton, Mass.

The regular monthly meetings of the
 Horticultural Society which have been
 suspended during the summer months
 were resumed on Tuesday, October 12,
 when Professor Ganony of the Botanical
 Department of Smith College gave an il-
 lustrated lecture on "The scientific basis
 underlying common garden operations." The
 meeting was held in the Lily Hall of
 Science, Smith College.

The third annual Chrysanthemum Ex-
 hibition will be held in the City Hall, No-
 vember 4, 5, and 6. The local gardeners
 and florists are doing their best to make
 this exhibition one of the best ever held
 in western Massachusetts. For schedule
 of premiums address the secretary, Ed-
 ward J. Canning, Botanic Gardens of
 Smith College, Northampton, Mass.

Syracuse, N. Y.

The Chrysanthemum Show of the Cen-
 tral New York Horticultural Society will
 be held in this city, at the Alhambra, No-
 vember 9, 10, and 11; entries close three
 days before exhibition. The secretary's
 address is D. Campbell, Syracuse, N. Y.
 The announcement that E. C. Stearns
 Co., makers of the Yellow Fellow bicycle,
 will present one of their high-grade
 wheels for a new solid yellow seedling
 Chrysanthemum, has been already men-
 tioned in these columns. The competi-
 tion is open to all, only plants in pots
 being eligible. The seedling must not
 have been previously disseminated, and
 the award will be made by the Society's
 judges.

Chrysanthemum Society of America.

Seedlings.—The committees judging
 new seedlings will be in session this and
 every Saturday up to and including No-
 vember 27.

Exhibitors should make their entries (a
 fee of \$2 is charged for each variety ex-
 hibited) to the secretary, not later than
 Tuesday of the week in which the blooms
 are to be shown.

Blooms may be sent to any of the fol-
 lowing addresses, express prepaid:

Boston.—A. H. Fewkes, Horticultural
 Hall.

New York.—Eugene Dailledouze, care
 of Dr. F. M. Hexamer, Madison Square
 Garden.

Philadelphia.—Edwin Lonsdale, 1514
 Chestnut street.

Cincinnati.—B. Witterstaetter, corner
 Fourth and Walnut streets.

Chicago.—W. N. Rudd, room 202, 185
 Dearborn street.

Silver Cup.—The Chrysanthemum So-
 ciety's Silver Cup, to be offered annually,
 will be awarded to the best six varieties,
 six blooms each (36 blooms in all). The
 first cup will be competed for October 21
 at New York. Competitors should for-
 ward their blooms to Dr. F. M. Hexa-
 mer, Madison Square Garden, New York
 City, express prepaid. Competition open
 to all, no entry fee. For further particu-
 lars address Elmer D. Smith, secretary,
 Adrian, Mich.

New York.

A November Show.

The New York Gardeners' Society
 announces that it will hold a grand
 floral exhibition in the city on November
 12 and 13. The preliminary schedule is
 already out and makes provision for
 plants, Chrysanthemums, Roses, Carna-
 tions, and fruit. There are two sections,
 the larger one for private gardeners only,
 the other open to all. This display will
 be held in the new Hotel Astoria, Thirty-

fourth street and Fifth avenue, and is
 under the patronage of the leading society
 ladies of New York, as many as forty-
 two names appearing on the list. The
 exhibition will be under the management
 of Mr. J. H. Troy, whom intending con-
 tributors should address at 365 Fifth
 avenue.

Gardeners' Society Meeting.

The New York Gardeners' Society
 held its regular monthly meeting Sat-
 urday, October 9; 47 members and
 others were in attendance. One of the
 chief attractions of the evening was a
 lecture by the celebrated Orchid collector,
 John E. Lager, who gave an account of
 his recent experiences in the tropics; he
 also discoursed upon the cultivation of
 Orchids in this country, enlarging upon
 the necessity of adopting more rational
 modes of treatment.

A. Wengerter, Bay Ridge, exhibited
 some fine vases of President Carnot,
 Kaiserin Augusta, and Perle Roses.

The following gentlemen were elected
 as associate members: W. E. Marshall,
 Lyman Crow, and James W. Withers.

The American Institute Show.

The horticultural exhibition at the
 American Institute Fair at Madison
 Square Garden continues to grow in vol-
 ume and interest as time goes on, so
 great is the interest manifested in this
 part of the great fair that the manage-
 ment has decided to continue it over the
 fifth week, so that it will not close till
 October 30. The additional or what will
 be known as the last week will be almost
 entirely devoted to Chrysanthemums,
 Roses, Carnations, and Orchids. During
 the present week exotic plants, cut flow-
 ers, Cyclamen, and Geraniums are the
 features. Among fruits, apples, and
 pears are the attraction, also Southern
 fruits and Dates from California and Ar-
 zona. Vegetables are also well represented.

Next week, beginning October 18, will
 be the Chrysanthemum and Rose show,
 and despite the early date a great exhibi-
 tion is expected. On Thursday special
 interest will be centered on the National
 Chrysanthemum Society's cup contest,
 which calls for a display of six varieties,
 six blooms of each.

So far we have omitted to mention a
 special feature of the week's display and
 one which merits more than passing men-
 tion. This is a collection of Colum-
 bian grasses collected and exhibited by J.
 E. Lager, in all over 500 species, many of
 which are unknown and have never been
 named. Messrs. Lager & Hurrell also
 stage in front of this exhibit a group of
 Colombian Orchids, also one raft or
 board showing their new mode of Orchid
 culture. This board, 66 inches in length,
 is covered with Cattleya Trianae, show-
 ing 32 sheaths and wonderful vigor of
 plant. This last in fact is true of all the
 pieces staged, several of which are yet in
 their original state, having never been
 blocked or placed on boards, but are sub-
 sisting on their natural blocks. Special
 awards were made to both these exhib-
 its.

The Florists' Club Medal.

The Florists' Club, at its meeting
 on Monday last, decided to give its gold
 medal, valued at \$100, to the exhibitor
 scoring the highest number of points for
 displays made at the monthly meetings
 of the Club held during 1898. At the No-
 vember meeting a silver medal will be
 offered for the best vase of 25 Chrysan-
 themum blooms, not less than five varie-
 ties. These competitions are open to all.

A Reflection.

It is only within a year or so that the
 private gardeners of the country began
 to band themselves together in the vari-
 ous sections for the purpose of mutual
 improvement; and already the beneficial
 influence of such organization is being
 demonstrated in the increased number of
 floral exhibitions to be given this fall
 under the auspices of the gardeners' socie-
 ties in rural districts adjacent to the me-
 tropolis. In this respect the gardeners
 are showing more aggressiveness than
 the commercial florists, although, of
 course, the co-operation of the latter is
 often sought and obtained in these ven-

tures. Evidences that the private gardeners are coming to the front in other directions as well, and to all appearances superseding their more apathetic confreres, the florists, are seen in the election of gardeners as officers in our florists' clubs, e. g., New York, where the positions of president and vice-president are both filled by private gardeners. All this goes to show that the trend of the times is toward a reversal of conditions of former days, when the commercial man was the dominant factor, and the private gardener played but a subsidiary part. [And this is just what AMERICAN GARDENING has always held should be.—ED.]—Florists' Exchange.

Coming Exhibitions.

Sept. 27 to Nov 4—NEW YORK: American Institute (Horticultural Section), Madison Square Garden. James W. Withers, Box 1897, superintendent.

Nov. 2-5—BOSTON: Massachusetts Horticultural Society, Horticultural Hall. Robert Manning, secretary.

Nov. 3-4—MORRISTOWN, N. J.: Morris County Gardeners' and Florists' Club, McAlpin's Hall. W. H. Thomas, Convent Station, N. J., secretary.

Nov. 3-5—FORT WAYNE, IND.

—**POUGHKEEPSIE, N. Y.:** Dutchess County Horticultural Society, Armory. Wallace G. Gomersall, Fishkill-on-Hudson, N. Y., secretary.

Nov. 3-6—INDIANAPOLIS, IND.: State Florists' Association of Indiana, Tomlinson Hall. R. A. McKeand, Garfield Park, secretary.

Nov. 4-6—NORTHAMPTON, MASS.: Northampton Horticultural Society, City Hall. E. J. Canning, Smith College Botanic Gardens, secretary.

—**NEW BEDFORD, MASS.:** Gardeners' and Florists' Club, Adelphi Rink. A. J. Fish, secretary.

Nov. 5 and 6—PORT CHESTER, N. Y.: The Westchester County Gardeners' Association, Fehr's Opera House. A. Grierson, Rye, N. Y., secretary.

Nov. 9-11—SYRACUSE, N. Y.: Central New York Horticultural Society, in the Alhambra. D. Campbell, secretary.

—**WORCESTER, MASS.:** Worcester County Horticultural Society. Adin A. Hixon, Worcester, Mass., secretary.

Nov. 9-12—MT. KISCO, N. Y.: Bedford Flower Club, under management of Westchester County Horticultural Society, Opera House. H. Spavins, Box 52, Secretary.

Nov. 9-13—CHICAGO: Horticultural Society, Armory, Lake Front. W. N. Rudd, Room 202, 185 Dearborn street, manager.

—**MILWAUKEE, WIS.:** Florists' Club, Lincoln Hall. A. Klokner, manager.

—**PHILADELPHIA:** Pennsylvania Horticultural Society, Horticultural Hall, Broad street. David Rust, secretary.

Nov. 10-12—SPRINGFIELD, MASS.: Hampden County Horticultural Society, International Chrysanthemum Exhibition. William F. Gale, 381 Main street, manager of exhibitions.

—**WACO, TEX.:** Waco Floral Society. Mrs. M. B. Davis, secretary.

Nov. 10-13—LOUISVILLE, KY.: Kentucky Society of Florists. F. C. Haupt, 241 W. Jefferson street, secretary.

—**TORONTO, ONT.:** Gardeners' and Florists' Association, The Pavillon. E. H. Carter, 280 Gerrard street, East, secretary.

Nov. 11-13—PROVIDENCE, R. I.: Rhode Island Horticultural Society, Music Hall. Charles W. Smith, 61 Westminster street, secretary.

Nov. 12 and 13—NEW YORK: N. Y. Gardeners' Society, Hotel Astoria, 34th street and Fifth avenue. J. H. Troy, manager, 865 Fifth avenue.

Nov. 16-19—CLEVELAND, OHIO: Florists' Club. G. A. Tilton, 85-87 Woodland avenue, secretary.

Nov. 20—BOSTON, MASS.: Horticultural Society's Prize Exhibition, Horticultural Hall. Robert Manning, secretary.

Not Fixed—SAN FRANCISCO, CAL.: California State Floral Society. Enory E. Smith, manager.

ARMISTEAD & McKELVEY
Pittsburgh.
REYNOLDS-BAUMAN
Pittsburgh.
DAVIS-CHAMBERS
Pittsburgh.
FAHNESTOCK
Pittsburgh.
ANCHOR
Cincinnati.
ROCKSTEIN
Cincinnati.
ATLANTIC
Cincinnati.
BRADLEY
Cincinnati.
BROOKLYN
New York.
JEWETT
Cincinnati.
ULSTER
Cincinnati.
UNION
Cincinnati.
SOUTHERN
Chicago.
SHIPMAN
Chicago.
COLLIER
Chicago.
MINNOURI
St. Louis.
RED SEAL
St. Louis.
SOUTHERN
St. Louis.
JOHN T. LEWIS & BROS CO
Philadelphia.
MORLEY
Cleveland.
SALEM
Salem, Mass.
COENKILL
Buffalo.
KENTUCKY
Louisville.

CONSIDER THE COST. Suppose the building is 60x25x20. It will require to paint it, 14 gals. ready-mixed paint at \$1.25 per gal.—\$17.50.

Or, four 25-lb. kegs of white lead, \$6.00; five gals. pure linseed oil, \$2.00; four cans tinting colors, 80 cts.; ½ pt. Japan dryer, 15 cts.; ½ pt. turpentine, 5 cts. Total, \$9.00—a saving of \$8.50 in favor of **Pure White Lead** without considering its greater durability. Examine the brand (see list).

FREE By using National Lead Co.'s Pure White Lead Tinting Colors, any desired shade is readily obtained. Pamphlet giving valuable information and card showing samples of colors free; also cards showing pictures of twelve houses of different designs painted in various styles or combinations of shades forwarded upon application to those intending to paint.

National Lead Co., 1 Broadway, New York.

Mention American Gardening when you write.



Lane's Steel Car-Jack
Ask your hardware dealer.
Makers LANE BROS.
Poughkeepsie, N. Y.



Mention American Gardening when you write.

INCUBATORS. Self-regulating. Catalogue free S. S. SINGER, Gardington, O.

Mention American Gardening when you write.

\$5 Hand Bone, Shell, and Corn Mills for Poultrymen. Daisy Bone Cutter. Power Mills. Circular and testimonials free. **WILSON BROS.,** Easton, Pa.

Mention American Gardening when you write.

LIFE PRODUCERS
THE SUCCESSFUL INCUBATOR.
LIFE PRESERVERS
THE SUCCESSFUL BROODERS.
All about them in our 128 page Catalogue. Sent for 6c, worth a 2c. **DES MOINES INCUBATOR CO.,** Box 99 DES MOINES, IA.

Mention American Gardening when you write.

WHEN BUILDING

a new house or barn, or in putting new roofing or siding on those you already have, a little inquiry into the value of **CORRUGATED IRON AND STEEL ROOFING AND SIDING** will repay you handsomely. It is cheaper than boards or shingles, because the first cost is no greater and the lasting qualities are double. No body knows how long it will last if kept properly painted. **A GOOD CORRUGATED STEEL ROOF** at 2 1/2 cts. per Square Foot. For testimonials, circulars and estimates—**THE BERLIN IRON BRIDGE CO., E. BERLIN CONN.**

When Writing Mention Florists' Exchange

HENS AND EGGS

Undoubtedly there are many readers of AMERICAN GARDENING who keep hens who do not take a poultry paper; possibly some take the wrong one. Gardening, fruit culture and poultry keeping dovetail together perfectly, each filling a season comparatively dull in the others.

Realizing the above facts, we have arranged with the publishers of **POULTRY MONTHLY**, to offer that journal in club with **AMERICAN GARDENING**, for the coming subscription season, both journals postpaid, one year, for the **SMALL SUM OF \$1.25.**

POULTRY MONTHLY is now in its nineteenth year; it has always been recognized as the leading publication in its particular field. Sound and reliable in its teachings, and not the mouthpiece of cranks, cliques, or rings. Its correspondents are practical and successful men, in the harness to-day. The publishers of **AMERICAN GARDENING** recommend *Poultry Monthly* as being one of the very best poultry papers issued, and advise all interested to accept this Great Combination Offer.

A WONDERFUL OFFER!

American Gardening (Weekly), \$1.00 } **Both \$1.25**
Poultry Monthly, - - 1.00 } One Year, postpaid.

Present subscribers who are in arrears must pay up in full to become eligible to this offer.
Address **AMERICAN GARDENING, P. O. Box 1697, New York City.**

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Started Cyclamen Bulbs.

The great beauty and the lasting qualities of the Cyclamen push it more strongly into favor with every passing year. Those who are best satisfied with it, however, have bought it as a plant rather than as a dry bulb. It is at just this point of starting the bulb that so many meet failure. Generally, it is better, either to raise it from seed for one's self, or to buy the bulbs from a florist after they are properly started. Many firms now sell them in this condition.

Grevillea Robusta.

Several times in the past these notes have contained references to the Grevillea as grown from seed, not so flattering as those usually seen. It is but fair to say that now, at 18 months old, the house-grown Grevilleas are really taking the place assigned them in the descriptions. The plants have several points to recommend them. They lose no foliage, thus keeping well clothed almost to the pot; even if some of the lower leaves were lost, the drooping habit of the foliage would almost conceal the fact. The plants are symmetrical to an unusual degree. And while the young growth is the unstimulating, dry atmosphere of the living room has not the perfection of glossy beauty attributed to it in the descriptions, it forms, nevertheless, a beautiful plant, and satisfactory above the average. The seedlings have been grown both indoors and outside, doing well under both conditions.

Early Flowering Bulbs.

Since November and December are the months of scarcity of bloom, it behooves the window gardener to make careful selection of bulbs for this season. Most of the various lists contain some sorts that bloom earlier than others. Early potting, of course affects all, and is desirable. The Roman Hyacinths and the Paper White Narcissus are of the earliest. These come in ahead of the general lists. Among Tulips, careful selection must be made. The class known as the Duc von Thols are early, and can be had in carmine, scarlet, white, and yellow. Among others, the beautiful pink Cottage Maid is late. Rose Grisdelin is early. In Hyacinths, La Tour d'Auvergne, Norma, Flevo, and Baron von Thuyll are to be chosen. Harrisii is the early Lily. The Ixias are late blooming bulbs, but Ixia

crateroides is the earliest, and one of the most brilliant.

Favorite Hyacinths.

In the most select lists, those containing sorts which have fine spikes, well set with good bells, are always found La Tour d'Auvergne, La Grandesse, Flevo, Robert Steiger, the three beautiful yellows, Goethe, Heroine, and Ida, Noble par Merite, Czar Peter, Othello (so-called black), and Queen of Hyacinths. This last is described by some as dark red; by others as bright scarlet. All of these will be found in the lists of sorts shown at the foremost exhibitions. What is good enough for the florist is surely good choice for the amateur. But the price must be paid, and these are not cheap.

Cockade and Other Hyacinths.

The various minor classes of Hyacinths seem to be growing in popularity. Distinct among these are the Cockade Hyacinths, which grow from a small spike like a cockade, into a feathery plume several times as large. As this development is slow, one may get several weeks of pleasure from a single pot of bulbs. Another species, known as Belgicus, seems to come between the Grape Hyacinth and the larger sorts. The tiny Grape Hyacinths, set thickly in pots or pans, are finding favor also. It is hardly necessary to mention the Roman Hyacinths, as they have made their own place, and it is a large one. But there is a variation, known as Dutch Roman, or Miniature Hyacinths, which are classed as almost as good as the standard Dutch sorts. All these minor divisions of the great Hyacinth family have cheapness to recommend them, some being as low as 20c. a dozen. Between this and the \$2 a dozen, asked for exhibition Dutch bulbs, is a range wide enough for every purse.

The "Yellow Hyacinths."

Most certainly, a yellow Harrisii, were it in sight, would be a welcome addition to our list of desirable winter blooming bulbs. The Lily that is offered this season under the above name, is known to the general public as Parryi. It has been considered a difficult sort to ship long distances, and has been thought to need a cool, and partly shaded, location outside. Those who undertake to grow it, should keep this requirement in mind.

Distemper in Fowls.

It is customary with some to name every case of discharge or swelling about the head in fowls as roup or its beginnings. Others are pleased to call these beginnings by the wide-reaching name of "distemper." For any or all these ailments (and they are all due, primarily, to catching cold) aconite acts well as a remedy; if there is fever, it is all the more

indicated. Whenever there is canker, or lighter coatings of the mouth and throat, powdered borax, puffed on the surface with an air gun, is an excellent remedy. It can even be blown into the eyes, if they are swollen and mattery. It is not well, however, to trust to any remedy, if the cause for the disease has not been ferreted out, and rendered inoperative.

Post-Mortems on Fowls

Sometimes a post-mortem examination is the only thing that will reveal the cause of sickness and death in the flock; and, though unpleasant, it may be necessary in order to prevent the spread of disease. Whatever the family, there is almost always one person in it who knows how to dissect a fowl. If no one else has the requisite knowledge, the cook can always be appealed to, either for the work itself, or for instruction as to its details. This suggestion is for the benefit of the occasional novice who falls into inextricable difficulty at this point.

Separate Yards.

There are many leaving the city and taking up country life, who gain a large part of their pleasure from fusing with various sorts of fowls. Chickens alone do not satisfy them. They want a peacock, perhaps, some guinea fowls, some ducks, possibly even geese. Judging from what is usually found in the poultry papers, they believe it to be absolutely necessary, if all these are kept, to assign them separate quarters. While this might be the better plan, it is not a necessity if there is a reasonable amount of room. It is customary on farms for poultry of all sorts to run together about the farm yards, and there is seldom any interference between the breeds, especially if they are raised together. It is said, however, that peacocks sometimes attack young chickens and kill them.

Getting a Good Strain.

The variation between different strains of the same breed, is little understood by those who have not had experience. One may buy White Wyandottes, for instance, of a fancier who has inbred his fowls till they have no stamina left. Again, one may buy fowls of the same breed from another whose birds are but fairly good in vigor and in laying qualities. Or, from a third breeder one may get birds, also White Wyandottes, of exceptional thrift and vigor, and having exceptionally good laying powers. In the first two cases he will condemn, in the other, exalt the breed. It is better to buy from stock one knows, if possible.

Defects in Fowls Due to Treatment.

The subject of wry tails and crooked breasts springs up in the path of every beginner in the art of raising fancy poultry in good condition. The cause

NOW READY.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$2.00. 25 per cent. off to subscribers to American Gardening and Florists' Exchange.

This work contains nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work.

On heavy enamelled paper. Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., Nos. 2 to 8 Duane Street, P. O. Box 1697, New York City.

being known, these defects can be mainly avoided. They are sometimes due to inherited weakness. At other times they are the direct result of crowding the young stock, or of allowing the chicks to roost, while the bones are still in the softest cartilaginous state. Let the coops be without corners, the chicks uncrowded, and, later, the first roosts broad and firm, and there will be little difficulty with stock of good constitution.

New Breeds Coming Untrue.

Beginners need to be told that the progeny of any new breed may be expected to throw back in the direction of one or other of the breeds which have formed it, and thus show characteristics which may make them seem impure. The Rose-combed Orpington, for instance, having Langshan blood in its ancestry, still shows feathered legs, and single combs among its progeny. Even the Silver Wyandotte, for all the many years it has been before the public, sometimes shows both these faults, as well as others. Different strains show much variation in this respect, some throwing many "off" birds, others coming nearly true—surprisingly so, indeed.

The Narcissus Family.

Is there one other to which the window worker is so wholly indebted? In it is found the Paper White Narcissus, a delightful friend in the need of dull November. In it the great yellow Daffodil, so popular for personal adornment. In it, too, are the incomparable chalice-flowered beauties. The Chinese Sacred Lily needs but to be mentioned to make the family seem indispensable, while the lovers of the sweet Jonquils number all who ever grew them. That gem among pot bulbs, the Bulbocodium, or Hoop-petticoat Narcissus, surely does no discredit, even to so useful and handsome a family, while many other members are less popular simply because they are less well known. Cheapness, too, is a pleasing attribute of most of the family.

MYRA V. NORRIS.

Autumn Flowering Shrubs.

NOTES FROM THE BOTANIC GARDENS OF SMITH COLLEGE, NORTHAMPTON, MASS.

Desmodium penduliflorum is one of the very best autumn flowering shrubs we have. It is of dwarf bushy habit, being not more than four or five feet in height. The stems are well clothed with trifoliate leaves, the lower leaflets being some three inches long, by one and one-half inches wide, while the upper leaflets are small, not more than an inch in length. The rosy purple, pea-shaped flowers are produced in the greatest profusion on long, leafy drooping panicles, and are very showy at this date (September 26). The variety *alba* is also good, but with us it is not as free flowering as the *penduliflorum*. Both die back to the ground each winter, but seem to come up more vigorously every spring. It is a most useful subject either in masses or in the front line of the shrubbery border.

We have a mass of the Groundsel tree (*Baccharis halimifolia*) in flower just now on a grassy hillside, and it is very effective. It is called the Groundsel tree because the flowers are like those of the common Groundsel consisting chiefly of a white pappus. It also belongs to the same family (compositæ). It is of an upright, bushy habit and grows about five feet in height with us. The leaves are small, obovate in outline, with coarsely-toothed edges. The flowers are borne in large terminal panicles and flowering at this season it is worth a place in every collection.

Comanthospace snibanceolata is a subshrub belonging to the Mint family, and a native of Japan. The leaves are opposite, lanceolate, four inches long by one and a half wide. The stems are much branched towards the summit and about three feet in height. The flowers are yellow, and are produced in spikes three to six inches in length on the ends of all the branches. I believe it to be perfectly hardy, but as we only received it last year, we gave it a slight protection last winter until we could prove its hardiness. For the front line of a shrubbery

border, or planted in a mass, we consider this a useful shrub.

Berchemia volubilis, the common Supple Jack, is attractive just now with its terminal panicles of cream-colored flowers. It is a good subject for climbing over stone walls or fences or covering up unsightly places.

On a hillside where we have a number of ericaceous plants grouped, a mass of the Scotch Heath (*Calluna vulgaris*) has been very attractive for some time past; the bright green foliage and tiny bell-shaped flowers are very pretty. *Erica vagans* is also a charming plant for grouping; it is of much stiffer habit than the Scotch Heath, with pink flowers rather longer than those of the Scotch Heath. We protect these two Heaths in winter with a few leaves among them and a few Hemlock or Pine branches over them. For propagating we lift and pot two or three plants of each, cut them back and after they have become established in their pots place them in a moderately warm greenhouse. Fresh young growths soon appear which as soon as the tips become just "firm," are taken as cuttings and inserted thickly in shallow pans filled with white sand and pressed firmly. The pans are plunged in the propagating bed, and a bell glass placed over them. The moisture which collects in the bell glass must be wiped out once or twice a day. As soon as the cuttings begin to make roots, admit air by tilting the bell glass, and as soon as rooted remove altogether. The cuttings generally take about three weeks to root. We propagate all our Heaths in this manner, and although there may be other admirable methods of propagating Heaths we can generally root 99 per cent. in the way I have stated.

Although this garden has only been established little more than four years, we have now growing over 4,000 shrubs in about 375 species. They are grouped in families in natural sequence around the College buildings and in other parts of the campus. In addition, we have planted some 200 different species of trees and conifers, and about 1,200 different species of hardy flowers. Seven greenhouses have been built, including a large Palm house, and are now well filled with a large variety of plants both of botanical and ornamental interest.

EDWARD J. CANNING.

FREE ILLUSTRATED CATALOGUE....
Ornamental Trees, Evergreens and Plants. Prices never so low. Japan Ivy, 3 yrs., strong, \$2.00 per 100.
MONTROSE NURSERIES, Montrose, N. Y.
Mention American Gardening when you write.

JAPAN PLUMS Large stock of best varieties at lowest rates. Full assortment of Trees and Plants. Get our prices before ordering elsewhere. Catalogue free. Established 1869. 150 acres.
THE GEO. A. SWEET NURSERY CO.,
Box 1848, Danville, New York.
Mention American Gardening when you write.

Grape Vines Small Fruits
Descriptive list free. Old and New Varieties.
Extra fine stock of **CURRENTS**, including the new and unrivalled **WILDER**. Lowest rates. Quality extra. Warranted true. **T. S. HUBBARD CO.,** Fredonia, N. Y.
Mention American Gardening when you write.

WE grow TREES, PLANTS
and vines; all kinds; 100,000 FRUIT TREES. Millions of fruit and vegetable plants; evergreens, shrubs and shade trees. Stock first-class. Prices low. Our 1897 catalogue free. **T. J. DWYER,** Orange Co. Nurseries, Cornwall, N. Y.
Mention American Gardening when you write

1840 OLD COLONY NURSERIES. 1897
Hardy Shrubs, Trees, Vines, Evergreens and Perennials.
A large and fine stock of well-rooted plants grown in a sandy loam. Good plants, best sizes for planting; very cheap.
Priced Catalogue free on application.
T. R. WATSON, Plymouth, Mass.

PEACH TREES, \$3 PER 100.

All kinds of Trees and Plants CHEAP. Cat. FREE. **RELANCE NURSERY CO.,** Box 1410, Geneva, N. Y.
Mention American Gardening when you write.

GROW BISMARCKS IN POTS

Wonderful Midget Bismarcks bear beautiful large Apples in Pots or Garden when two years old. \$1.00 each. **CRISMON RAMBLER ROSES.** Magnificent Climber for Porch, &c., each, prepaid. Send for beautiful colored Lithographs giving descriptions. Address,

Manhattan Nursery Co.,
47 U Day Street, New York.
Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write.

ESSEX
Flower Food
TEN CENTS
Feeds ten plants ten months.
Essex Flower food imparts vigor to house plants. Flow they thrive in winter is no longer the florist's secret.
If your dealer does not have the ten cent package, it will be mailed to you for eight ac. stamps by the **RUSSIA CEMENT CO.,** Gloucester, Mass.

Mention American Gardening when you write.

Nitrate of Soda

is the best and cheapest form in which you can buy nitrogen (or ammonia). It is also the most soluble and available form in which nitrogen can be applied as food for plants. You can mix it yourself with other materials in just the correct proportion for the particular crop to which you wish to apply it. You cannot raise good crops without nitrogen in some form. Why not use the best—Nitrate?

Free A 40-page book, "Food for Plants." Tells all about mixing and using fertilizers. Please ask for it.

S. M. HARRIS, MORETON FARM (P. O.) N. Y.
Mention American Gardening when you write.

WHOLESALE MARKETS.

New York.

There is a general improvement in the cut flower trade. Chrysanthemums are becoming plentiful, although growers claim that the season is ten days late. The varieties now on the market with the order of arrival are: Mme. Gasteller, Lady Fitzwygram, Marquis de Montmort, Mme. F. Bergmann, Marion Henderson, Glory of the Pacific, Merry Monarch, Yellow Monarch, and John E. Lager.

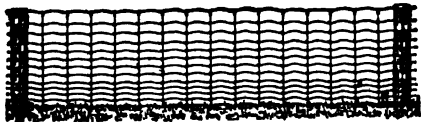
The fruit and vegetable market is crowded with stock, and demand and values are nominal. The season is not sufficiently started to yield any results for fancy fruits, etc. The only things in the fancy trade that is making any particular prices worth noting are the new chestnuts, Paragon, Numbo, and others. These are being eagerly sought after, and \$10 to \$12 per bushel is the regular price. Retailers with fancy trade, since seeing Mr. Parry's exhibit at the American Institute, are still more eager for them, and now they are inquiring where they can obtain them in the burr.

Mushrooms are abundant and realize 60 to 75c. per pound.

Apples are being offered at high figures, but the demand is not brisk. The warm weather also interferes with the trade.

Apples—Jonathan, western, per barrel, \$4@4.50; Missouri Pippin, western, per barrel, \$3.50@4; Albemarle Pippin, Virginia, per barrel, \$4@4.50; Wine Sap, Virginia, per barrel, \$3.50@4; Johnsons' Winter, Virginia, per barrel, \$3.50@4.50; Fall Pippin, hand-picked, per d.-h. barrel, \$2@2.50; Twenty-Ounce, hand-picked, per d.-h. barrel, \$2@2.50; King, hand-picked, per d.-h. barrel, \$2.25@3; Ben Davis, western, per barrel, \$2.50@3; Jersey, per barrel, \$2@2.50; Greening, hand-picked, per d.-h. barrel, \$1.50@2; Baldwin, hand-picked, per d.-h. barrel, \$1.50@2; mixed varieties, fair to good, per barrel, \$1.75@2; poor to fair, per barrel, \$1.25@1.50; Jersey, winter, open heads, \$1@1.25.

Peaches—Jersey, extra, selected, per basket, \$1@1.25; choice per basket, 80@90c.; fair to good, per basket, 60@75c.; common, per basket, 40@50c.



The Lion and the Lamb.

It matters little what kind of animals you confine in adjacent lots, provided the division fence is strictly "stock proof." Here surely, "the best is the cheapest."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

POT YOUR PLANTS IN

JADOO FIBRE

WATER YOUR PLANTS WITH

JADOO LIQUID

And they will thrive during the Winter.

Particulars and Prices on Application to

THE AMERICAN JADOO CO.,

813 Fairmount Ave.,

PHILADELPHIA, PA.

Mention American Gardening when you write.

Pears—Bartlett, large, clean, per barrel, \$2.50@3; poor to fair, per barrel, 50c.@2; per bushel box, 50c.@1.50; Seckle, per barrel, \$2.50@5; per bushel box, \$1.25@2.25; Beurre Bosc, per barrel, \$1.50@3; Sheldon, per barrel \$1.50@2.25; Kieffer, Jersey, per barrel, \$1.75@2; Beurre d'Anjou, per barrel, \$1.25@1.75; other late sorts, fair to good, per barrel, \$1@1.50.

Quinces—Apple, good to prime, per barrel, \$2@3; poor to fair, per barrel, \$1.25@1.75.

Grapes—Delaware, Keuka, per small basket, 13@15c.; other state, per small basket, 11@13c.; Niagara, western N. Y., per small basket, 9@11c.; per 20-pound basket, 35c.; Catawba, western N. Y., per small basket, 10@11c.; Concord, up-river, per case, 40c.; western N. Y., per large basket, 10@11c.; western N. Y., per small basket 6@6½c.; black varieties, up-river, per small basket, 6c.

Wine grapes—White kinds, in trays, per pound, 1¼@2c.; Delaware, in trays, per pound, 2@2½c.; black kinds, in trays, per pound, 1¼@1½c.

Plums—French prune, per 8@10-pound basket, 35@40c.; German prune, 8@10-pound basket, 20@30c.; Gage and Keine Claude, 8@10-pound basket, 15@20c.; Damson, per 8@10c. pound basket, 10@15c.; up-river, per crate, 30@35c.

Nuts—Chestnuts, northern, per bushel, 60 pounds, \$5.50@6.50; southern, per bushel, 60 pounds, \$5@6.50; Hickory nuts, per bushel, 50 pounds, \$1.50.

Cauliflowers—Fancy, per barrel, \$1.75@2.25; poor to fair, per barrel, \$1@1.50.

Celery—Choice to fancy, large, per dozen, 25@35c.; fair to prime, per dozen, 15@20c.; small and poor, per dozen, 10@12c.

Corn—Per 100, 75c.@1.25.

Cabbages—Jersey and Long Island, per 100, \$4@5; state, per 100, \$3.50@4.50.

Cucumbers—Shelter Island, per barrel, \$2@4; selected, per 100, 75c.@1; Florida, per crate, 40@75c.

Egg plants—Jersey, per barrel, 75c.@1.25; Jersey, per one-half-barrel box, 75c.

Green peas—Virginia, per basket, 75c.@1.25.

Lima beans—Jersey, Potato, per bag, \$1@1.50; Jersey, flat, per bag, 50@75c.

Onions—Orange Co., red, prime, per bag, \$1.50@2; Orange Co., yellow, per bag, \$1.50; Orange Co., white, per bag, \$1.50@3; Orange Co., inferior, per bag, \$1@1.25; state and West, yellow, per barrel, \$1@1.75; Shelter Island, yellow, per barrel, \$1.75@2; eastern, white, per barrel, \$2@3.50; eastern, red, per barrel, \$2.25; eastern, yellow, per barrel, \$2@2.25; small, white, per barrel, \$3@4.

Peppers—Jersey, red, per barrel, \$1@1.50; Jersey, green, per barrel, 75c.@1.

String beans—Virginia, per basket, 25@30c.

Squash—Hubbard, per barrel, 75c.@1; Marrow, per barrel, 75c.

Tomatoes—Per box 75c.@1.

Turnips—Russia Canada per barrel 75@85c.

Potatoes—Long Island, in bulk, per barrel, \$2.25; Jersey, per bag, bag included, \$2@2.12; choice round, in bulk, per barrel, \$2@2.12; fair to good, in bulk, per barrel, \$1.50@1.75; state, in bulk, per 180 pounds, \$1.87@2.12.

Boston.

Seckle pears take a range of \$1.50@4 per bushel; readers must understand that it takes a handsome thing to bring \$4, and that there are not many of this kind. Choice Sheldons \$3 a bushel, while ordinary sells 75c.@1.50; Buerré Bosc, fancy, \$3; other grades downward according to their quality. Comice \$2; this pear is very little known in this city; it is called a nice pear, having a very little tart flavor, which pleases a good many tastes. Bartletts \$1.50@2.25, but occasionally a fancy box \$3; Kieffer pears limited demand, when customers can be found bring \$3@3.50 per barrel.

Lettuce is dull; in other words, there is plenty stock offering with very small head, while large heads are scarce, wanted, and in good demand.

Very few native peaches coming in; bring 50c.@1.25 per basket; the arrivals as well as the demand are of a limited nature.

Hothouse tomatoes higher and are being sold 10@15c. per pound.

Apples easier for all kinds of cooking stock. Ben Davis \$2.25@2.50 per barrel; Greenings, Baldwins, and Spies, \$2.25@2.50; high-colored Snobs, \$3@3.25; and the same price can be obtained for fancy Jonathans. A party in Maine sent up five barrels of triple extra Gravensteins which sold \$6 a barrel; it almost takes one's breath away in mentioning the fact.

Hothouse grapes fairly active; with a good demand at prices ranging 25@75c. a pound; partly on quality and partly on the customer.

In the pony baskets Delawares 11c., Niagaras 10c., Concord 7@8c.

Onions are a little easier, \$2 a barrel. Celery unchanged in prices as well as in demand, 75c.@1.25 a dozen bunches.

Horticultural beans 50@75c. a bushel; Slevas and Limas, \$1@1.50; market very well supplied with these goods. Norfolk shipments of green string beans have been quite plenty the past week, but found no sale.

Cauliflower firmer, a range of price 10@18c. per head. Cabbage so plenty that 3@4c. is best range in price we can name.

Hothouse cucumbers not moving quite as freely as the ought, \$3@5 per 100 the ruling price. We might say right here that the trade the last five days has been what is termed in this city mighty dull. One of those times when it seems as if people ate nothing.

Cranberries are weaker, \$5@5.50 a barrel; crates \$1.50@1.75; peppers seem to be waiting for colder weather, so that they may warm up the partakers. No change in their selling prices. Nor can anything new be said regarding egg plants.

Carrots selling 50@75c. a bushel or \$1.50@2 a barrel. Some of the finest purple top turnips have come in and sold \$1.25 a barrel. They were ahead of any stock we have seen for several years. Beets are not in very large demand at 35@50c. a bushel; parsnips 75c. a bushel; not a great supply here, neither any large amount wanted; some corn offered 10@12c. a dozen.

Squash, while not in so healthy demand, can be quoted about the same, \$1@1.25 per barrel for Marrow, Hubbard, Turbans, or Bay State, \$1.50. Several cars of Minnesota hard-shelled Hubbard coming in at present time and brings \$25 per ton. Forty cents will buy a dozen bunches of mint. Parsley still continues 50c. a bushel.

Potatoes are lower, 65@70c. for best Hebrons; in small lots the jobbing price at railroad yards being 75c. for anything. Quite a good deal of the stock coming here from Minnesota has false hearts; therefore hard to place in New England. Our people know what a good potato is and will have it or none.

Sweet potatoes broke down a little; Eastern Shore stock bringing \$1.87½, while the Norfolk County growings being in large flour barrels bring \$2.

Quinces in liberal supply, 35c. in the peck baskets; or \$3.50@4 if in barrels.

A few plums still offered, but customers are scarce. Cantaloupes and watermelons are so little called for that it is unwise to mention them, except to let readers know they are still among us.

Florida continues to give us a few pineapples which sell anywhere from 8@10c. a piece.

Philadelphia.

The general tone of the market has been much slower than last week. The supply of nearly all kinds of stock has been light, and buyers have been much more particular.

Receipts of apples have been moderate, and the demand for choice fruit has been good. Prices have been: Jonathan, per barrel, choice, hand-picked, \$3.25@3.50; Gravenstein, hand-picked, per barrel, \$3@3.25; Black Detroit, and Twenty-Ounce, choice, per barrel, \$2.75@3; mixed varieties, choice, per barrel, \$2.25@2.75; mixed varieties, fair, per barrel, \$1.75@2.

Pears—Bartlett, per barrel, \$3@4; per bushel keg, \$1@1.75; Seckle, per barrel, \$3@4 per one-half barrel, \$1.50@2; Louise Bonne, per barrel, \$1.50@2; per

half-barrel, 75c.@\$1; Duchess, per barrel, \$1.75@2.

Peaches are about done, and receipts have been small. Mountain fruit, per five-eighths basket, choice, \$1@1.50; fair to good, per five-eighths basket, 75@85c.; per 20-pound basket, 75@90c.; fair to good, 50@65c.

Grapes—The supply has fallen off considerably, and demand has been light; N. Y. Concord, per 5-pound basket 6@7c.; per 10-pound basket, 10@12c.; N. Y. Delaware, per 10-pound basket, 12@14c.; N. Y. Niagara, per 5-pound basket, 8@8c.

Cranberries—Cape Cod, per barrel, choice, \$4@5.50.

Quinces—No. 1, per barrel, \$2.50@3; No. 2, \$1.50@2.

Plums—Prunes, per 10-pound basket, 20@30c.; Gage and Reine Claude, per 10-pound basket, 18@25c.; Damsons, per 10-pound basket, 14@18c.

Calliflowers—Choice, per barrel, \$1.50 @2; fair, per barrel, \$1@1.25.

Celery—Choice, per dozen, 30@40c.; fair, per dozen, 15@25c. Corn, per 100, 60@90c.

Cabbages—Jersey, per 100, \$3.50@5.

Lima beans—Per 100 pounds, \$2@2.40.

Peppers—Per barrel, red, 75c.@\$1.25; green, per barrel, 50@65c.

Squash—Hubbard, per barrel, 70c.@\$1; Marrow, per barrel, 65@80c.

Green peas—Per bushel box, 65@75c.

Onions—Jersey, white, per barrel, \$2 @2.25; yellow, per barrel, \$1.50@2; per bushel, 60@75c.

Potatoes—Receipts have been liberal, the market being somewhat easier, nearly stock shows poor keeping qualities, which will, no doubt, cause an advance. Sales have been slow, apparently only to supply immediate wants. Prices of choice stock per bushel, 70@75c.; fair to good, per bushel, 60@65c.; Jersey sweets, per five-eighths basket, 80@40c.

SOME BARGAINS IN CLUBS

FOR

Men, Women and the Young.

Ohio Farmer, a giant among the agricultural weeklies, and American Gardening, The two, one year, For \$1.60.

Farm, Field and Fireside, a 32 to 40 page weekly Farm and Family Journal, the best of its class, and American Gardening, The two, one year, For \$1.50.

Country Gentleman. This weekly amply covers the field its title indicates. Every country gentleman should subscribe to it. And American Gardening. The two, one year, For \$2.75.

Farm Journal, the "little giant" of monthly journalism in matters agricultural, and American Gardening, The two, one year, For \$1.25.

Farm Poultry (semi-monthly). and American Gardening, The two, one year, For \$1.50.

Poultry Monthly and American Gardening, The two, one year, For \$1.25.

Above is your choice of two most excellent poultry magazines. And nearly every one of our readers keeps poultry. Why not subscribe to both? The two poultry papers and American Gardening, one year, For \$2.25.

Meehan's Monthly, a horticultural stand-by, and American Gardening, The two, one year, For \$2.85.

Harper's Magazine, as good as ever; none better among the literary monthlies, and American Gardening, The two, one year, For \$4.25.

Ladies' Home Journal, an unrivaled monthly for women, the standard in its class, and American Gardening, The two, one year, For \$1.90.

Youth's Companion, of Boston. At the head of all journals for both boys and girls, and read by the elders, too. New Subscribers Only and American Gardening, The two, one year, For \$2.85.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.			General—Con.		
	A.	P.		A.	B.
American Agriculturist.....	\$1 00	\$1 85	Donahoe's Magazine.....	\$2 00	\$2 60
Breeders' Gazette.....	2 00	2 40	Eclectic Magazine.....	5 00	5 25
Country Gentleman.....	2 00	2 75	Electrical Review.....	3 00	3 20
Farmers' Advocate (Canada)...	1 00	1 75	Engineering Magazine.....	3 00	3 50
Farmers' Magazine.....	1 00	1 75	Forest and Stream (new only)...	4 00	4 20
Farmers' Review.....	1 00	1 90	Forum, The.....	3 00	3 60
Farm, Field and Fireside.....	1 00	1 50	Frank Harrison's Magazine.....	50	1 40
Farm and Fireside.....	50	1 40	Frank Leslie's Popular Monthly	3 00	3 50
Farm and Home.....	50	1 40	Godey's Magazine.....	1 00	1 90
Farm Journal.....	50	1 25	Golden Days.....	3 00	3 35
Farm News.....	50	1 20	Good Housekeeping.....	2 00	2 70
Gleanings in Bee Culture.....	1 00	1 35	Harper's Bazaar.....	4 00	4 25
Home and Farm.....	50	1 45	Harper's Magazine.....	4 00	4 25
Indiana Farmer.....	1 00	1 35	Harper's Weekly.....	4 00	4 25
Mass. Ploughman, new.....	2 00	2 60	Harper's Round Table.....	2 00	2 50
Renewals.....	2 00	2 90	Home Queen.....	50	1 35
Michigan Farmer.....	1 00	1 60	Illustrated American.....	4 00	4 30
National Stockman and Farmer	1 00	1 35	Independent.....	3 00	3 60
Nebraska Farmer.....	1 25	1 85	Jenness Miller's Illus. Mag.....	1 00	1 75
New England Farmer.....	2 00	2 50	Judge.....	5 00	5 20
Ohio Farmer.....	1 00	1 60	Judge's Library.....	1 00	1 35
Orange Judd Farmer.....	1 00	1 35	Ladies' Home Journal, The.....	1 00	1 90
Pacific Rural Press.....	2 40	3 00	Ladies' Home Companion.....	50	1 45
Practical Dairyman.....	50	1 35	Ladies' World.....	35	1 30
Practical Farmer.....	1 00	1 35	Leslie's Illustrated.....	4 00	4 40
Prairie Farmer.....	1 00	1 35	Life.....	5 00	5 40
Rural New Yorker.....	1 00	1 30	Lippincott's.....	3 00	3 25
Southern Cultivator.....	1 00	1 35	Macmillan's.....	3 00	3 60
Southern Farm.....	1 00	1 35	McClure's Magazine.....	1 00	1 90
Southern Florist and Gardener	1 00	1 75	Munsey's Magazine.....	1 00	1 90
Strawberry Cultivist.....	50	1 35	Nation, The.....	3 00	3 80
Strawberry Specialist, new....	50	1 00	New England Magazine.....	3 00	3 50
Renewals.....	50	1 25	New York Ledger.....	2 00	2 50
Texas Farmer.....	1 00	1 75	" Tribune (Weekly).....	1 00	1 90
Texas Farm and Ranch.....	1 00	1 35	" World (Tri-Weekly).....	1 00	1 75
Horticultural, etc.			North American Review, The...	5 00	5 50
Canadian Horticulturist.....	1 00	1 90	Notes and Queries.....	5 00	5 50
Garden and Forest.....	4 00	4 25	Observer, new only.....	3 00	3 25
Gardening (Chicago).....	2 00	2 50	Renewal.....	3 00	4 00
Meehan's Monthly.....	2 00	2 35	Outing.....	3 00	3 35
Vicks.....	50	1 35	Peterson's Magazine.....	1 00	1 35
Poultry.			Philadelphia Press (Weekly)...	1 00	1 35
American Poultry Advocate...	25	1 15	Phrenological Journal.....	1 50	2 25
Fancier's Review.....	50	1 35	Popular Science Mont'ly.....	5 00	5 65
Farm Poultry.....	1 00	1 50	Popular Science News.....	1 00	2 50
Ohio Poultry Journal.....	65	1 50	Puck.....	5 00	5 10
Poultry Herald.....	50	1 40	Puck's Library.....	1 20	1 95
Poultry Keeper.....	50	1 40	Paritan.....	1 00	1 90
Poultry Monthly.....	1 00	1 25	Review of Reviews.....	2 50	3 25
Reliable Poultry Journal.....	50	1 40	Scientific American.....	3 00	3 60
General.			" Supplement.....	5 00	5 25
Advance (Cong'l) new.....	2 00	2 60	" with.....	7 00	7 25
renewals.....	2 00	2 90	" Builders' edition.....	2 50	3 10
American Field, new.....	4 00	4 25	" Inc. B'l'ds' edit.....	5 00	5 75
renewals.....	4 00	4 50	" All 3 editions.....	9 00	9 25
American Kitchen Magazine..	1 00	1 75	Scribner's.....	3 00	3 60
American Machinist.....	3 00	3 20	St. Nicholas.....	3 00	3 60
Aquarium.....	1 00	1 75	Sunday School Times.....	1 50	2 10
Arena.....	3 00	3 60	Texas Siftings.....	4 00	4 25
Art Amateur.....	4 00	4 35	The Etude, new only.....	1 50	2 15
Art Interchange (with plates)..	4 00	4 35	renewals.....	1 50	2 35
Atlantic Monthly.....	4 00	4 30	The Outlook.....	3 00	3 35
Ave Maria.....	2 00	2 70	Toledo Blade.....	1 00	1 35
Babyhood.....	1 00	1 90	Turf, Field and Farm, new....	4 00	4 25
Baptist Missionary Magazine...	1 00	1 90	Renewal.....	4 00	4 60
Carpentry and Building.....	1 00	1 85	Womankind.....	50	1 20
Century.....	4 00	4 60	Young Ladies' Journal.....	4 00	4 60
Chicago Herald (Weekly).....	1 50	2 35	Youth's Companion, new only...	1 75	2 35
Chicago Inter-Ocean.....	1 00	1 30	Renewals.....	1 75	2 75
Chicago Weekly Times.....	50	1 40	Foreign.		
Christian Herald.....	1 50	2 15	Farm and Home.....	2 25	3 25
Christian Register.....	3 00	3 85	Field.....	10 50	11 00
Churchman.....	3 50	4 10	Garden.....	4 50	5 25
Colman's Rural World.....	1 00	1 35	Garden Work.....	2 50	3 25
Cosmopolitan.....	1 00	1 90	Gardener's Chronicle.....	4 50	5 25
Delaware (Butterick's).....	1 00	1 90	Gardener's Magazine.....	4 50	5 25
Demorest's Monthly Magazine.	2 00	2 60	Gardening, Illustrated.....	2 25	3 00
Detroit Free Press (Weekly)...	1 00	1 90	Gardening World.....	2 50	3 25
Domestic Monthly.....	1 50	2 15	Journal of Botany.....	4 75	5 25
			Journal of Horticulture.....	4 00	4 35
			Kew Gardens Bulletin.....	1 50	2 25
			Revue Horticole.....	5 50	6 10

Henry Strawberry Plant Premiums

Will be shipped to all who desire them this season until ground freezes.

Owing to the wonderful run on this unequalled strawberry we are preparing 100,000 Henry plants for Spring delivery, and in this connection we desire our readers to remember

Two Facts

- 1—The Henry Strawberry can be obtained solely through a subscription to AMERICAN GARDENING; as the publishers will not sell plants under any consideration;
- 2—Neither will Mr. Jerolaman.

Who is Entitled to Plants

New and Renewal Subscribers.—Five plants of the Henry will be mailed, postpaid, as a premium to every Renewal or New Subscriber sending us \$1.00 for a year's subscription. When remitting be sure to state if you want this premium.

To Agents and Workers.—For every \$1.00 received from agents and others for New Subscriptions, we mail, postpaid, Ten Henry plants, Five to the New Subscriber and Five to the Agent.

Special to Club Raisers!

Clubs of Ten.—To every agent sending us in a club of Ten New Names and \$10.00, we will forward in payment therefor One Hundred (100) Henry Strawberry Plants, by express, as well as send Five plants, postpaid, to each person in the club.

Mr. Jerolaman's series of articles has been put in pamphlet form; and agents will be supplied with copies on application. Best campaign matter out.

Address Your Letters,

AMERICAN GARDENING,
P. O. Box 1697, NEW YORK.

We PAY FREIGHT Box and Pack free. PAPER line all boxes. REPLACE free. Give BUYER'S choice; low WHOLESALE prices. orders large or small; 10 trees at 100 rate, 300 at 1000 rate. Guarantee SAFE ARRIVAL, trees TRUE to name, FREE from SAN JOSE scale, and of BEST quality. Guarantee SATISFACTION.—WRITE for lists, photos and FULL particulars of foregoing Stark 12 CHALLENGE Points. STARK BROS., Louisiana, Mo., Stark, Mo., Belpert, Mo., Hamlet, N.Y.

Mention American Gardening when you write

CAMPBELL'S EARLY Seeds Need Not Be Swallowed.

"First of all Grapes," says *Rural N.Y. Yorker*. Scaled 96 points in possible 100. "Will ship round the world." Early or Late. Insist on our Seals and get what you buy. Largest stock of other Grape Vines, Small Fruits. Elegant Catalogue FREE. GEORGE S. JOSSELYN, FREDONIA, NEW YORK.

Mention American Gardening when you write

A BARGAIN

We have made arrangements to furnish THE OHIO FARMER of Cleveland, O., and AMERICAN GARDENING, both papers, one year, making a total of 104 great papers, for only \$1.60.

ONLY \$1.60

THE OHIO FARMER

is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the LEADER of the Agricultural Press of America. A 20-page, 80-column paper EVERY WEEK in the year; employs THE VERY BEST WRITERS that money can produce; a strong, fearless defender of the agricultural interest of this country, and CLEAR in both reading and advertising columns. IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE. Present subscribers can order this combination at once and have their present term of subscription to AMERICAN GARDENING extended for one year. New subscribers to THE OHIO FARMER will receive the rest of this year free. Address all orders,

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

LORD & BURNHAM CO.,

Architects and Builders Steam and Hot Water Heating Engineers.

(Established 1856.)

Plans and specifications for Greenhouses, Conservatories, and all kinds of Horticultural Structures. Erected complete with our patent iron construction; or for material only, ready for erection.



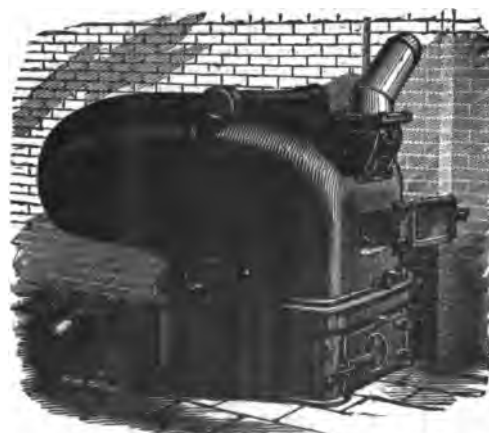
Largest Builders of Greenhouse Structures. Plans and construction embrace latest improvements. Six highest awards at the World's Fair. Send four cents postage to New York office for latest catalogue.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N.Y.

Mention American Gardening when you write.

GREENHOUSE HEATING AND VENTILATING, Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

FIVE PATTERNS OF BOILERS
NINETEEN SIZES

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron
Frame Construction erected complete
or the Structural Iron Work ship
ped ready for erection.

Iron Frame Benches with the
"Perfect Drainage Bench Tile"
or Slate Tops

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

L. XVIII. No. 148.
SECOND SERIES VOL. LI.

NEW YORK, OCTOBER 23 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE

American Institute Fair	Lawn.....	727	Manure Question.....	730	Roses Under Glass.....	728
Fourth Notice.....	E. N.Y. Horticulturals	731	Market Reports.....	738	Societies' Meetings.....	734
Gonias and Gloxinias	Exhibitions, Coming...	735	Melons, Rocky Ford...	733	Strawberry Culture in	
rial Grounds, Using	Farm Wagon, A.....	739	Mushroom Spawn.....	727	October.....	731
Id.....	Fertilizer Problem, A...	728	Peaches For L. I.....	727	Strawberries Increas-	
massia Cusickii.....	Fraud on Farmers....	730	Pear, Lady Clapp.....	726	ing.....	727
nes, Laying Down.....	Fruit Garden, The....	726	Plants Injured by Gas..	731	Vegetable Garden.....	729
lery Leaf Blight.....	Home Plot.....	726	Poultry Notes.....	736	Window Gardening.....	736
metry to Park.....	Hydrocyanic Acid for	736	Private Gardeners.....	734	Wintering Stock.....	727
matia Dying.....	Fumigating.....	728	Raspberry, The.....	726	Woolen Waste as Ferti-	
ive way for Village	Legal Notes.....	731	Roses in Winter.....	727	lizer.....	727

Illustrations.

Berry Canes, Laying	
Down.....	727
Capacity of Houses,	
Calculating.....	729
Celery Leaf Blight.	
Treating.....	725
Hydrocyanic Acid,	
Fumigating by.....	729
Plan, A Convenient.....	727

Treating Celery for Leaf Blight Disease.

The early part of July of this year, we set out about 400 lery plants in a rich, mellow bed of earth which had been previously used for Violets. The plants started off well, making fine growth, which remained healthy until the latter part July. At this time the entire bed was attacked by celery light (*Cercospora apii*), and by August 14 every leaf, except a very youngest, was diseased. At this time we decided to spraying with Bordeaux mixture and ammoniacal solution copper carbonate with a view of checking the spread of the disease. All badly affected leaves were first cut away, and the d, which contained 47 rows one foot apart, with 8 plants the row, was divided into three plats. Plat No. 1 contained

smaller and in most cases drawn and curled and of a much lighter color than those receiving Bordeaux mixture, besides showing considerable blight. The unsprayed plants blighted badly from the time they were cleaned up, when the spraying of the other plants commenced, until the close of the experiment.

The results obtained in this experiment are fairly shown in the accompanying photograph, made October 9, 1897. The first two plants were sprayed with Bordeaux mixture, the following two with ammoniacal solution, and the remaining two were left unsprayed. Before photographing, all the worst diseased leaves were removed, leaving the plants sprayed with Bordeaux mixture entirely free from blight, those unsprayed



I.—Treated with Bordeaux.

II.—Treated with Ammoniacal solution of Copper Carbonate.

III.—Untreated.

FIG. 203.—THE TREATMENT OF CELERY FOR LEAF BLIGHT DISEASE.

rows and 160 plants, which were to be sprayed once a week with Bordeaux mixture, the 50-gallon formula, i. e., 6 pounds copper sulphate, 4 pounds of lime, and 50 gallons of water. at No. 2, in the center of the bed, contained 7 rows and 56 plants, which were left untreated for control. Plat No. 3 retained 20 rows and 160 plants, which were to be sprayed with ammoniacal solution of copper carbonate, the 45-gallon formula. The sprayings were made once a week until the plants received five applications, water being regularly applied in the meantime by syringing overhead. The plants sprayed with Bordeaux mixture took on a deeper green than the others, and also made a much more vigorous growth than either the unsprayed plants or those sprayed with ammoniacal solution, and were, moreover, almost entirely free from blight. The plants sprayed with the ammoniacal solution seemed to be checked in growth, the foliage being

with ammoniacal solution with a few spotted leaflets here and there, and the unsprayed with infections on nearly every leaf except the very youngest. After being photographed the plants were all cut off at the surface of the ground and weighed, with the following results:

No. I, treated with Bordeaux mixture, weighed 29¾ ounces. No. II, treated with ammoniacal solution, weighed 16 ounces. No. III, unsprayed, 9¾ ounces.

As will be seen from these weights, as well as in the photograph, there is a marked difference in favor of the Bordeaux sprayed plants.

This experiment was a very severe test of the value of the fungicide, as prior to the treatment the disease had gained a firm foothold. The work has pretty thoroughly convinced the writer that the blight may be kept well in check by the use of Bordeaux mixture properly applied. P. H. DORSETT.

Begonias and Gloxinias.

[Paper read by A. A. McDonald, before the Lenox, (Mass.) Horticultural Society, and officially communicated to AMERICAN GARDENING.]

Begonias and Gloxinias are two of the most interesting and useful greenhouse plants in cultivation. For the purposes of these remarks I will divide the Begonias into three classes, namely, Rex, Flowering, and Tuberous, dealing with each in its turn.

Rex Begonias.

In this section there have been marvelous improvements during the last few years, and among the best are the following: Mme. Siebold, President Carnot, Charles Laurent, Mrs. A. G. Sheppard, Robert George, Louis Closson, Louise Erdody, Kaiser Wilhelm, Baron Prevost, Perle Hunnefeldt, and Marquis de Paralta.

To have them at their best the plants should be grown in pans, when they are invaluable for conservatory and greenhouse decoration. They can also be used with splendid effect in covering walls or other unsightly places in the greenhouse.

Cuttings made during the latter part of August make the best plants, although good plants can be had the same year by propagating early in February. I have found that it is better to leave the cuttings in the sand till they show signs of growth at the top.

In making cuttings choose leaves that are well-ripened, cut in parts from the midrib and insert in the sand one-half inch deep, give a thorough watering and keep the house closed for a few days; at the same time do not allow the temperature of the house to go over 80 degrees. This is the most important point in propagating Rex Begonias. I have seen more failure than success in propagation by not observing these details.

The plants will thrive in any good rich loam with plenty heat and moisture. They are subject to a rust which is induced by sudden changes in temperature and draught, wherefore the remedy suggests itself.

Flowering Begonias.

In flowering Begonias we also have very useful plants for either commercial or private use. The old so-called "rubra" as an all-round plant is still at the head of this class; possibly because it will bear more abuse than any other. Those which are considered the best are rubra, Thurstonii, Saudersonii, argentea, guttata, picta venalis, metallica, rosea gigantea, sanguinea, incarnata, Gogensis, Mme. Linet, and a fine new one Glorie de Paix; this latter requires stove treatment. They thrive best in a light rich soil in ordinary greenhouse temperature.

As these Begonias will not reproduce themselves from seed, the best way is to propagate them by cuttings, which may be done at any time during the winter or spring for good plants desired the same year.

Fibrous Rooted Begonias.

Another interesting set of Begonias in this class is the fibrous rooted semperflorens varieties; these are chiefly used for bedding, and with good effect. It is a matter of opinion as to which is the better way to raise these, whether from seed or by cuttings, but for my part I believe the better way is to raise them annually from seed. By sowing in pans in a warm house during January or February and keeping growing, fine plants can be had by the middle of May.

The Tuberous Begonias.

The most showy of all the Begonias are the tuberous. When well grown they make as fine a display as any plants I know of; their rich colors, large flowers and perfect form of growth commending them to all lovers of floriculture. They are of easy growth, but will not stand any forcing; under such treatment they rebel.

It seems reasonable to suppose that the real cause of the rust about which so much has been written, is principally too high a temperature; we hear men who are supposed to know, advocating grow-

ing in a high temperature as being the best means to eradicate the disease. For one, I will not accept this theory, in fact, I will guarantee by putting a badly infected plant into a cold frame to bring it out in a healthy condition. And anyone else can do the same.

The tubers are usually started into growth from February to May for a succession. I prefer starting them in pots as small as they can conveniently be placed in. Good rough loam, well-rotted manure, and a liberal supply of soot with some sand will insure a good healthy growth.

The greatest care should be exercised in watering, as they are very susceptible to over-watering. It will pay to look over them three or four times daily during bright weather. To grow the best of plants a hose should never be allowed near them. After they have been shifted for the last time liquid manure given occasionally will greatly benefit the plants. For shading, one-inch strips tacked onto wire netting three quarters of an inch apart answer first-rate. It can be removed at any time. Permanent shading is not conducive to a strong, healthy growth.

There are various methods of propagation, but the usual way is to raise from seed, which may be sown in pans or flats in a warm house with a light of glass placed over them, to prevent the soil moisture from evaporating too rapidly.

In watering the seedlings it is better to sub irrigate than to water overhead, as the soil is liable to crust and so prevent germination. As soon as the seedlings appear the light should be gradually removed till you think they are strong enough to do without it. They are usually pricked off in flats when strong enough and later potted on in light soil. Gloxinias.

Gloxinias are natives of tropical America and hence require stove treatment. Bulbs can be had at very reasonable figures, so that it is more satisfactory to buy them than to raise them from seed. They are usually started into growth from January to May. A few started at different periods will give a good succession and prolong their season. After the seedlings are well established (say about the middle of June) it will greatly increase the size of the bulbs to plant in a spent hotbed.

The compost should be very light, as anything like heavy stiff soil is fatal to the plants; one part leaf mold, one part peat, one part of old rotted sod, a little old manure, and enough sharp sand to keep it open will give good results. Pot in as small pots as the plants can conveniently be placed in, seeing that drainage is perfect, some charcoal among the crocks will be found beneficial. As soon as the roots appear next the pot, the plants should be shifted on successively till they come to the flowering pots. As soon as the leaves cover the pots they should be stood on others inverted under which saucers have been placed and these kept filled with water. Syringing among the pots three or four times daily will be about all the water they will then require. By this treatment there is very little danger of thrips appearing.

If this pest shows itself it should be overcome at once, as it will ruin the plants in a very short time. There is nothing looks more miserable than a Gloxinia infested with thrips. A few drops of ammonia dropped in the pathway will hold them in check, also tobacco in its various forms will answer.

A very important part in the cultivation of the Gloxinia is in properly ripening off the tubers after the season's growth. This should be carefully attended to, as much depends on this for the following year.

Gradually withhold water as the leaves begin to ripen, and never under any circumstances cut off any of the leaves, as the sap in them has to be taken up by the bulb to help in doing the work of the following year. The leaves will drop off themselves when sufficiently dried. A temperature of 50 to 55 degrees will be about right to store the bulbs in.

In raising from seed much the same treatment as recommended for tuberous Begonias will answer.

The Fruit Garden.

The fruit exhibit at the American Institute Fair has at this date beaten past records for size and quality. Ellwanger & Barry, the Mount Hope nurseries, Rochester, N. Y., have an extra fine showing, in which, for size, were very prominent, Beurré d'Anjou, Beurré Clairgeau, and Angouleme pears, some 40 Anjous having a place of honor in the center of the table. For beauty just now, Buffum, Flemish Beauty, Lady Clapp, Sarah, and Jackson were very noticeable, the last having the appearance of Clapp's Favorite in shape and color of cheek with the russet dots of the Seckel.

Lady Clapp is a fine smooth-skinned yellow pear, very much after the style of Bartlett, but ripening the end of September, quality of fruit very good; tree good grower. Here could be seen some of the new varieties of the firm's seedlings as Col. Wilder, P. Barry, etc. Do not confound this last with Barry, one of the older pears of similar shape that ripens in October, whereas P. Barry is a late winter pear. One point about this exhibit was the care shown in selecting the specimens of each variety; it reminded me of the old quotation "as like as two peas in a pod." Another item was I saw no change or correction of names in the lot; in short, this whole exhibit gave the impression that these exhibitors had the stock, and knew their business from a to z.

Apples and Grapes are in great quantities and varieties from a number of exhibitors. The Eastern New York Horticultural Society was just getting a large collection in place. Among the grapes staged I noticed one of fine appearance named Mills, while here were Eaton and Niagara in better shape than shown in the Geneva exhibit. Nearby was a new grape Alice, exhibited by Ward D. Dun, of Clintondale, N. Y., who is willing to answer any questions concerning it, which, judging by the appearance of these, it would pay to do, if about to invest in new grapes. The exhibit showing some fine bunches of a red color, and a branch showing it to be very prolific. An exhibit of apples from Stephen Hoyt's Sons, New Canaan, Conn., was in this part of the hall.

An exhibit from California of grapes and dates was being unpacked, and others coming in which makes things look now as if next week New Yorkers will have a fruit show that they should appreciate.

The exhibition of nuts from John L. & W. Parry, N. J., is another very interesting feature and worthy of some thought and inquiries when we read of the quantity imported to this country every year. J. HOLLOWAY, Glen Cove.

Raspberry Enquiries.

Last winter I bought a few small raspberry plants; they were set out in good soil, an old cow pen. Cuthbert and Schaeffer both bore a few fine berries. The wood then seemed like dying, as new shoots were coming. I cut all the old wood out. Was that right? Now, September 12th, there is plenty of new canes ten feet long. I have them trained on frames. I am now afraid that I have not managed them right; think perhaps they should have been kept pinched back to make them grow in bush form. It is said that raspberries do not do well in Louisiana, but a few years ago I had red raspberries sent me from Missouri. They bore in spring and again in fall. A man fairly tore them from the ground and lost them.—C., La.

—The treatment was all right, only it is probable that if the growth had been stopped once, more fruit would have been obtained next summer from the resulting three or four canes than from the one extra strong cane. Don't cut the canes back, but bend them so that the tips touch the ground; it will make the canes produce fruit-bearing shoots on a larger portion of the canes.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

*. We cannot undertake to reply by mail.

Clematis Dying.

What is the cause of Clematis dying off just above ground when the plant is in full bloom. The stem turns black and in a few days is dried right off; it seems to me to be a disease. Can you inform me of a remedy, as I have lost numbers of them the last two years, and had no trouble before.—A. ANNANDALE.

—This is a matter of much mystery, and was discussed in these columns very recently (July 10, 17, 24, and 31), but no definite conclusion was reached. Several expert growers are at work trying to discover the cause of the trouble, it having occurred simultaneously in parts far removed. As soon as possible any advance of knowledge will be published in these pages.

Increasing Stock of Strawberries.

I am at a loss to know just what is the best thing to do. We want to increase our stock of strawberry plants during the winter. We have a Rose house and also a house for Carnations. Which temperature will suit the strawberry the better, also should they be potted or planted in the bench?—J. W. M.

—The Carnation house comes nearest to what the strawberry needs in the way of temperature; the Rose house would be altogether too warm. The plants would do better planted out than in pots. But it is a very questionable proceeding to attempt to propagate stock in such a manner. It certainly must weaken the constitution and would give a severe setback to the young stock.

Scale on Shade Trees.

(To T. Price.)—Do not, by any means, cut back the Silver Maples because they have insects on them—already too many valuable trees have been thus destroyed, and with modern appliances for fighting insect pests, such treatment shows only ignorance. If you send specimens of the insects we shall be able to give definite advice as to treatment, not otherwise.

Peaches for Long Island.

What three varieties of peaches would you recommend for the light sandy soil of Long Island? The trees now on the place are doing remarkably well. I wish to grow the fruit for the New York market.—J. McH.

—Long Island growers are not able to compete in the markets with early varieties, so that late sorts only are recommended. The following are already found doing well in the section named: Elberta, Rives' Favorite, Fox Seedling, and Crawford's Late.

Wintering Tender Stock.

How do florists carry through the winter stock of tender plants, as for instance, Coleus?—C. C. M., Conn.

—Cuttings are taken early in the fall and established as plants; in this way they continue to grow during winter. Old stock plants are also kept over, and propagation begins in January. It is then easy to propagate from the young struck plants, tips being taken as soon as they become available.

Hardiness of English Violet.

Will hardly English Violet, if transplanted in the open ground in November, survive the winter?—C. S.

—Possibly it will do all right, but it is safer and wiser to give some sort of protection.

Roses in Winter.

Do Roses of the American Beauty, Kaiserin Augusta, Bride, Maman Cochet class require protection on Long Island? If so, please explain method.—C. S.

—American Beauty may survive the winter outdoors in the section named, but for all that it can hardly rank as a

suitable Rose for such a purpose. Kaiserin Augusta makes an excellent outdoor variety, easily one of the best. Maman Cochet will also do tolerably well. A few dry leaves or a little litter is all that is needed for protection. Mulch the ground so that the collar of the plant is protected, that is, the vital part, usually two inches is sufficient.

Woolen Waste as Fertilizer.

Has the refuse of a woolen mill much value as fertilizer? Is it good to mix it with stable manure and let it rot during the winter? How to apply it as fertilizer alone? For what farm crops and vegetables?—W., Mass.

—The average of eleven analyses of wool waste reported by the Massachusetts Experiment Station is: Nitrogen, 4.56 per cent.; potash, 1.68 per cent.; total phosphoric acid, 0.31 per cent. Its

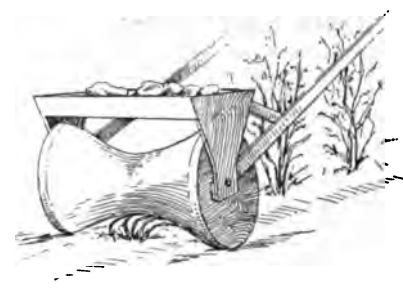


FIG. 204.—LAYING DOWN BERRY CANES.

commercial value as a fertilizer calculated from this is about \$15 per ton. However, the plant food in it is but slowly available, and \$10 would probably be the highest value that should be assigned to it. Mixing with stable manure and allowing it to rot would increase the solubility of the plant food, but the large amount of nitrogen in the waste would necessitate careful handling to prevent loss. The addition of 200 pounds of gypsum per ton of waste would largely prevent escape of ammonia. It would scarcely be profitable to apply the waste alone. The addition of 100 pounds of acid phosphate and 10 pounds muriate of potash to each 100 pounds of wool waste would give a fertilizer containing

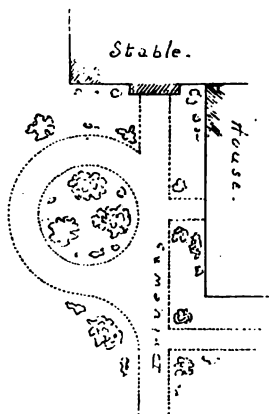


FIG. 205.—A CONVENIENT DRIVEWAY.

about 2.25 per cent. nitrogen, 3.35 per cent. potash, and 6 per cent. available phosphoric acid. If used alone, the waste should be worked into the soil before the planting of the crop, to give time for decomposition. It would act too slowly to be of great value as a fertilizer for vegetables; it might be used on corn, wheat, and grass lands with profit.—JOHN FIELDS.

Insects Eating Shrubbery Foliage.

The specimens of worms sent from Avondale, O., were dead and so badly mutilated that it is impossible to determine definitely what they are; possibly the species of Leaf-roller, known as the "Fruit-tree Leaf-roller" (*Cacaecia argyospila*). This is known to feed upon various kinds of shrubbery and upon fruit trees. Paris green used at the rate of one pound to 160 to 200 gallons of water has been found to be the best remedy for

the above pest, but I would recommend that the Paris green be used with Bordeaux mixture, instead of with water alone. The Bordeaux mixture will adhere to the leaves better than water, and when dry is not washed from the foliage by the first rain that falls. It also has the advantage of counteracting the tendency of the Paris green to burn the foliage. If London purple can be purchased more cheaply than Paris green it can be safely used with Bordeaux mixture.—F. A. SIRRINE.

Propagation of Clematis and Pelargoniums.

(To F. C.)—A full account of the methods of propagation of Clematis will be found in the issue of July 10, page 493. Pelargoniums are treated upon at length on page 271 of the issue for July 27, 1895.

Grafting Apple on Pear.

Is it possible to graft pear on apple (or vice versa) and have the two kinds of fruit on the same tree?—INQUIRER.

—While it is possible, it certainly is not desirable. It is more practicable to adhere to the usual practice of growing each as a separate tree.

Mushroom Spawn.

If mushroom spawn is put under sod in lawn now (October) will it bear next summer? Please give directions for treatment of mushrooms.—M. W., N. J.

—The life of spawn when inserted artificially under grass is always uncertain; it may live or it may not. Make your request on mushroom culture more specific.

Laying Down Canes.

In some sections the only hope of the next year's raspberry or blackberry crop depends on the laying down and covering of the canes late in the fall. Laying down blackberry canes by hand is a weariness (and a laceration) to the flesh. The cut shows a device that does away with such hand work. A short log is hollowed out in the form shown, and strips added so that it can be drawn along the row over the canes. Unless the log be large, or of hard wood, more weight may be needed. In which case rocks can be added as shown. As the canes are bent down they are covered with earth from behind, and the roller goes on to the next hill.—D.

Driveway for Village or Farm Lawn.

The proper laying out of the driveway into one's grounds is a matter of not a little importance, for a mistake made in this, entails inconvenience for almost every day thereafter. One of the most serious inconveniences in the case of most driveways, is the necessity for one driving in, to turn his wagon or carriage about by cramping the wheel and backing (often in a contracted space), before he can get out again. A driveway ought to have a circular or oval turn, so that the butcher, the baker, and the candlestick-maker—as well as those who call socially, may be able to drive into one's ground—without having painful doubts as to ever getting out again! The accompanying illustration gives a plan for laying out a turn at the side of the house that will prove both convenient and attractive, if the circular space inside the drive is attractively set out with plants and shrubs. This drive gives a straight run into the stable, or gives a chance for an easy turn to those who wish to go out. Of course all houses and stables do not have this relative position that is given, though a large percentage have.

However, the same idea can be adapted to almost any situation, without necessarily sacrificing either convenience or attractiveness.—WEBB DONNELL.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

A Fertilizer Problem.

A correspondent recently sent us a cutting from a contemporary publication and remarks as follows:

"The enclosed clipping I send you from where it is published without note or comment, as if the editor accepted its statements as trustworthy. What does AMERICAN GARDENING say about it? Would such a mixture save our strawberry beds from the ravages of the grub that are often so destructive? Has any one tried it besides Mr. Ward?"—W. H. W.

The clipping referred to we have noticed in several other papers and is here given:

MANURE FOR ORCHARDS.

The following mixture, containing nitrogen, phosphoric acid and soda, has proved destructive to all grubs and worms that either live in the ground or go into it in order to pass through the pupa state, and come out as full-fledged flies to work their devastation on fruit and foliage, and there to lay their eggs for the perpetuation of their kind.

Slake 500 pounds of quick lime and mix 300 pounds of common salt with it. Let it stand for twenty days for chemical changes. It should be shoveled over three or four times to be thoroughly mixed. Then mix with it 300 pounds of powdered lime and 100 pounds of nitrate of soda.

The mass is then ready for use and will cost about \$8. Use 1000 pounds of this mixture per acre; spread broadcast on the orchard; it can also be used on lawn, meadow or pasture in the same quantity. The use of this mixture not only increases the quantity of the fruit, but also gives the fruit a better flavor, a higher quality and larger size and puts the tree in vigorous condition for future yields. The ingredients can be easily procured in any quantity at market prices, and the mixing can be done on the farm. It does not deteriorate in quality by keeping.

—The action of the separate ingredients which go to make up the above mixture is well-known.

Lime (quick-lime or caustic lime) has the property of making a small amount of insoluble plant-food available, of neutralizing (or sweetening) acid (or sour) soils, or rendering stiff clayey soils more easily worked, and in exceptional cases, of supplying lime to crops grown on soils that are deficient in this ingredient. Such soils are exceptions, and it seldom is necessary to apply lime as a direct plant food.

Salt (common salt, sodium chloride, or muriate of soda) is so well known that a description of its properties would seem to be superfluous. Yet frequently a new prophet arises and profoundly states that soda may replace potash as plant food, cheerfully disregarding the numerous careful experiments that have shown exactly the opposite. A few plants do well on soils that contain a large amount of salt; the majority do not thrive when any appreciable amount of it is present.

Nitrate of soda (sodium nitrate, or Chili saltpetre) is a valuable fertilizer supplying plant food in a readily utilized form; the nitrogen which it contains is the measure of its value. It will cause a vigorous growth of the foliage parts of plants and delay the production of flowers and fruit.

With these facts as a basis, we are prepared to understandingly tackle the wonder-working formula given above.

1. The mixture as stated does not contain phosphoric acid; the fact of its containing soda is of no special significance since it is not a plant food.

2. Very little chemical reaction other than the slaking of the lime and the formation of a small amount of carbonate of soda will take place when "500 pounds of quick-lime" are shoveled over three or four times to mix it with "300 pounds of common salt." Any reaction which can possibly take place will not produce a mixture giving effects dissimilar to those produced by the two ingredients applied separately.

3. The final mixing with "300 pounds of powdered lime and 100 pounds of nitrate of soda" is of no significance beyond the work involved. The addition of lime to nitrate of soda can neither injure nor benefit it as a manure.

So much for the fertilizing side of the case; any improvement of the quality, quantity, size, and flavor of the fruit is due to the action of the separate ingredients. The same may be said of its grub-killing properties. It is claimed by some, and with a good show of reason, that quick lime when applied to a soil in large amounts may kill some grubs and worms. Fertilizers containing salt have been recommended as of value in destroying grubs and worms in the soil, but experiments at the Cornell Experiment Station show that they are not always successful.

The action of the mixture advised would probably be similar; I have not tried it; it may be destructive to "all grubs and worms" that abide in the soil, but I doubt it. It is neither probable nor reasonable that it will.—JOHN FIELDS.

Roses Under Glass.

During late Summer and early Fall we have been firing and ventilating more for the purpose of keeping out dampness than maintaining a given temperature; but it is now time that we turn our attention to the latter, especially at night. A rose naturally is a deciduous plant, therefore, we must be careful that it is not subjected to conditions that will cause it to go into a semi-dormant state, namely, too low a temperature, too much air, and keeping the plants on the dry side at the root for any unreasonable length of time. I have seen roses about this time of the year, that were perfectly healthy in every respect, still they kept losing too many leaves at the bottom of the plant and otherwise had a decided Autumnal look. La France is the most sensitive variety I know of in this respect. I always run a little higher night temperature during this period, not lower than 60 degrees, and a trifle warmer according to the mildness of the weather. I am well aware finer flowers can be produced in a cooler temperature, but in my experience I have not found it consistent with the growth we are looking for. If our plants stop growing now they will keep in that condition a long time.

In regard to firing and ventilating, it will be found necessary on cold days not to drop the steam too early in the morning, even if it promise to be bright and warm. The day is pretty well along before the sun begins to warm up the houses, and therefore it is best to keep up some heat to help the day along. We always have a pile of wood in the cellars, and if a fire is nearly burned down by morning, we find it much better to put on a little fire to keep up the steam for such a short time, than to put on a new hard coal fire. Of course, where soft coal is used the wood would not be needed.

As to ventilating at night I always close up tight if there is frost in the air, and during daytime, especially if there is a cold air, I am very careful about the amount of ventilation, at the same time putting it on little by little as the day advances, and reducing it likewise in the afternoon. By so doing we get all the benefit from the sun possible. It often happens on bright days the outside temperature stands about 50 degrees. During such times it is a very easy matter for a man accustomed to rose growing, when walking through the houses, although the sun is warm, to feel a chilly atmosphere if too much air is on. When using more artificial heat care must be taken that the bottom of the benches do not become dry. They should be examined thoroughly.

Celery Diseased.

(To C. H. B.)—Your celery is affected by the common celery blight due to a fungus *Cercospora apii* (see page 725).

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

Hydrocyanic Acid for Fumigating

In our issue of September 4, Mr. Thomas L. Cone, in referring to a short previous note in the paper, asks for more information about the use of hydrocyanic acid gas. The method of using it was fully described in the Florists' Exchange of February 13, 1897, which article, by request of the Department of Agriculture is now reproduced. The gas was tried on a number of plants, but it has not been used commercially except on Violets, *Davallia Mooreana*, *Adiantum cuneatum*, and upon *Coleus* of various varieties. We think, writes Mr. A. F. Woods, acting chief of the Division of Vegetable Pathology and Pathology, the article referred to will give Mr. Cone such information as he desires. If not, we shall be glad to answer further.

"In the course of work on the fungous diseases of greenhouse plants we have been forced to take notice of a number of insect pests, which if left alone or destroyed by some of the usual methods proposed would seriously interfere with the progress of the main work in hand. Tobacco, for instance, in any form is not always safe for some crops, as under certain conditions it may render the plants more susceptible to disease.

"With a view of finding an effectual means of destroying some of the more common insect pests, especially aphides, hydrocyanic acid gas has been used under the direction of Mr. Albert F. Woods, on a sufficient scale to show its entire practicability, at least in the case of Violets. We recently called attention to this matter, and have received a number of requests for more details as to the methods employed in calculating the space in greenhouses, amounts of materials to use, etc. For the benefit of those making the inquiries, we take this opportunity of answering the questions as far as we are able.

"Figures 206 and 207 show cross sections of the two styles of greenhouse structures now in general use. The house shown in figure 206 is an even span, 75 feet long, 9 feet 6 inches wide, 10 inches on the sides, and 4 feet 2 inches from the beds to the ridge, with a walk 20 inches wide and 2 feet 10 inches deep. Now it is desired to determine accurately the number of cubic feet of space in this house, and to do this draw lines from the ridge and gutter plates, as shown in the sketch, and mark the respective lengths in feet and inches on each. The space is now divided into triangles and rectangles, and from these the cubic contents of the house may be computed. For example, the number of cubic feet in the walk (figure 206) is found by multiplying the depth, 34 inches, by the width, 20 inches, and then by the length, 75 feet, or 900 inches, and dividing the product by 1,728, the number of cubic inches in 1 cubic foot, as follows: $34 \times 20 \times 900 \div 1,728 = 354.16$ cubic feet. Second, to find the number of cubic feet in the space between the bed and gutter plate, multiply 9 feet 6 inches by 10 inches, then by 75 feet, and finally divide by 1,728, which will give 593.75 cubic feet. It will, of course, be understood that in making this calculation the feet must all be first reduced to inches.

The rule generally given to find the area of a triangle is to multiply the perpendicular by the base and divide the product by 2. The quotient will be the area of the triangle. Thus, to find the contents of the space abc, multiply by bc by ac and divide the product by 2, as follows: 57 inches \times 40 inches \div 2, \times 900 inches, or 75 feet, equals 102,600 cubic inches, divided by 1,728 cubic inches equals 593.75, the number of cubic feet in the house space abc. Since the two triangles are equal the contents of one multiplied by 2 will give the total number of cubic feet contained in the roof. Thus, 593.75 cubic feet, multiplied by 2 equals 1,187.5 cubic feet. We therefore have in the house of the dimensions given as follows: 354.16 cubic feet + 593.75 + 1,187.5 = 2,135.41 cubic feet.

"For fumigating Violets use 0.15 gram of potassium cyanide per cubic foot. Thus a house, as shown in figure 206 would require $2,135.41 \times .15 = 320.3115$ grams. To reduce this to ounces divide by 28.35, the number of grams in an ounce. This will give 11.29 ounces, the

amount of potassium cyanide required. For every part of cyanide use $1\frac{1}{2}$ parts of commercial sulphuric acid and 1 part water. That is, where 11.29 ounces of cyanide are used, it would require 16.93 ounces by weight of sulphuric acid, and 11.29 ounces of water.

"At figure 207 is shown a section of a different style of house, the cubic contents of which may be determined as in the preceding case. This house is a $\frac{3}{4}$ -span, 50 feet long, 18 feet wide, front wall 5 feet, back wall 7 feet, and 12 feet to the ridge. It will thus be seen that the size of a house of any given shape or style can be figured out, and the amounts of materials necessary to fumigate it ascertained.

"After determining the number of cubic feet the house contains, and the amounts of materials necessary to make the fumigation, arrange the ventilators so that they can be easily and quickly opened from the outside. This is absolutely necessary, as the house should be thoroughly ventilated as soon as possible after exposing the plants to the gas the desired length of time, and it would be almost certain death to enter the house to open ventilators. All having been arranged, look over the house and stop all large cracks through which the gas might escape. It will also be well to wet down the roof from the outside. The water will fill the cracks between the glass and make it nearly air-tight.

"Everything being in readiness, get a $1\frac{1}{2}$ or a 2-gallon earthen jar, of as small a diameter as possible, so that when the acid and water are added, the potassium cyanide will be covered. Place the jar about the center of the house, provided the latter is not over 75 or 100 feet long. If longer than this, it will be best to use two jars, placed in the walks about an equal distance from each end of the house. Tack a small stick or lath across the walk to the edges of the beds, directly over the jar. If, however, the sides of the walk are not of sufficient height to allow the bag to hang above the jar, tack a piece of board to each side of the walk, and the lath across these, as shown in figure 208. Run a string from the jar over this stick to the door, and fasten one end

into the jar. Then pour in the required amount of water and add the acid slowly. When the acid is all added, a considerable amount of steam should arise from the jar, showing that the water is quite hot. If, however, this does not occur when all the acid is added, enough more should be poured in to cause the desired evolution of steam. After this, carefully place the string and bag in position, taking care that the bag does not fall into the jar before reaching the door. If, however, it should fall, hold your breath and make a rush for the door, for it will mean death to breathe the gas.

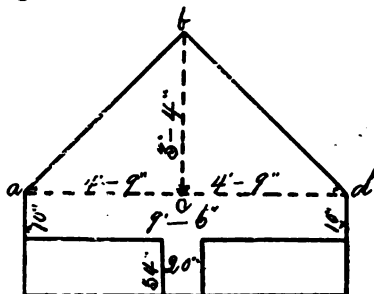


Fig. 206.—Even Span House.

SHOWING METHOD OF CALCULATING SPACE.

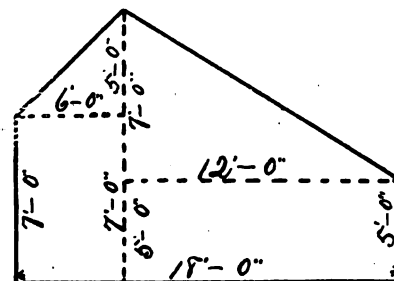


Fig. 207.—Three-quarter Span House.

"Everything being in readiness when the door is reached loosen the string, allow the bag to quickly descend into the jar, and immediately step outside and close the door.

"The plants should be left exposed to the gas for exactly twenty-five minutes, and then the doors and ventilators opened. This should be done from the outside, all arrangements for doing it having been made beforehand. When the doors and ventilators are opened wait 30 to 50 minutes before trying to enter the house, and even then enter with caution.

"The gas should be used at night or after the sun goes down, as the increased temperature during the day causes it to penetrate the tissues of the plant more

green and black aphids on Violets. One fumigation was sufficient to thoroughly eradicate the pests from badly infested plants, and, what is just as important, the houses one hour after the work was done were as sweet as if they had been exposed to fresh air."

The Vegetable Garden.

Endive.—This will do well in cold frames if protected from frost. Dig up with good roots before hard frost and transfer to cold frames, and if treated similarly to lettuce will come in useful for garnishing, and is also fine for salad. If required to be blanched, keep partially shaded.

Whitloof and Chicory.—The thick roots of these should now be dug up and stored away in a pit or cool cellar covered with sand. Whitloof is very fine for salad during the winter months if properly grown. This can easily be done by placing in heat a few roots every few weeks. An ordinary mushroom house is peculiarly adapted to its requirements; it will grow to perfection there, but any corner will suit it where the temperature will average 50 degrees. For convenience it is best planted in a wooden box, this should be about 14 inches in depth, plant in rows about three inches apart in the bottom of the box, leaving a space in the top of box of about six inches; after the plants are set, procure any old boards, the same length as the rows, and set one on edge between each row, then fill to the top with good clean sand. In a few weeks the roots will be fit for use. When ready, and it is necessary to cut some, to prevent any damage, it is best to take out the end board; the sand will then fall out, and it can then be conveniently gathered. The object of the other boards between the rows is to keep intact those not required, as there should be no disturbance until the roots are required for use. This method is easy and convenient in handling, and whitloof grown thus makes a fine stiff growth, perfectly blanched, and is a very delicious salad.

Mint is very useful at times during the winter, and being so easy to grow should always be had when called for. Dig a few roots of this before the ground freezes, plant in heat, in hotbed or greenhouse, or it may be put in a pot and grown in any ordinary window.

Chives are also useful for salads; a bunch put in a pot in the fall and grown as directed for mint, will give constant supply for a long time.

Parsley should now be put into the greenhouse or hotbed, or it also can be grown in a pot in a window.

W. M. EDWARDS, Conn.

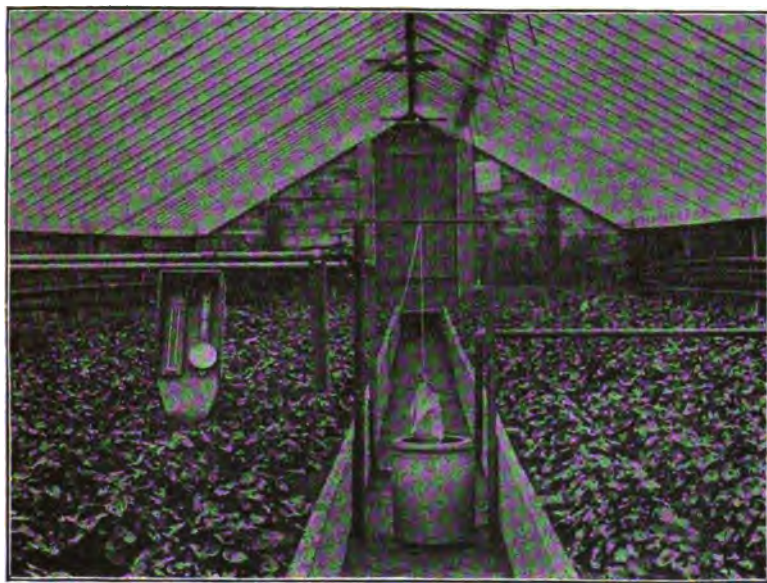


FIG. 208.—VIOLET HOUSE READY FOR FUMIGATING.
Showing Arrangement of Jar, String, and Bag of Potassium Cyanide.

of it there where it can be easily reached. Procure a small paper bag (two-pound bag), large enough to hold the potassium cyanide. After placing the cyanide in the bag, tie it to the end of the string at the jar, so that it will be suspended over the lath and just above the jar, as shown in figure 208. In this way when the string is loosened at the door, the bag and contents will sink into the jar. After this is properly arranged, move the bag of potassium cyanide fastened to the string to one side, so that it will be out of the way when putting the other materials

quickly, first on account of its increased diffusibility, due to a rise of temperature, and second, because the plant has its stomata, or breathing pores open, and is taking in the gases of the air in order to make sugar. It is quite possible that if the temperature were low and assimilation could be stopped this gas could be used in daytime. It is decomposed by light, but it appears from experiments so far that the gas resulting is probably more effective in killing insects and not so dangerous to plants. However, additional experiments will be necessary

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY

A. T. DELAMARE Ptg. & Pub. Co. Ltd.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.

REGISTERED CABLE ADDRESS
Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

The Henry Strawberry.

Arrangements have been made whereby a bountiful supply of these plants will be ready for spring delivery to subscribers and agents, and in this connection we beg to call the attention of our readers to our generous offer of these plants in another column. We do not think that a more liberal offer has ever been made than the one now advertised, whereby the agent or worker sending us in a club of ten new names, at \$1 each, becomes entitled to 100 Henry Strawberry plants, while five plants will be sent postpaid to each person in his club. This offer will not apply to a club of less than ten. It may be a very long time before such an offer of such a plant can be made again. The wonderful success which has accompanied our premium offer this fall, in the short time at our disposal to advertise it, leads us to believe that the orders for the Henry Strawberry next spring may exceed all anticipations; however, we have planned for a large supply for delivery and trust to be able to meet all demands upon us. Mr. Jerolaman's series of articles is now being placed in pamphlet form, and copies will be mailed free to all who desire to use same in the canvas for new subscriptions.

All the premium Henry Strawberry plants due to date, have been shipped, except where a request has been made to hold them till spring, and judging by the unsolicited acknowledgments received, they are giving immense satisfaction. In order to reduce weight and hinder excessive transpiration some of the leaves are cut off before shipping, this is especially beneficial during a hot spell, and readers can rest assured all is done for the best.

The Manure Question. THIS is one of the most serious the horticulturist has to consider, because of the many phases that present themselves. In the first place we are to consider the cost, upon which its use is or is not practicable; and with this query is coupled the more important one, what special form is best for the soil upon which it is to be applied, and for the crops we are to produce.

One thing is as certain as the earth we tread, viz., without plant food we cannot have plants, and, to a limited extent the latter is proportionate to the former; nothing for nothing being the universal law of nature.

The agricultural chemists have given us the chemical properties of the plant, the food it requires, and have shown us where to find it, but they have not been able to furnish a chef who can prepare the food just as the plant desires it; they have brought "water to the horse, but could not make him drink." The owners of the clay, the loam, and the sandy soils have heard the story alike, when, in reality, it was told differently to each of them.

Different soils require different treatment, or, in other words, the fertilizers that one may require, would not be needed by the other. One soil may be deficient in lime, another in potash, while the third may be thirsting for nitrogen, and for special purposes every one must determine for himself according to his own situation and circumstances what the needs of his soil are, for the crops he is to produce.

It is generally supposed the barnyard furnishes the best plant food, and at the least cost. This may or may not be true, all depends upon the crops to be grown; if such only are grown as desire a free supply of nitrogenous matter it will do, but plants must have certain mineral substances, some of which seem necessary to both as stimulants or condiments, and which act upon and with the food in fitting it for use. Soil fertility will become impaired by the constant use of stable manure, where cultivated crops are steadily grown; and the same is true with chemical fertilizers, which impoverish the soil by not keeping up the balance of humus. The stable manure does not furnish the minerals, and the chemical fertilizers do not furnish the humus required for the plants. Consequently with a more than liberal application of either the soil does not yield as abundantly as it would do if given the kind of food the plants require, and as they want it. It therefore follows that the two kinds must be used together in order to get the best results.

The question is asked us "Can you suggest any preparation of stable manure so that it may be used in large quantities without danger of breeding maggots, wire worms, and cut worms." Insects are found in the greatest abundance in decaying animal or vegetable matter; their mission being to consume such; besides that, while fermentation is the most active, the reproduction is the more rapid, the heat being favorable to the hatching of the eggs, and the development of the larvæ, these will always be present where there is manure, but they will be far less numerous where the manure is thoroughly rotted before it is applied to the soil.

The insect question has many sides to it. The majority of insects do not come because of the manure applied, but because of the crops that are to be grown. Every vegetable has its insect enemy, or, we might say, every insect has its favorite vegetable, and subsists upon that one alone. The brassica has its caterpillar, the asparagus its beetle, the onion its maggot, the squash and potato their own bugs. When any insect finds its feeding ground it will immediately establish a colony in anticipation of a returning crop the coming season, should the progeny find it, they will not only destroy, but again deposit their eggs from which the larvæ will develop for the destruction of yet another crop. To thwart their purposes a rotation of crops will become necessary; and, in most instances this will prove an effectual remedy.

Using Old Burial Grounds. THE work just commenced in New York City of taking old burial grounds which are no longer used as such, and turning them into park areas is one of the most feasible steps of modern city government. In London, England, there is a special association which at its own expense undertakes to do this noble work, and the area of city lungs which has been thus made available is enormous. The conditions of our cities are not generally so extreme as are those in the older European countries. Yet in time, if precautions be not taken, our status will be what theirs is to-day. Even now New York City has the very unenviable distinction of containing the most densely populated city area in the world.

This overcrowding is a serious menace to the moral, social, and physical welfare of our fellow-citizens, and calls for measures of relief in whatever way possible. The question opens a large field for discussion into which it is not our province to enter, but in one phase it has a bearing on the interests we represent. The multiplication of city park areas is a growing necessity and it is surely not a deprecation to devote to the welfare of the living what has already outlived its usefulness for the dead.

A Fraud on Farmers.

A fraud order has been issued by the Post Office Department against Carl B. Cline, who operated a swindle from Columbus, O. Cline wrote letters to and inserted advertisements in various newspapers concerning a new wheat called the Early Surprise. He offered to send, on receipt of three stamps, a sample package of the wheat; in other letters he tried to get a notice for Crimson Clover, also offering a small sample for a few cents. Letters poured in on him by the hundred, and in return he sent a circular letter, saying that he would furnish the seed wheat at \$1.50 per bushel, and also quoted rates on Crimson Clover, and a certain brand of corn known as Ok. When the victims forwarded their money he failed to furnish the seed. Finally, the pressure became so strong that he went to a farmer near Columbus and bought 250 bushels of wheat from him, which he made up in small packages and sent to the victims of his game. He is now under bonds to answer a charge of swindling.

By the death of Charles A. Dana, editor of the New York Sun, American horticulture loses one of its most intelligent patrons. In our next issue we hope to give some account of his connection with gardening and shall present a splendid half-tone portrait from the latest picture taken by his son.

Legal Notes.

Plants Destroyed by Escaping Gas.—An action brought by William H. Siebrecht against the East River Gas Company, in which judgment recovered on the trial by the plaintiff was on October 6 affirmed by the Second Appellate Division (New York), presents some singular features. The plaintiff, a florist owning greenhouses in Long Island City, claimed damages because the Gas Company allowed a pipe laid in the ground near his premises to become out of repair, so that gas escaped and destroyed his flowers and plants. The pipe ran along the tracks of an electric railway. The ground, in the winter, was frozen to quite a depth, so that the escaping gas was prevented by the frozen crust from reaching the surface, and in consequence percolated through the soil, and entered the greenhouses. It was claimed for the company that the life of the pipe, according to experts, had not expired, and that its condition was produced by the action of the electrical current from the railroad. Having remedied the defect as soon as possible, it claimed not to have been guilty of negligence.

Justice Hatch, who gave the unanimous opinion of the court, said in concluding his opinion, "that the condition of the pipe was produced from lying in a wet place. The character of the place should have been known, for the defendant made the excavation and laid the pipe therein. This evidence is more than a scintilla; it had substance in it, and the jury were authorized to predicate negligence of the defendant for a failure to examine the pipe under such circumstances. 'The evidence was clearly sufficient to exonerate the plaintiff from contributory negligence, and this question requires no discussion at our hands.'"

Concerning a Cranberry Bog.—One of the most important cases argued in the Supreme Court of Wisconsin was that of Russell Case, plaintiff, vs. Frederick J. Hoffman and others, defendants, argued recently. In 1873 the plaintiff bought about 400 acres of land in the town of Sullivan, Jackson County, for the purpose of cranberry culture. The land, as he determined at the time of the purchase, was well supplied with water from a lake known as Big Lake, about two miles northwest of the land in question. From Big Lake to and across the plaintiff's land, the water flowed upon the surface and beneath the surface. Through the greater portion of the distance between Big Lake and the plaintiff's land it was not confined within any channel. Beyond the plaintiff's land it again formed into a channel and emptied into a stream called Beaver creek. As it is impossible to cultivate cranberries without a supply of living water, the natural water supply to plaintiff's land was a matter of greatest importance, and relying upon its permanent character, he expended large amounts of money improving his cranberry marsh.

Later, under an act of the Legislature, a canal was constructed absorbing the water supply, and this finally came into the hands of the defendants, who refused to supply the plaintiff. The court gave judgment for the plaintiff for damages and an injunction commanding the defendants to restore the water to him. From this judgment the defendants appealed. The case was argued in the supreme court by R. M. La Follette and C. E. Roe for plaintiff, and Bushnell, Rogers & Hall for the defendants. The presentation of the case in the supreme court occupied nearly two days and the examination of the law and facts necessary to reach a decision in the case has entailed a very large amount of work upon the supreme court. The supreme court reverses the decision of the lower court, Chief Justice Cassoday and Justice Marshall dissenting.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

Strawberry Culture for October.

October is rather an "off" month in strawberry culture proper, and although it pays to stir the soil shallowly after every packing rain till freezing weather, few continue it as late as October. Still no truce must be given weeds and grass to mature seed and make toll for the coming year. If not done earlier, it will pay to chop in around the plants 200 to 300 pounds of the fertilizer, mentioned later.

Except in the farthest north, October is usually the time for fall planting. A September-set plant is better, provided rain follows and puts it at once to growing. But nothing is as damaging to a strawberry plant as to be checked by drought soon after it is put into the ground. It is slow to recover from a check of this kind, especially in autumn. And September is all too apt to give it just such a check. In October, even if the soil is not more moist, it is cooler, and the sun is weaker, just the conditions that the strawberry loves. Plants set then are not apt to wilt, even without rain.

October-set plants undoubtedly bloom earlier and bear larger berries than those set earlier. They are often a week ahead of plants set in the spring or summer before. If the plants are vigorous and the soil rich and well prepared a fair crop of exceedingly fine berries will be the result the following spring. In the far south fall-set plants bear their main crop the following spring. Then the plants start the summer large and stocky, and will make a better growth and bear a heavier crop the next spring than if they had been planted only the spring before instead of the fall preceding that spring.

More care should be taken with fall-set plants, so they may get all the growth possible before cold weather comes. Well started, they continue their growth all through the winter wherever the temperature in the sun goes a little above freezing.

If the roots of the plants are very long, trim them back to about four inches. Let the hole in which they are set be large enough to spread the roots as near fan-shape as possible. Press fine, moist dirt firmly about the roots, letting it cover the roots firmly up to the bud, but no higher. Nothing checks growth as much as a bud covered and choked by earth.

Prepare the soil for planting as follows: Plow the land as early and deeply as possible. If a crop of pea vines or other cultivated green crop has been turned under, all the better. If such crop has been turned under, a top dressing of agricultural lime (500 to 1,000 pounds per acre) will pay.

I find that of all fertilizers cotton-seed meal is the safest to use in the drill. It is less apt to harm a plant when it comes in contact with its roots. One hundred pounds of sulphate of potash or 200 pounds of kainit and 200 pounds of dissolved bone or acid phosphate per acre should be applied around the plants a little later. It can be sown over them during the winter while the plants are dormant and will then do no harm. Wood ashes and stable manure are also excellent for top dressing. Splendid berries can be made with them alone. Never sow fertilizer on a plant wet with dew or rain, winter or summer. It will be sure to stick and burn.

O. W. BLACKNALL, Kittrell, N. C.

String beans classified as beans.—The importers claimed that the merchandise is dutiable at 10 per cent. ad valorem as vegetables in their natural state not specially provided for. This merchandise consists of beans in the pod, green. As distinguishing them from dried beans, they are commercially and popularly known as string beans. In the absence of a special provision for beans, they would undoubtedly be dutiable as vegetables in their natural state, but the provision for beans is sufficiently broad to include string beans, and the Board of General Appraisers therefore affirms the decision of the collector.

Our publishers will supply any book wanted. Send your orders.

From Cemetery to Park.

The work of transforming St. John's burying ground, New York City, into St. John's Park was begun on September 28. The 1,000 tombstones still remaining were broken off at the ground and carted to a large pit in the eastern part of the cemetery. In this they were dumped and earth piled over them.

The cemetery was opened a hundred years ago, and was used until 1850. After 1830 the city ordinances forbade further burials south of Canal street, but for twenty years after the passage of the ordinance burials were permitted in St. John's.

It is estimated that 10,000 interments have taken place in the plot. The property owners and tenants of the vicinity began an agitation about eight years ago to have the burying ground made into a park. Trinity Corporation, which owned the property, resisted the project until the city won a victory in the courts, and the property was bought for \$520,000. The relatives of the dead were notified in September last of the city's intention to soon begin work, and were requested to make removals at once. About 250 graves were opened and fragments of bones were taken to other cemeteries.

Eastern N. Y. Horticultural Society.

The Executive Committee of the Eastern New York Horticultural Society met on Tuesday morning in the concert hall, Madison Square Garden, New York City. It was decided to hold the next annual meeting at either Newburgh or Highlands, the object of thus moving about being to stimulate interest among fruit growers in different sections. It was decided to hold a two days' convention of five sessions and an interesting program was prepared. Among those attending the meeting were W. F. Tabor, W. C. Hart, S. B. Husted, L. L. Morell, E. Van Alstyne, B. D. Van Buren, J. E. Rice, N. W. Hallock, W. W. Williams, C. L. Allen, J. W. Withers, and Dr. F. M. Hexamer.

The Successful Farmer.

Referring to the farmer of to-day, William Allen White, who first attracted attention by his trenchant inquiry of "What's the Matter with Kansas?" says, in *Business of a Wheat Farm*, in October Scribner's: "The successful farmer of this generation must be a business man first, and a tiller of the soil afterward. In him must be combined many talents. He must be a capitalist, cautious and crafty; he must be an operator of industrial affairs, daring and resourceful, and he must play labor's part with patience and humility. He is in business as certainly as the banker. And henceforth, until the order changes, the farmer's success in business will quadruple with the kind and quantity of brains he uses, and with the number of fertile acres under his plow."

Farm Hand in Pennsylvania.

Walter A. Wyckoff's most interesting narrative of his experiences as a laboring man describes in the November Scribner's his work as a farm hand in Pennsylvania. That there is work of this kind for those who want it is evident: "But surely," I said, "more men apply to you for work than you can possibly employ." He looked at me with some wonder at my ignorance. "For a long time I have been looking for a man to help me," he said. "I'm growing old, and I can't do the work that I once did; and if I could find the right man I'd keep him the year round and pay him good wages. But the best young fellows go to the cities, and the rest are mostly a worthless lot. There's hardly a day in the year when I haven't a job for any decent man who'll ask for it."

M. P. Hedrick has been appointed State Inspector of orchards and nurseries by the Michigan State Board of Agriculture.

There is Not a Home in the Land

But calls for a yearly Calendar.

Every family tries to get one or more; generally more.

There are Calendars and Calendars

Some are good, some bad, most of them indifferent.

There Will Not be a Calendar Issued for 1898

To exceed in artistic elegance, finish, beauty of designs and effective coloring, the one we to-day offer as a premium to every subscription to AMERICAN GARDENING received before December 31, 1897.

EVERY SUBSCRIBER IS ENTITLED TO ONE

AND CAN EASILY EARN TWENTY.

OUR magnificent **Rose and Girl 1898** six sheet **Art Calendar**, two months to a sheet, each sheet $8\frac{1}{2} \times 11\frac{1}{4}$ inches, is superbly lithographed in eleven colors, and printed on hammered paper; the whole tastefully tied with silk bow—undoubtedly a work of art fit for the most elegant home, and as handsome a Calendar as was ever published. Each one of the six designs presents a distinct type of female loveliness and a fresh study in roses, the coloring on each sheet being rendered in harmony with the design. There is not a line of advertising on the Calendars to detract from their value. They will not be sold by us for less than \$1.00 each.

Description

Who is Entitled to a Calendar?

EVERY SUBSCRIBER renewing before **December 31, 1897**, enclosing Five Cents additional to pay packing and postage.

EVERY NEW SUBSCRIPTION—To induce people to test the value of AMERICAN GARDENING we will send the Calendar absolutely free to every name received direct not previously on our mailing list. Remit \$1.00 for A. G. 12 months.

EVERY ONE sending us a club of Four 3-month trial subscriptions at twenty-five cents each, will get a Calendar, free as a premium, by return mail.

EVERY NEW name sent in by an agent.

NOTE.—We have ordered manufactured for us a large stock of these superb Calendars in the endeavor to have sufficient supply for all demands, but will not guarantee to fill orders after supply is exhausted. Therefore, order yours now.

Special to Agents A copy of our Art Calendar to show people will clinch the argument and obtain the subscription. Bona fide Agents will be mailed one copy, securely wrapped, on receipt of only Twenty-five cents (one-fourth its value.) Armed with this superb Calendar we misjudge human nature greatly if any ordinary man cannot secure a big list of new subscriptions every day. Every new subscriber you send us gets a Calendar by return mail.

We Pay Agents

Every new subscription at \$1.00 entitles the agent to **Five of the Wonderful Henry Strawberry Plants**, to be delivered next Spring. Thus 100 new subscriptions would secure agents 500 plants; a possession worthy of your consideration. Every new subscriber taken by agent will receive one of our Art Calendars free by return mail. Agents who do not want the Henry Strawberry Plants can retain as their payment **25 cents in cash** on each subscription they take, or will be credited **twenty-five cents** on any book, magazine or publication they wish to obtain through us.

Address all
correspondence

AMERICAN GARDENING, P. O. Box 1697, New York.

REMIT BY P. O. or EXPRESS MONEY ORDER—IT IS SAFEST.

The Rocky Ford Melons.

Our market reports have, during the past few months, contained several references to Rocky Ford muskmelons which have right along realized such fancy prices, and correspondence is received asking for further information, source of seed, etc.

It is true those melons have given exceedingly good satisfaction. The old-fashioned Emerald Gem or Black Jap gave satisfaction because almost every melon cut was good eating, and therefore they pleased the uninitiated; the Rocky Fords were even better than those in that every melon was a fine eating one. The color inside is greenish white, very juicy and rich, good eating *clear to the rind*. They are oblong, being 5 to 6 inches long and 4 to 5 inches in width (or depth), and, as far as observation goes, nearly all of a size. They have had an immense run in New York City as well as in Boston. Proprietors of the restaurants and hotels being well pleased because of their sureness of giving a good tasting melon to offer their patrons and the patrons being well pleased because they had a nice eating melon. Very little seed was saved. One farmer eating the melons in a dining room, procured a crate and saved the seed; another farmer approached the proprietor of a dining room, had him save the seed.

According to a recent report in the Fruit Trade Journal, the exceptionally fine quality of these melons depends upon location.

And now we have a cantaloupe trust. Three years ago Mr. Wetzel, president of the Western Poultry and Game Co., was at Rocky Ford, Atero Co., Colo., which is about 50 miles south of Pueblo. It was in the melon season, and he had a Rocky Ford cantaloupe fresh from the vine, and wet with dew for breakfast. It was the most delicious he had ever tasted. He brought some of the seed home with him, gave them to truck farmers. The vines were very prolific, but the transplanted Rocky Fords were just like other Missouri grown cantaloupes. They lacked the rare flavor he had noted in the melons grown on the altitudinous plains of Colorado. In order to test the difference in soil and climate he had a friend at Rocky Ford send him a crate of cantaloupes. The difference was readily apparent.

A company was organized with \$200,000 capital, of which Mr. Wetzel was made President, and general manager. This year there were 300 farmers raising cantaloupes on 632 acres of land.

The Rocky Ford Melon Co. shipped 1,264 cars, of 864 crates each, and there are 45 melons in a crate.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

Catalogues Received.

W. W. BARNARD & Co., Chicago.—Catalogue of Bulbs, Seeds, Florists' Sundries, etc.

JAMES GRIFFITH, Cincinnati, Ohio.—Price List of Wire Floral Designs.

CONARD & JONES Co., West Grove, Pa.—Catalogue of Bulbs, Roses, etc.

LOVETT Co., Little Silver, N. J.—Illustrated catalogue of Trees and Plants.

SAMUEL C. MOOR, Morrisville, Pa.—Catalogue of Ornamental Trees, Plants, Shrubs, Vines, Fruit Trees, etc.

PETER HENDERSON & Co., New York.—Illustrated Catalogue of Bulbs, Plants, and Seeds for Autumn planting.

WEBSTER & DON, New York.—Annual Catalogue of Bulbs, Roots and Seed for Fall Planting.

HENRY A. DREWER, Inc., Philadelphia.—Autumn Catalogue of Bulbs, Plants, Seeds, etc.

D. S. GRIMMS & SON, Denver, Col.—Price List of Seeds of Rocky Mountain Conifer and Native Plants.

ALLEN WARREN & SON, Greenville, N. C.—Descriptive Catalogue of Select Fruits, Ornamental Trees, etc.

J. M. THORBURN & Co., New York.—Pamphlet on the Sugar Beet, with practical directions for its culture.

WM. H. HARRISON & SONS, Lebanon Springs, N. Y.—Catalogue of Ornamental Trees, Shrubs and Herbaceous Plants.

Business Cards.

C. D. Zimmermann, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

WANTED, a position by a competent man: accustomed to all kinds of greenhouse work; 9 years with Mr. James Dean, Bay Ridge, N. Y. Address Edward Fischer, care American Gardening, Box 1697, New York.

WANTED, position as head gardener and manager of private place; thoroughly versed in all branches of horticulture and landscape work; accustomed to the management of help, 35 years' experience. References. H. J. Smith, Millbrook, N. Y.

PROFESSIONAL commercial gardener is at liberty to consider responsible proposition and engage as head gardener with right parties. Sober, competent, experienced, active. Correspondence solicited. Address "Head Gardener," care American Gardening.

SITUATION wanted, by Englishman; 50, single; a life's experience in all branches of the florist business and gardening; good at designs and decorations; 17-year class testimonial as to ability, honesty and sobriety; 25 years in America. Address Honesty, care American Gardening.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

RASPBERRY and Strawberry plants. Chas. C. Nash, Three Rivers, Michigan.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Red Glass & Paint Co., 456 W. Broadway, New York.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boekoop, Holland.

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 715 Wharton St., Philadelphia. Three shipping points, can save you freight.

TO LET, \$400; fine truck or garden farm, 12 acres adjoining shore; warm fertile soil; one hour out; daily boat; good big house; barn. S., Room 705, 56 Pine St., New York.

HEADQUARTERS for the Loyd Strawberry Plants; conceded to be the best ever seen in this section; also Miller Raspberry plants. Prices low. C. Howard, Two Johns, Md.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

CALIFORNIA Privet make the finest ornamental hedge, and are perfectly hardy. Fine large plants grown at seashore, two years old, \$3 per hundred. Cash with order. References. First National Bank, Asbury Park, N. J.; State Banking Co., Newark, N. J.; Atlantic Coast Nursery, James H. Cornell, Proprietor. Office, 606 4th Ave., Asbury Park, N. J.

BLANCHING CELERY with paper tubes. If I could remove my one acre celery patch to Georgia or Florida, after cutting this my second crop of celery. I could still cut five hundred roots per day until spring. Fifty cents per square yard on one hundred and fifty yards: one crop of onions, two of celery, grown by two girls. Full information with photo of seed and roots. Price on dollar. Richard Branson, Box 451, Syracuse, N. Y.

Peach Trees for everybody. Wholesale and retail U. S. Government, Box 11, Staekley, Del. Mention American Gardening when you write.

We PAY CASH each WEEK the year round, if you sell Stark Trees. Outfit free. STARK NURSERY, LOUISIANA, Mo., Stark, Mo., Rockport, Mo., Bensville, N. Y. Mention American Gardening when you write.

PEACH TREES, \$3 PER 100.

All kinds of Trees and Plants CHEAP. Cat. FREE. RELIANCE NURSERY CO., Box 1410, Geneva, N. Y. Mention American Gardening when you write.

JAPAN PLUMS

Large stock of best varieties at lowest rates. Full assortment of Trees and Plants. Get our prices before ordering elsewhere. Catalogue free. Established 1869. 150 acres. THE GEO. A. SWEET NURSERY CO., Box 1848, Danville, New York. Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE... Ornamental Trees, Evergreens and Plants. Prices never so low. Japan Plums, 3 yrs., strong, \$1.00 per 100. MONTROSE NURSERIES, Montrose, N. Y. Mention American Gardening when you write.

Miller Red Raspberry Plants

GENUINE, own growing. Reasonable prices. Get Price List of other stock and worthy specialties. P. EMERSON, Nurseryman, Wyoming, Del. Mention American Gardening when you write.

To Nurserymen!

The entire stock of ALICE Grape Vines, unsold, in Nursery, near Rochester, is now in my control. Will sell them and arrange for future propagation and sale. Address

WARD D. GUNN, Clintondale, N. Y. Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodora B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California Mention American Gardening when you write.

1840 OLD COLONY NURSERIES. 1897

Hardy Shrubs, Trees, Vines, Evergreens and Perennials. . .

A large and fine stock of well-rooted plants, grown in a sandy loam. Good plants, best sizes for planting; very cheap.

Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass. Mention American Gardening when you write.

We are ready to fill your order for

PEACH TREES

Guaranteed free from Yellow, Rosette, or San Jose Scale. State Inspectors certificate with each order. All standard varieties including Kiberta, Kamma, and Triumph. Also Pear, Plum, Apple, and other Trees and small Fruit plants. Catalogue on application.

CHAS. WRIGHT, Sanford, Dela. Mention American Gardening when you write.

DO YOU NEED WATCHING?



Or, to put it another way,

Do You Need a Watch?

We sell them, sell them at such an exceedingly low price that you can't afford to go watchless.

Got 'em all sizes and styles.

But we'll just mention two:

An Elgin or Waltham Watch, best movement made, hunting case, accurate time-keeper, handsomely engraved, Swiss Case, heavily gold-plated—last for all time. Ladies' or gentleman's size.

We'll send it to your address with privilege of examination. If it's not entirely as represented, send it back—costs you nothing. If you like it, pay the agent express charges and \$6.50. —That's fair. Or this—

A Hunting Case Watch—beautifully engraved case, first-class movement, any size, heavily plated (14k)—looks just like a \$40.00 gold watch—keeps as good time as any of them. Sent to your express agent with privilege of examination—same conditions as all our watches sent out—and if you like it, pay him \$6.45 and express charges.

If you take our word for it, and send money with order, a handsome chain goes with either, and express charges are paid by us, for the prices named above.

Royal Manufacturing Co.


334 Dearborn St., CHICAGO

Mention American Gardening when you write

W. & D's.
CELEBRATED SURE CROP.
MUSHROOM SPAWN.
8 LBS. FOR \$1.00.
 Liliom Harriet, Roman Hyacinths, Freesias,
 Paper White Narcissus, Callas,
 Etc., Etc.
 Special PRICES on application.
WEEBER & DON,
 Seed Merchants and Growers,
 114 Chambers St., N. Y. CITY.
 Mention American Gardening when you write.

MacDONALD & McMANUS Wholesale Florists and
 Dealers in Cut Flowers
 50 West 30th St., NEW YORK CITY.
 Solicit Shipments of Cut Flowers on Com-
 mission. Best market prices guaranteed.
 Mention American Gardening when you write.

AGENTS WANTED, by the CELE-
 BRATED
GENEVA Nurseries, estab-
 lished 1846. Good Pay. Suc-
 cess ensured to Workers. Address
W. & T. SMITH, GENEVA, N. Y.
 Mention American Gardening when you write.

GROW BISMARCKS IN POTS

 Wonderful Midget Bismarcks bear
 beautiful large Apples in Pots or
 Garden when two years old. \$1.00
 each. Catalogue FREE. Bismarck
 Magnificent Ulimber for Porch, &c.,
 each, prepaid. Send for beautiful
 colored Lithographs giving descrip-
 tions. Address,
 Manhattan Nursery Co.,
 47 U Day Street, New York.
 Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO.
Commission Dealers
 100 Murray St., NEW YORK.
Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
 HOT HOUSE FRUITS A SPECIALTY.
 Mention American Gardening when you write.

POT YOUR PLANTS IN
JADOO FIBRE
 WATER YOUR PLANTS WITH
JADOO LIQUID

And they will thrive
 during the Winter.

Particulars and Prices on Application to

THE AMERICAN JADOO CO.,
 813 Fairmount Ave.,
 PHILADELPHIA, PA.

Mention American Gardening when you write.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

New York.

The Chrysanthemum show at the American Institute Fair this week, was, considering the early date, a grand success; the classes were well filled and competition was keen, thus, for instance, in the class for the best vase of six white blooms there were eight exhibitors, and in the corresponding class for yellow, seven lots were staged, and so on through the list.

In the class for not less than 10 varieties, six blooms in a vase, G. H. Hale, gardener to J. E. Brown, Bellport, L. I., was first; H. Weber & Sons, Oakland, Md., second. Mr. Hale's lot contained Ivory, Vesuvius, Rider Haggard, Mutual Friend, Philadelphia, Mrs. H. Robinson, Major Bonaffon, Miss Georgienne Bramhall, Marie Louise, Golden Gate, and Iora.

In the class for five varieties, six blooms of each, A. Herrington, Florham Farms, Madison, N. J., was first with H. Wright, Miss Georgienne Bramhall, Major Bonaffon, Mrs. H. Robinson, and Ethel Addison; J. N. May, Summit, N. J., was second with smaller, but perhaps neater, blooms. Mr. Herrington was also first in the class for three vases of six blooms each, H. Weber & Sons second.

For the best six blooms of white, Mr. Herrington was again first with six grand erect specimens of Mrs. Henry Robinson; Mrs. William Brennecke was second with larger blooms, but they lacked strength in the neck, and thus failed to show up to advantage. The same variety from J. N. May was also a grand display.

Much interest was evidenced in the competition for the best yellow, inasmuch as the new variety Mrs. Trainor L. Park was exhibited by Ernst Asmus, West Hoboken, in this class. Unfortunately, this truly superb variety was hardly matured enough to be seen at its best, but yet, for all that, it beat the magnificent blooms of Major Bonaffon exhibited by Mr. Herrington.

For the best vase of pink Dailedouze Bros. were first with Glory of the Pacific, J. N. May securing second with a charming pink named Elvena. For the vase of any other color, Mr. May was first with Sunrise.

In the class calling for 12 Japanese blooms, distinct, Mr. Hale was first and Robert Laurie, gardener to Cornellus Vanderbilt, second; both had heavy massive blooms. Mr. Laurie also secured the prize for the largest and best individual bloom in the show, winning it with a finely characteristic bloom of Mrs. Henry Robinson.

The first honors for a group of Chrysanthemum and foliage plants arranged forefect, covering 100 square feet, went to W. Duckam, gardener to D. Willis James, Madison, N. J., with a grand lot of plants and excellent flowers. For the best specimen Chrysanthemum plant A. Welsing, Brooklyn, was first, the variety being Autumn Bride.

Miscellaneous Exhibits.

N. Butterbach, gardener to C. N. Bliss, Oceanic, N. J., staged a remarkably fine lot of Antirrhinum in great variety, also a fine lot of Cosmos, for which he was awarded a special prize. The Diploma of the Institute was awarded to R. Laurie for a remarkable display of Nerines, which, in fact, formed one of the principal attractions of the show; among the most attractive were N. Fothergalli, N. cornuta major, and N. elegans carinata. Judging from this exhibit, the Nerine is worthy of a more prominent place as a cut flower.

Exhibit of Roses.

The F. R. Pierson Co. and L. M. Noe, Madison, N. J., were the two principal competitors for American Beauty Roses, the first-named firm beating three

times consecutively. W. Turner, A. Taaffe, A. J. Wengerter, J. N. May, and Peter Streit were large exhibitors also.

Novelties and Seedlings.

Mrs. C. S. Valentine had an interesting collection of these in 25 vases. There were Semple's Asters, pale pink, crimson, pale lavender, and white, which were by far the best Asters in the show. Nasturtium, Mdme. Gunther's Hybrid; Helianthus cucumerifolius, China Pink, Rosa multiflora nana, a fine specimen grown from seed by exhibitor; Scabiosa maxima plena, novelty of '97, which is all its name signifies, and many others.

Chrysanthemum and Rose Novelties.

A. D. Rose, Jersey City, N. J., exhibited white sport from Glory of the Pacific; Peter Streit, Nyack, N. Y., had a yellow sport from Mrs. Henry Robinson; and William Anderson, Manraoneck, N. Y., a new light colored reflexed Japanese bloom intermediate between Glory of the Pacific and Chalfant in form and build. This will be known as Ben Nevils.

H. Weber & Son, Oakland, Md., exhibited the new Rose Mrs. Robert Garrett, for which was awarded a medal of merit. The flower illuminates in a charming manner in artificial light, but failed to satisfy the judges when seen in daylight, owing to the paleness of the outer petals; this, it was claimed by the growers, was largely due to the extremely hot weather to which the blooms had been subjected during the few days previous.

Madison, N. J.

There was a full meeting of members of the Morris County Gardeners' and Florists' Society in Masonic Hall, Madison, October 13. The president announced that subscribers to the Society had come forward handsomely, and the financial success of the forthcoming show was assured; it only remained for members to work and get together a display worthy of the support and encouragement the Society had received.

Mr. D. H. Burnett who was to have opened a talk on Violets was prevented from attending, but he sent a bunch of good flowers, while a very fine bunch was on hand of flowers grown by Mr. W. Duckham, gardener to D. Willis James. Mr. Duckham opened the talk with a few brief but pertinent remarks, expressing the opinion that past practice must be considerably modified, in fact, entirely changed, as under the old way of planting the Violets outside for the summer and lifting them into the houses in the fall, results had become so uncertain that he had been led to try the Poughkeepsie grower's plan of planting direct from the cutting bed into their permanent bench quarters. By no other method could he have got flowers so fine so early in the season. He was convinced that the growing and lifting of big plants was a mistake, as they usually failed to fulfill promises, but went right back on the grower. Some interesting conversation followed, descriptive of some of the great Poughkeepsie establishments by members who had visited them in Violet season.

Newport, R. I.

Mr. Samuel Matson has been engaged as gardener for David H. King, Jr., Esq., Catherine street. Mr. Matson entered upon his duties to-day; his address is Everett Place.

Our brother gardener, Mr. Robert Laurie, was fairly successful with Chrysanthemums at the Saturday show of the Massachusetts Horticultural Society to-day, 16th, securing first premium for vase of 10 blooms of white with 10 blooms of Mrs. H. Robinson, second for vase of yellow with Marion Henderson, also second with vase of six varieties, one bloom of each.

Mr. Laurie's whole stock of Chrysanthemums are in a very healthy condition, which gives promise of some very fine blooms later on.

The Newport Horticultural Society will hold no Chrysanthemum exhibition this fall, and will hold only one meeting each month, on the fourth Wednesday evening. Members are requested to bring any new

or rare plants which they may have in good condition at the time. A committee on awards to be present at each meeting.

Lenox, Mass.

Some of the charming gardens of this fairy spot have just been inspected by garden committee of Massachusetts Horticultural Society. This was on October 14 and all were greatly impressed with the horticultural beauty of Lenox, which they declare excels any town in Massachusetts, if not in New England.

The visitors had a busy day. At 9 o'clock a delegation from the Lenox Horticultural Society called on them and under its escort, the sight-seeing began. "Sunny (Croft), the country place of George G. Haven (gr. R. A. Schmidt) was first visited. Here the visitors were shown the extensive greenhouses and lawns, after which "Wheatleigh," the palatial country home of Henry H. Cooke (gr. George Thompson) was visited. Mr. Cooke received the guests.

The greenhouses and graperies were seen and the Bostonians re-embarked in their tally-ho for "Shadow Brook," the country place of Anson Phelps Stokes, one of the largest private residences in America. The magnificent lawns and shrubbery were seen, and then the committee was taken to Stockbridge, where the country home of Lawyer Joseph H. Choate was seen. The party was entertained here by C. R. Russell, superintendent of the place.

Luncheon was enjoyed in Led Lion Inn, and the return trip was made to Lenox by the high road, where "Erskine Park," the magnificent place of George Westinghouse (gr. E. G. Norman) was visited. This place, a marvel of engineering work, shown by canals, wooded islands, rustic bridges of stone and iron, and terraced lawns, was declared the most beautiful place seen on the trip.

From the Westinghouse place David Wolfe Bishop's "Interlaken" and William D. Sloane's "Elm Court" (superintendent, W. Griffin) were seen and admired.

Flower Show Posters.—We have received from the Courier Litho. Co., Buffalo N. Y., samples of their new posters for Chrysanthemum shows. These are in two sizes, showing Chrysanthemums in all colors, and could not fail to attract the notice of the passerby.

Chrysanthemum Society of America.

Seedlings.—The committees judging new seedlings will be in session this and every Saturday up to and including November 27.

Exhibitors should make their entries (a fee of \$2 is charged for each variety exhibited) to the secretary, not later than Tuesday of the week in which the blooms are to be shown.

Blooms may be sent to any of the following addresses, express prepaid:

Boston.—A. H. Fewkes, Horticultural Hall.

New York.—Eugene Baillodouze, care of Dr. F. M. Hexamer, Madison Square Garden.

Philadelphia.—Edwin Lonsdale, 1514 Chestnut street.

Cincinnati.—B. Witterstaetter, corner Fourth and Walnut streets.

Chicago.—W. N. Rudd, room 202, 185 Dearborn street.

Silver Cup.—The Chrysanthemum Society's Silver Cup, to be offered annually, will be awarded to the best six varieties, six blooms each (36 blooms in all). The first cup will be competed for October 21 at New York. Competitors should forward their blooms to Dr. F. M. Hexamer, Madison Square Garden, New York City, express prepaid. Competition open to all, no entry fee. For further particulars address Elmer D. Smith, secretary, Adrian, Mich.

Coming Exhibitions.

Sept. 27 to Nov. 4—New York: American Institute (Horticultural Section), Madison Square Garden. James W. Withers, Box 1697, superintendent.

Nov. 2-5—Boston: Massachusetts Horti-

A BARGAIN

We have made arrangements to furnish **THE OHIO FARMER** of Cleveland, O., and **AMERICAN GARDENING**, both papers, one year, making a total of 104 great papers, for only \$1.60.

ONLY \$1.60

THE OHIO FARMER

is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the LEADER of the Agricultural Press of America. A 20-page, 80-column paper EVERY WEEK in the year; employs THE VERY BEST WRITERS that money can produce; a strong, fearless defender of the agricultural interest of this country, and CLEAN in both reading and advertising columns. IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE.

Present subscribers can order this combination at once and have their present term of subscription to AMERICAN GARDENING extended for one year. New subscribers to THE OHIO FARMER will receive the rest of this year free. Address all orders,

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

cultural Society, Horticultural Hall. Robert Manning, secretary.

Nov. 3-4—MORRISTOWN, N. J.: Morris County Gardeners' and Florists' Club, McAlpin's Hall. W. H. Thomas, Convent Station, N. J., secretary.

Nov. 3-5—FORT WAYNE, IND.

—POUGHKEEPSIE, N. Y.: Dutchess County Horticultural Society, Armory, Wallace G. Gomersall, Fishkill-on-Hudson, N. Y., secretary.

Nov. 3-6—INDIANAPOLIS, IND.: State Florists' Association of Indiana, Tomlinson Hall. R. A. McKeand, Garfield Park, secretary.

Nov. 4-6—NORTHAMPTON, MASS.: Northampton Horticultural Society, City Hall. E. J. Canning, Smith College Botanic Gardens, secretary.

—NEW BEDFORD, MASS.: Gardeners' and Florists' Club, Adelphi Rink. A. J. Fish, secretary.

Nov. 5 and 6—PORT CHESTER, N. Y.: The Westchester County Gardeners' Association, Fehr's Opera House. A. Grierson, Ryer, N. Y., secretary.

Nov. 9-11—SYRACUSE, N. Y.: Central New York Horticultural Society, in the Alhambra. D. Campbell, secretary.

—WORCESTER, MASS.: Worcester County Horticultural Society. Adin A. Hixon, Worcester, Mass., secretary.

Nov. 9-12—MT. KISCO, N. Y.: Bedford Flower Club, under management of Westchester County Horticultural Society, Opera House. H. Spavins, Box 52, Secretary.

Nov. 9-13—CHICAGO: Horticultural Society, Armory, Lake Front. W. N. Rudd, Room 202, 185 Dearborn street, manager.

—MILWAUKEE, WIS.: Florists' Club, Lincoln Hall. A. Klokner, manager.

—PHILADELPHIA: Pennsylvania Horticultural Society, Horticultural Hall, Broad street. David Russ, secretary.

Nov. 10-12—SPRINGFIELD, MASS.: Hampden County Horticultural Society, International Chrysanthemum Exhibition. William F. Gale, 881 Main street, manager of exhibitions.

—WACO, TEX.: Waco Floral Society. Mrs. M. B. Davis, secretary.

Nov. 10-13—LOUISVILLE, KY.: Kentucky Society of Florists. F. C. Haupt, 241 W. Jefferson street, secretary.

—TORONTO, ONT.: Gardeners' and Florists' Association, The Pavilion. E. H. Carter, 280 Gerrard street, East, secretary.

Nov. 11-13—PROVIDENCE, R. I.: Rhode Island Horticultural Society, Music Hall. Charles W. Smith, 61 Westminster street, secretary.

Nov. 12 and 13—NEW YORK: N. Y. Gardeners' Society, Hotel Astoria, 84th street and Fifth avenue. J. H. Troy, manager, 865 Fifth avenue.

Nov. 16-19—CLEVELAND, OHIO: Florists' Club. G. A. Tilton, 85-87 Woodland avenue, secretary.

Nov. 20—BOSTON, MASS.: Horticultural Society's Prize Exhibition, Horticultural Hall. Robert Manning, secretary.

Not Fixed—SAN FRANCISCO, CAL.: California State Floral Society. Emory E. Smith, manager.

The Napa Valley Nurseries, Napa, Cal., well known in connection with Leonard Coates, have been sold to John Ames, who has secured the co-operation of William S. Munro, a man of lifelong experience both in nursery and greenhouse, and under the name of Ames & Munro, there will be offered a full line of trees, shrubs, plants; bulbs, and seeds.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and, therefore, requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

Diplomas and Certificates



**HORTICULTURAL SOCIETIES,
FOR FAIRS, INSTITUTES, : :
GARDENERS' CLUBS, ETC.**

These should be selected well in advance of the date needed, and secretaries of above should send now for our set of samples, all of which have been especially designed by first-class artists and engravers for the purpose. Owing to the wide demand for these samples and their expensiveness, we will mail the set of five, postpaid, for \$1.00; money refunded on return of samples, or placed to credit of order, as directed. One single sample sent free on application if the writer will explain the exact purpose for which it is wanted.

A. T. De La Mare Ptg. & Pub. Co., P.O. Box 1697, New York.

HEADQUARTERS FOR ALL PRINTED SUPPLIES

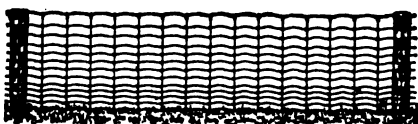
INCUBATORS. Self-regulating. Catalogue from
G. S. SINGER, Cardington, O.
Mention American Gardening when you write



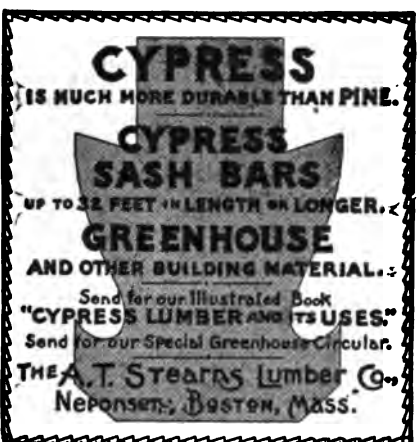
Mention American Gardening when you write.



Mention American Gardening when you write.



A Boundary Dispute.
That is "what many line or 'party' fences become. 'Good fences make good neighbors.' Never heard of a quarrel 'over, through or under' Page Fence.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write



Mention American Gardening when you write.

Raise Hens

People living just outside cities and large towns can (owing to their nearness to markets), make large profits in the poultry business. No other occupation pays better or is easier to conduct. It can be successfully carried on by women or boys and girls, provided they have a knowledge of the right methods of management, feeding, etc. This may easily be gained by faithful study of that best and most practical poultry paper,

Farm-Poultry

It teaches how to make money raising poultry and eggs for market. It is edited by practical poultry raisers, who tell their readers how to prevent and cure all poultry diseases; bring pullets to early laying maturity; make hens lay when prices are highest; build the best houses and yards; keep poultry free from vermin; hatch strong chickens in incubators; caponize and dress poultry for market. Published semi-monthly.

Price, \$1.00 a year; 50 cents for six months. Sample copy and a 25c. book, "A Living from Poultry," sent for 12c. in stamps.

L. A. JOHNSON & CO.,
Custom House St., BOSTON, MASS.

Mention American Gardening when you write.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Open Soil in Pots.

From now on, one of the most difficult points to keep in mind, and to insure, is that of freely open soil. Constant watering bakes the surface; too free use of liquids of every sort chokes the pores of the soil; and the constant effect of the sunlight adds to the hardening and solidifying process. Careful cultivation of the surface will help, after the mischief has been done. Turning the pots frequently will prove a defence from some of the evils which the sun might otherwise cause. Watering from below, instead of at the surface, will avoid much of the difficulty, and the disuse of clogging stimulants will prove another aid. Meantime, it needs to be reiterated that an open soil is, as a rule, absolutely necessary to the health and vigor of indoor plants.

The Best Season for Obtaining Palms.

"If you are a window gardener at what season would you prefer to buy Palms?" I asked the grower of a large firm one day last week. "Autumn is the best season of the whole year to my mind," he replied "because throughout the Summer the plants have been grown with natural heat and with an abundance of fresh air and have become stocky and hardened to an extent that does not obtain at any other season. They are also ready for the resting period. Thus it is not possible for removal into hard conditions to do them the damage that must occur from removal when in the soft and sappy state induced by free growth in close moist conditions."

Choice of Window Palms.

"What do you consider the best Palm for growth in the dwelling," is a question I always have in stock for the expert. The last one to whom this question was put declared unhesitatingly in favor of *Latania borbonica*. After this the choice would be the *Kentias*, *Belmoreana* and *Forsteriana*. Being asked why he considered these better than the *Areca*s, he replied that in the first place they formed handomer plants. The *Areca*s, too, were, as a class, less responsive to a certain amount of handling and growing on, than the others. And complaints from unsatisfied customers, in very large proportion, concerned the *Areca*s.

Camassia Cusickii.

Not one published report concerning the behavior of this novelty of last year has come to my notice. Our own bulb was received late, and in an immature state, and furnished nothing but leaves for the delectation of the experimenter. This year, this *Camassia* is held at the same price as last year, a price



Mention American Gardening when you write.

No. 8.

STANDARD CO.'S

New line of Automatic Feeding

BONE CUTTERS

with gears moved back to prevent clogging. The principal exceeds all others. Nine different sizes ranging in price from \$6.75 to \$39.50. Try them in competition. Sent on trial. Diamond Granite Grit: Clear, strong, lance-like points are the best grinders. Illustrated catalogue.



For Hand Use.

Standard Green Bone & Vegetable Cutter Co.,

Milford, Mass., U.S.A.

Mention American Gardening when you write.

that will keep it from the masses. If it equals the descriptions, it must prove a delightful bulb for those windows that have plenty of room. It is catalogued as a grand new species with especially fine leaves, blooming in wonderful profusion, and carrying hundreds of pale, sky-blue flowers, the blooming racemes being two or three feet long.

Some Satisfying Bulbs.

Among the most delightful of the window bulbs is the great, sweet-scented Jonquill, catalogued as *odoros reginae*. It is so cheap that one may have a pot full of bulbs at a time, and is nearly as large as the Daffodil. It carries more than one bloom to the stalk, is quite lasting, and lights up the whole window with its brilliant yellow. A bulb of different style, unpretentious in coloring, is neglected by many, perhaps because not more praised; this is the *Allium*. At 15c. a dozen, one may be liberal and have one or even two (!) pots at a time. The large clusters of pearly white blooms call forth admiration from all who see them, and are produced successively for some weeks.

Cyclamen Giganteum.

If one has never grown a *Cyclamen*, it needs but a single visit to a flower store, or an exhibition, to become its ardent admirer. The foliage of the new sorts is as admirable, perhaps, as any known plant. It is excellent for window use. As to bloom, when well treated it is almost amazing. As to size, plants are now exhibited by scores which run between an inch and a half and two inches in length of petal, and these are wide enough to form a very handsome flower. It is now shown in both single and double forms, though, of course, capable of improvement in the last.

Palestine Iris.

One of the more enterprising firms offers *Iris* this season as a novelty, under the above name, in four different styles. One is (so-called) black; another sky-blue, with blotches of white and yellow; a third lilac-pink, mingled with rich purple, and still another delicate straw color veined with blue, and blotched with crimson, brown, and black. They are offered as almost without rivals among bulbs for winter pot culture, and booked as requiring no special care, while rivaling in beauty the choicest orchids. Of course the price for all this is not low, as bulbs go.

Pluck and Success.

It takes pluck to invest money in novelties at a high price, without knowledge as to their proper treatment, and with failure often appearing more probable than success. It takes pluck, too, to invest hard-earned cash in decorative stuff, which, beautiful indeed in the florists' hands, may prove anything but beautiful under less favorable conditions. All these the experimenter must do, and the average grower often dares for the interest there is in it. And, somehow, the pluck often seems to bring success with it, just because it is pluck, in company with brains. Far from any of the cities I recently found a little woman luxuriating in greenhouse seedlings, in English Primroses, in *Spiraea Astilbe* for the window, and even in *Genistas*, with all of which she was succeeding marvelously.

Pullets Against Hens.

Almost everybody is matching them in these days. And the pullets are better than the hens, generally speaking, for late fall and early winter. But we have no proof in our own experience that for the whole year pullets are always the best. Indeed, during the past year a certain yard of two-year-old hens has laid better in proportion than the pullets. They were not, however, of the same breed as the pullets, and it is here that a limitation must be put on the statement that pullets are better than hens. Hens of some breeds may do better for the year than pullets of some other breed.

The Early Layer.

One of the farm papers has been having a general discussion as to the safety of forcing pullets to early laying. Half a dozen or so of the best poultry men of the country are represented in

its symposium, and they agree wonderfully in their testimony. The general opinion, deduced from years of actual experience is that the majority of the pullets, of whatever breed, will not begin to lay before five or six months of age. The consensus of opinion is even more strongly in favor of non-forcing methods. Let growth, frame, constitution, first, then you may safely force to some extent the idea.

at the Fence.

Right by the roadside, in two instances, in a single farm neighborhood, 5 chicks, half-grown, were seen roosting. It was a dangerous position for more reasons than one. It is just this position that an interested reader of some Plot notes charges the writer with copying. "Why do you say in the same notes (page 607) that trees are not fit for poultry roosts, and that they make good poultry roosts?" "You have mistaken me," was the reply. "I was merely trying to say that there are arguments on both sides." Now, however, the season is past for such thinking. Now, indeed, the chicks must come off their perches in the trees and try the warmer, dryer, and safer perches of lockable buildings. Let the doors and windows stand wide throughout the day.

the Contagion of Boup.

The great source of contagion with boup, it should not be necessary to say, is the mouth of the sick bird. Allemanations therefrom, in places where other birds can be infected by them, are immediate sources of the disease. The great sick on most places where poultry is raised is a "hospital" for possible sick birds. It need not be wasted if there are no sick birds, for there are scores of times when a small, dry cooping place comes handy. Without a hospital, it is impossible to prevent the spread of infectious diseases of the head through the medium of the drinking water. MYRA V. NORRIS.

SOME BARGAINS IN CLUBS
FOR
Men, Women and the Young.

Ohio Farmer, a giant among the agricultural weeklies, and American Gardening. The two, one year, For \$1.60.

Farm, Field and Fireside, a 32 to 40 page weekly Farm and Family Journal, the best of its class, and American Gardening. The two, one year, For \$1.50.

Country Gentleman. This weekly amply covers the field its title indicates. Every country gentleman should subscribe to it. And American Gardening. The two, one year, For \$2.75.

Farm Journal, the "little giant" of monthly journalism in matters agricultural, and American Gardening. The two, one year, For \$1.25.

Farm Poultry (semi-monthly), and American Gardening. The two, one year, For \$1.50.

Poultry Monthly and American Gardening. The two, one year, For \$1.25.

Above is your choice of two most excellent poultry magazines. And nearly every one of our readers keeps poultry. Why not subscribe to both? The two poultry papers and American Gardening, one year, For \$2.25.

Meehan's Monthly, a horticultural stand-by, and American Gardening. The two, one year, For \$2.85.

Harper's Magazine, as good as ever; none better among the literary monthlies, and American Gardening. The two, one year, For \$4.25.

Ladies' Home Journal, an unrivaled monthly for women, the standard in its class, and American Gardening. The two, one year, For \$1.90.

Youth's Companion, of Boston. At the head of all journals for both boys and girls, and read by the elders, too. New subscribers Only and American Gardening. The two, one year, For \$2.85.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.		A.	B.	General—Con.		A.	B.
American Agriculturist.....	\$1 00	\$1 85	Donahoe's Magazine.....	\$2 00	\$3 00	\$3 00	\$3 00
Breeders' Gazette.....	2 00	2 40	Eclectic Magazine.....	5 00	5 25	5 00	5 25
Country Gentleman.....	2 00	2 75	Electrical Review.....	3 00	3 20	3 00	3 20
Farmers' Advocate (Canada)....	1 00	1 75	Engineering Magazine.....	3 00	4 00	3 00	4 00
Farmers' Magazine.....	1 00	1 75	Forest and Stream (new only)...	4 00	4 20	4 00	4 20
Farmers' Review.....	1 00	1 90	Forum, The.....	3 00	3 60	3 00	3 60
Farm, Field and Fireside.....	1 00	1 50	Frank Harrison's Magazine.....	50	1 40	50	1 40
Farm and Fireside.....	50	1 40	Frank Leslie's Popular Monthly	3 00	3 50	3 00	3 50
Farm and Home.....	50	1 40	Godey's Magazine.....	1 00	1 90	1 00	1 90
Farm Journal.....	50	1 25	Golden Days.....	3 00	3 35	3 00	3 35
Farm News.....	50	1 20	Good Housekeeping.....	2 00	2 70	2 00	2 70
Gleanings in Bee Culture.....	1 00	1 85	Harper's Bazaar.....	4 00	4 25	4 00	4 25
Home and Farm.....	50	1 45	Harper's Magazine.....	4 00	4 25	4 00	4 25
Indiana Farmer.....	1 00	1 85	Harper's Weekly.....	4 00	4 25	4 00	4 25
Mass. Ploughman, new.....	2 00	2 60	Harper's Round Table.....	2 00	2 50	2 00	2 50
" Renewals.....	2 00	2 90	Home Queen.....	50	1 35	50	1 35
Michigan Farmer.....	1 00	1 60	Illustrated American.....	4 00	4 30	4 00	4 30
National Stockman and Farmer	1 00	1 85	Independent.....	3 00	3 60	3 00	3 60
Nebraska Farmer.....	1 25	1 85	Jenness Miller's Illus. Mag....	1 00	1 75	1 00	1 75
New England Farmer.....	2 00	2 50	Judge.....	5 00	5 20	5 00	5 20
Ohio Farmer.....	1 00	1 60	Judge's Library.....	1 00	1 35	1 00	1 35
Orange Judd Farmer.....	1 00	1 85	Ladies' Home Journal, The....	1 00	1 90	1 00	1 90
Pacific Rural Press.....	2 40	3 00	Ladies' Home Companion.....	50	1 45	50	1 45
Practical Dairyman.....	50	1 35	Ladies' World.....	85	1 30	85	1 30
Practical Farmer.....	1 00	1 85	Leslie's Illustrated.....	4 00	4 40	4 00	4 40
Prairie Farmer.....	1 00	1 85	Life.....	5 00	5 40	5 00	5 40
Rural New Yorker.....	1 00	1 80	Lippincott's.....	3 00	3 25	3 00	3 25
Southern Cultivator.....	1 00	1 85	Macmillan's.....	3 00	3 60	3 00	3 60
Southern Farm.....	1 00	1 85	McClure's Magazine.....	1 00	1 90	1 00	1 90
Southern Florist and Gardener	1 00	1 75	Munsey's Magazine.....	1 00	1 90	1 00	1 90
Strawberry Cultivist.....	50	1 85	Nation, The.....	3 00	3 80	3 00	3 80
Strawberry Specialist, new.....	50	1 00	New England Magazine.....	3 00	3 50	3 00	3 50
" Renewals.....	50	1 25	New York Ledger.....	2 00	2 50	2 00	2 50
Texas Farmer.....	1 00	1 75	" Tribune (Weekly).....	1 00	1 90	1 00	1 90
Texas Farm and Ranch.....	1 00	1 85	" World (Tri-Weekly).....	1 00	1 75	1 00	1 75
Horticultural, etc.				North American Review, The.....			
Canadian Horticulturist.....	1 00	1 90	Notes and Queries.....				
Garden and Forest.....	4 00	4 25	Observer, new only.....				
Gardening (Chicago).....	2 00	2 50	" Renewal.....				
Meehan's Monthly.....	2 00	2 85	Outing.....				
Vicks.....	50	1 35	Peterson's Magazine.....				
Poultry.				Philadelphia Press (Weekly)....			
American Poultry Advocate....	25	1 15	Phrenological Journal.....				
Fancier's Review.....	50	1 35	Popular Science Montly.....				
Farm Poultry.....	1 00	1 50	Popular Science News.....				
Ohio Poultry Journal.....	65	1 50	Puck.....				
Poultry Herald.....	50	1 40	Puck's Library.....				
Poultry Keeper.....	50	1 35	Paritan.....				
Poultry Monthly.....	1 00	1 25	Review of Reviews.....				
Reliable Poultry Journal.....	50	1 40	Scientific American.....				
General.				" " Supplement.....			
Advance (Cong'l) new.....	2 00	2 60	" " with.....				
" renewals.....	2 00	2 90	" " Builders' edition.....				
American Field, new.....	4 00	4 25	" " Inc. B'l's edit.....				
" renewals.....	4 00	4 50	" " All 3 editions.....				
American Kitchen Magazine..	1 00	1 75	Scribner's.....				
American Machinist.....	3 00	3 20	St. Nicholas.....				
Aquarium.....	1 00	1 75	Sunday School Times.....				
Arena.....	3 00	3 60	Texas Siftings.....				
Art Amateur.....	4 00	4 35	The Etude, new only.....				
Art Interchange (with plates)..	4 00	4 35	" renewals.....				
Atlantic Monthly.....	4 00	4 30	The Outlook.....				
Ave Maria.....	2 00	2 70	Toledo Blade.....				
Babyhood.....	1 00	1 90	Turf, Field and Farm, new.....				
Baptist Missionary Magazine..	1 00	1 90	" " Renewal.....				
Carpentry and Building.....	1 00	1 85	Womankind.....				
Century.....	4 00	4 60	Young Ladies' Journal.....				
Chicago Herald (Weekly).....	1 50	2 35	Youth's Companion, new only....				
Chicago Inter-Ocean.....	1 00	1 80	" Renewals.....				
Chicago Weekly Times.....	50	1 40	Foreign.				
Christian Herald.....	1 50	2 15	Farm and Home.....				
Christian Register.....	3 00	3 85	Field.....				
Churchman.....	3 50	4 10	Garden.....				
Colman's Rural World.....	1 00	1 85	Garden Work.....				
Cosmopolitan.....	1 00	1 90	Gardener's Chronicle.....				
Delineator (Butterick's).....	1 00	1 90	Gardener's Magazine.....				
Democrat's Monthly Magazine..	2 00	2 60	Gardening, Illustrated.....				
Detroit Free Press (Weekly)...	1 00	1 90	Gardening World.....				
Domestic Monthly.....	1 50	2 15	Journal of Botany.....				
Address all Orders to				Journal of Horticulture.....			
				Kew Gardens Bulletin.....			
				Revue Horticole.....			

AMERICAN GARDENING, P. O. Box 1697, New York.

Success

Engenders

Success!

Take our Advice:

Advertise

in the only

Successful

Weekly

Horticultural

Newspaper

Published

American Gardening

Subscribe

to a

Newspaper

which will make you

Successful

in your

Life's

Pursuit

American Gardening

WHOLESALE MARKETS.

New York.

The stagnation and over-stocked condition of the market in all branches at the present time is deplorable. No such thing as fixed values or moderately good prices are possible any more, no matter which line is taken, whether it be flowers, fruits, or vegetables, the overstock and lack of demand are the same in all.

Domestic grapes are feeling the depression most keenly perhaps; at the beginning of the week 32 carloads were sold by auction, and 12 by private sale.

Pears are very abundant and move slowly; apples are also in very large supply, much of the stock is selling 25c. per barrel lower than regular quotations.

Mushrooms are selling at from 50 to 75c. per pound.

Tomatoes 30 to 40c. per pound.

Cucumbers 75c. to \$1 per dozen.

There is a liberal offering of apples of nearly all kinds; the finest varieties of southern fruit are showing irregular quality and value; fanciest lots are held with some confidence, but it requires unusually high grade stock to reach our outside figures; a large part of the Wine Sap, Johnsons' Winter, etc., are selling in range of \$2.50@3.50. There is a little shipping demand for strictly choice export qualities, and such are fairly steady; the market is liberally supplied with undergrade fruit from all sections for which holders are pressing for sales at weak and irregular figures. Jonathan, western, per barrel, \$3.50@4.50; Missouri Pippin, western, per barrel, \$3@4; Albermarle Pippin, Virginia, per barrel, \$3.50@5; Wine Sap, Virginia, per barrel, \$2.50@4; Johnsons' Winter, Virginia, per barrel, \$2.50@4; Fall Pippin, hand-picked, per d.-h. barrel, \$2.25@2.75; Twenty-Ounce, hand-picked, per d.-h. barrel, \$2@2.50; King, hand-picked, per d.-h. barrel, \$2.25@3; Ben Davis, western, per barrel, \$2.50@2.75; Ben Davis, Jersey, per barrel, \$1.75@2.25; Greening, hand-picked, per d.-h. barrel, \$1.50@2.25; Baldwin, fancy lines, per barrel, \$2.25; Baldwin, fair to good, per d.-h. barrel, \$1.50@2; mixed varieties, fair to good, per barrel, \$1.75@2; mixed varieties, poor to fair, per barrel, \$1.25@1.50; Jersey, winter, open heads, \$1@1.25.

Peaches continue scarce; we see no strictly extra fresh fruit offering and the usual qualities are selling at moderate prices.

Bartlett pears are dull and irregular; fancy lots of Seckle, Sheldon and Beurré Boisé meet a fair demand; common kinds of these, and nearly all other varieties are moving very slowly.

Quinces continue dull; very fancy bright colored stock might bring a slight premium.

Delaware grapes fairly steady; Niagara dull and heavy; Concord moving slowly; prices show no further change; wine grapes in fair demand; sales of Concord, however, above 1½c. are very exceptional.

Cranberries quiet but held steady.

Peaches—Maryland, per carrier, \$1.25@2.25; Jersey, choice, per basket, 80c.@\$1; Jersey, fair to good, per basket, 60@75c.; Jersey, common, per basket, 40@50c.

Pears—Bartlett, large, clean, per barrel, \$2.50@3.50; Bartlett, poor to fair, per barrel, 50c.@\$2; Bartlett, per bushel box, 50c.@\$1.50; Seckle, per barrel, \$2.50@5; Seckle, per bushel box, \$1.25@2.25; Beurré Boisé, per barrel, \$1.50@3; Sheldon, per barrel, \$1.50@2.25; Kettler, Jersey, per barrel, \$1.50@2; Beurré d'Anjou, per barrel, \$1.25@1.75; other late sorts, fair to good, per barrel, \$1@1.50.

Quinces—Apple, good to prime, per barrel, \$2@2.50; poor to fair, per barrel, \$1.25@1.75.

Grapes—Delaware, Keuka, per small basket, 13c.; Delaware, other state, per small basket, 10@12c.; Niagara, western N.Y., per small basket, 7@10c.; Niagara, per 20-pound basket, 30c.; Catawba,

western N.Y., per small basket, 10@11c.; Concord, up-river, per case, 35@45c.; Concord, western N.Y., per large basket, 10@12c.; Concord, western N.Y., per small basket, 6@8½c.; black varieties, up-river, per small basket 5¼@6c.

Plums—French prune, per 8@10-pound basket, 40@50c.; German prune, 8@10-pound basket, 25@40c.; Copper, per 8@10-pound basket, 20@25c.; Gage and Rheine Claude, 8@10-pound basket, 15@20c.; Damson, per 8@10-pound basket, 10@20c.; Damson, up-river, per crate, 30@35c.

Cranberries—Cape Cod, special varieties, fancy, large dark, per barrel, \$6@6.25; fancy, Early Black, per barrel, \$5.50@5.75; choice, dark, per barrel, \$5@5.25; fair color, per barrel, \$4.50@4.75; defective, per barrel, \$4@4.25; per crate, \$1.80@1.85; Jersey, light to medium color, per crate, \$1.50@1.75.

Oranges—Florida, fair to choice, per box, \$3@4.50; grape fruit, bright, per box, \$6@6.50.

Nuts—The receipts of chestnuts are considerably larger to-day and prices show a decline of fully \$1 per bushel; early sales were at the highest prices; later deliveries seldom reach our top quotations. Hickory nuts about steady. Chestnuts, northern, per bushel, 60 pounds, \$4.50@5.50; chestnuts, southern, per bushel, 60 pounds, \$4@4.50; hickory nuts, per bushel, 50 pounds, \$1.50; bull nuts, per bushel, \$1.

There is a fair supply of Orange County onions offering and warm weather has been unfavorable to the condition of the goods; very little of the stock is of choice quality and outside quotations are extreme, although sustained on really fine goods. Cauliflowers are again mostly in bad order and of poor quality and dragging at low and unsatisfactory prices. Celery dull and weaker. Southern green peas are of very irregular quality and value; some poor lots cleaned up at 50c. per basket, but the best met a moderate demand at \$1@1.50. We see no fresh receipts of southern beans. There is little change in other kinds of vegetables.

Cauliflower—Fancy, per barrel, \$1.50; poor to fair, per barrel, 50c.@\$1.25.

Celery—Choice to fancy, large, per dozen, 25c.; fair to prime, per dozen, 12@20c.; small and poor, per dozen, 8@10c.

Corn—Per 100, \$1.25@1.50.

Cabbages—Jersey and Long Island, per 100, \$3.50@4; state, per 100, \$3@3.50.

Cucumbers—Shelter Island, per barrel, \$2.50@3.50; selected, per 100, \$1@1.50; Florida, per crate, 40@75c.

Egg plant—Jersey, per barrel, \$1@1.25; Jersey, per one-half barrel box, 50@65c.

Green peas—Virginia, per basket, 50c.@\$1.50; Charleston, per basket, \$1.25@1.50.

Lima beans—Jersey, Potato, per bag, 75c.@\$1.50; Jersey, flat, per bag, 50@75c.

Onions—Orange Co., red, prime, per bag, \$1.50@2; Orange Co., yellow, per bag, \$1.50; Orange Co., white, per bag, \$1.50@3; Orange Co., inferior, per bag, \$1@1.25; state and west, yellow, per barrel, \$1@1.62; Shelter Island, yellow, per barrel, \$1.75@2; eastern, white, per barrel, \$3@3.50; eastern, red, per barrel, \$2.25; eastern, yellow, per barrel, \$2@2.25; small, white, per barrel, \$3@4.

Okra—Florida, per carrier, \$2.50@3. Peppers—Jersey, red, per barrel, \$1@1.50; Jersey, green, per barrel, 60c.@\$1.25.

String beans—Va., per basket, 25@50c.

Squash—Hubbard, per barrel, 75c.@\$1; Marrow, per barrel, 75c.

Turnips—Russia, Can., car lots, per barrel, 75@85c.

Potatoes—Receipts to-day, 3,840 bbls. The market for round potatoes continues extremely dull and prices are weak and irregular; the small business reported is at unchanged prices, but it is impossible to force sales. Jersey sweet potatoes about steady; Virginia stock weaker; sales mainly at \$1.50@1.62, some of the small barrels weighing only about 120 pounds are unsaleable above \$1.25; a few extra large barrels of fancy reach \$1.75. Long Island, in bulk, per barrel, \$2.25; Jersey, per bag, bag included, \$2; choice round, in bulk, per

barrel, \$1.87@2; fair to good, in bulk, per barrel, \$1.50@1.75; state, in bulk, per 180 pounds, \$1.75@2; per sack, \$1.75@2; western, per 180 pounds, \$1.75@2; sweet potatoes, Vineland, fancy, per barrel, \$2.25@2.50.

Boston.

Pear market slightly easier. Prices named below are for the general runs, readers however might understand that something very fancy of the following varieties commands a little more money than what is mentioned. Seckels \$1.25@2 a bushel; Sheldons or Buerré Bosc, \$2@2.50; Howels, \$1.25@1.50; Commerce, \$1.50@2; Buerré D'Anjou, \$1 a bushel; some Keiffers, Hudson River stock, 1.50 a barrel; Bartletts from cold storage are having hard sledding, and bring most any price the purchaser is willing to give. Readers will remember the Bartlett was inferior in quality to that found most any year, while other varieties have been nearly up to their usual standard.

Lettuce very quiet generally speaking. If large heads can be found, customers can be had willing to pay good fair prices; peaches are higher because of their scarcity; about done for this year. Hot-house tomatoes, good demand, 15@20c. a pound; somehow the frost did not kill all the field stock, and the past few days have brought forward quite good quantities. Best selling \$2 a bushel; inferior not wanted.

Friday thermometer 86 in this city; Saturday 89. Your readers know what that means on fruits and vegetables. Apples and potatoes suffered the most. Cooler weather this morning, with better tone to the market, with Ben Davis generally selling \$2.25 for a choice article. Greenings, Baldwins and Spies \$2.25; fancy eating apples, high-colored stock, take a range of \$2.75@3.50. A few fancy Gravensteins still continue to command extreme figures.

Hothouse grapes come in in quantities to sufficiently supply the demand, at 85@75c. a pound.

In the pony baskets Delawares 10c., Niagaras 9c., Concordes 7c., Marthas 8c., few Catawbas just appearing, bring 7c.

Onions are a shade firmer, \$2@2.25 a barrel; celery 75c.@\$1.25 a dozen.

Horticultural beans 50@75c. bushel; Slevas and Limas \$1@1.50; quantity decreasing and likewise the demand. Just at present market does not seek the second growing of string beans.

Good fair call for cauliflower, 10@18c. a head. Cabbage unchanged 8@4c. each. Cucumbers from the hothouses holding their own, \$3@5 a hundred. With cooler weather there should be a better trade in them.

Cranberries are again easier, although will not quote any lower, \$5@5.50 a barrel; crates \$1.50@1.75.

Peppers and egg plants in limited demand; carrots 50@75c. a bushel; beets 35@40c.; parsnips 65@75c.; turnips 40@50c.; corn gone by.

Squash also was affected by the warm weather; \$1 buys a good barrel of Marrow, while Hubbard, Turbans, or Bay State can be had at \$1.25; Minnesota or Michigan hard-shelled Hubbard moves slowly at around \$20 per ton.

Twelve bunches of mint sold at 40c.; a bushel of parsley can be had for 50c.

Potatoes struck a decline all around of 5c. a bushel; 60@65c. buys best Hebrons. The people this year are taking white varieties by five to one; same as style in dress changes, so the demand for white or red potatoes changes, and no one knows why.

Quite fair demand for mushrooms \$1 a pound; eastern Shore sweets can be had for \$1.50 a barrel, with Norfolk stock in larger barrel \$1.75.

Quinces 35c. a peck; near-by stock quite plenty, likewise shipments from New York state.

Chestnuts very good demand, about \$6 a bushel; shellbarks \$1.50@1.75.

Philadelphia.

This market has been rather quiet this past week; all kinds of stock appears to be plentiful but buyers are very cautious.

Receipts of apples have been larger and prices have been somewhat easier. Peaches are about over; those now on sale are from cold storage. Supplies of grapes have fallen off, and the market is firm with a fair demand. Pears are in moderate supply and move fairly well.

Apples—Jonathan, choice and fancy, per barrel, \$8.25@8.50; Gravenstein, choice, hand-picked, per barrel, \$2.50@3; Detroit and Twenty-One, choice, hand-picked, per barrel, \$2.25@2.50; Ben Davis, choice, per barrel, \$2@2.25; fair to good, \$1.50@1.75; mixed varieties, choice, per barrel, \$2@2.25; fair to good, per barrel, \$1.50@1.75.

Quinces—Choice, per barrel, \$2@2.50; fair to good, per barrel, \$1@1.50.

Pears—Bartlett, choice, per barrel, \$3@4; fair to good, per barrel, \$2.25@2.50; per bushel keg, choice, \$1@1.50; Seckel, per barrel, \$2.50@3.50; per one-half barrel, \$1.50@2; Louise Bonne, per barrel, \$1.50@2; per one-half barrel, 75c.@\$1; Duchess, per barrel, \$1.50@2.

Grapes—N. Y. Concord, 5-pound basket 6@7c.; 10-pound basket, 11@12c.; N. Y. Delaware, per 5-pound basket, 10@12c.; Niagara, per 5-pound basket, 9@11c.

Cranberries—Cape Cod, per barrel, \$4.50@5.50; per crate, \$1.75@2.25; Jersey, per crate, \$1.50@2.

Cauliflowers—Per barrel, choice, \$1.50@2.25; fair to good, \$1@1.25.

Celery—Choice, per dozen, 25@30c.; fair, 15@20c.

Cabbage—Jersey, per 100, \$1.75@2.50. Cucumbers—Per 100, 75c.@\$1; Florida, per crate, 50@75c.

Egg plant—Jersey, per one-half barrel box, 50@75c.

Green peas—Per bushel basket, 75c.@\$1.

Lima beans—Per bag, 75c.@\$1.25; per 100 pounds, \$2@2.40; string beans, Southern, per basket, 30@40c.

Onions—Yellow, per barrel, \$1.75@2.50; white, per barrel, \$2@2.50; per bushel, 60@70c.

Potatoes—Receipts are much larger, and the market has been easier; a large proportion of the supply is of medium to poor stock. Choice, per bushel, 60@65c.; fair to good, per bushel, 50@55c. Jersey Sweets, per five-eighths basket, 25@35c.

A Good Cheap Farm Wagon.

In order to introduce their low metal wheels with wide tires, the Empire Mfg. Co., Quincy, Ill., have placed upon the market a farmers' handy wagon, sold at \$19.95. The bed of wagon is only 25 inches high, fitted with 24 and 30-inch



wheels, with 4-inch tires, either straight or staggered spokes. Catalogue giving full description will be mailed upon application to the manufacturers, who also furnish metal wheels at low prices, made any size and width of tire to fit any axle.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

A THRILLING RESCUE

A YOUNG LIFE SAVED IN A REMARKABLE MANNER

Florence Sturdivant, of Grindstone Island, Saved from an Untimely Death—Her Dangerous Predicament.

From "On The St. Lawrence," Clayton, N. Y.

Among the Thousand Islands is one called Grindstone. It is seven miles long and three wide. The inhabitants of this island are a well-informed class of people who devote their energies to farming and quarrying for a livelihood. In the home of one of these islanders resides Florence J. Sturdivant, the four-year-old daughter of Mr. and Mrs. William H. Sturdivant. She had a remarkable experience recently.



FLORENCE J. STURDIVANT.

In an interview with a reporter Mr. Sturdivant said: "Florence was taken sick in February, 1896, with scarlet fever and we immediately called a physician. After two weeks the fever subsided but Florence was left with a very weak back. Severe pains were constantly in the back and stomach. The difficulty seemed to baffle the efforts of the physician.

"Finally at the end of four months of treatment, we found our patient completely prostrated. At this time we called

an eminent physician, who agreed with the diagnosis of our physician. He prescribed a course of treatment and we followed it faithfully for three months, but instead of improving, Florence failed.

"A brother of my wife, who resided in Canada, but was visiting us, advised us to use Dr. Williams' Pink Pills for Pale People, and I purchased a box of the pills and began to give them to Florence. This was in October, 1896. After using the pills a short time we could see an improvement. Her strength began to return and her appetite was restored. When she had taken one box the pains in her back and stomach ceased and her recovery seemed certain.

"We eagerly purchased a second box of pills and watched with delight the change for the better that was being wrought daily. Florence finally became strong enough to walk a little. She gained in flesh and strength rapidly. By the time she had used three boxes of the pills she was evidently well. We continued the treatment using another box, the fourth, to prevent the possibility of a recurrence of the difficulty.

"We cannot praise too highly the value of Dr. Williams' Pink Pills. I am positive that without their use our child would have been a confirmed invalid."

(Signed) WILLIAM H. STURDIVANT.

Subscribed and sworn to before me this sixth day of April, 1897.

H. W. MORSE, Notary Public.

Dr. Williams' Pink Pills for Pale People are sold by all dealers, or will be sent postpaid on receipt of price, 50 cents a box or six boxes for \$2.50 (they are never sold in bulk, or by the 100), by addressing Dr. Williams' Medicine Co., Schenectady, N. Y.

Henry Strawberry Plant Premiums

Will be shipped to all who desire them this season until ground freezes.

Owing to the wonderful run on this unequaled Strawberry we are preparing 100,000 Henry plants for Spring delivery, and in this connection we desire our readers to remember

Two Facts

1—The Henry Strawberry can be obtained solely through a subscription to AMERICAN GARDENING; as the publishers will not sell plants under any consideration;

2—Neither will Mr. Jerolaman.

Who is Entitled to

New and Renewal Subscribers.—For plants of the Henry will be mailed, postpaid, as a premium to every Renewal or New Subscriber sending us \$1.00 for a year's subscription. When remitting be sure to state if you want this premium.

To Agents and Workers.—For every \$1.00 received from agents and others for New Subscriptions, we mail, postpaid, Ten Henry plants, Five to the New Subscriber and Five to the Agent.

Special to Club Raisers!

Clubs of Ten.—To every agent sending us in a club of Ten New Names and \$10.00, we will forward in payment therefor One Hundred (100) Henry Strawberry Plants, by express, as well as send Five plants, postpaid, to each person in the club.

Mr. Jerolaman's series of articles has been put in pamphlet form; and agents will be supplied with copies on application. Best campaign matter out.

Address Your Letters,

AMERICAN GARDENING,
P. O. Box 1697, NEW YORK.

STANDARD FLOWER POTS

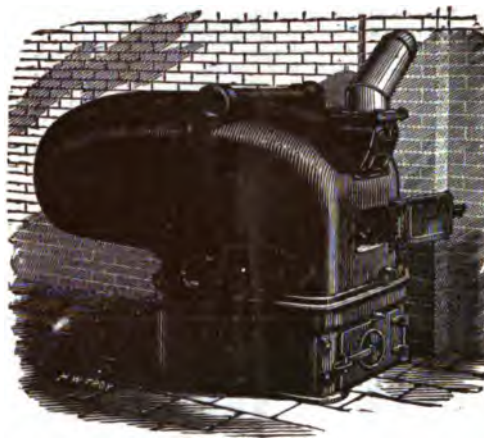
Send for our new price list with extra discounts. All of our pots from 7 in. and upwards have our Patent Excessor Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.
THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.
Mention American Gardening when you write.

GLASS FOR GREENHOUSES, GRAP- ERIES, CONSERVATORIES, GLASS HOTHOUSES AND HOTBEDS.

VANHORNE, GRIFFEN & CO.,
Importers of French Glass. 40 to 48 VESTRY STREET,
Cor. GREENWICH ST. NEW YORK.
Mention American Gardening when you write.

GREENHOUSE HEATING AND VENTILATING,

Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

**FIVE PATTERNS OF BOILERS
NINETEEN SIZES**

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron
Frame Construction erected complete
or the Structural Iron Work ship
ped ready for erection.

Iron Frame Benches with the
"Perfect Drainage Bench Tile"
or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

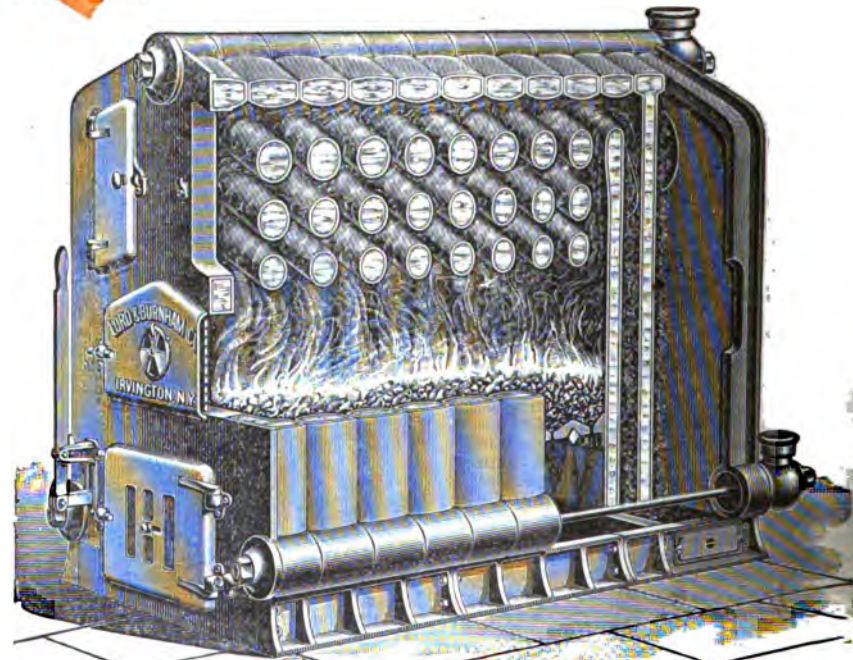
Mention American Gardening when you write.

LORD & BURNHAM CO.,

Cultural Architects and Builders and Manufacturers of Heating and
Ventilating Apparatus.

(Established 1856.)

and estimates furnished on application for Heating and Ventilating Apparatus
complete, or for material only. Highest Awards at the World's Fair.



NEW SECTIONAL HOT WATER HEATER.

Specially adapted to large ranges. Will heat up to 16,500 feet of glass. Highest economy. Moderate cost. Also heaters for smaller work. Send six cents postage to New York office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.
L. XVIII. No. 149. NEW YORK, OCTOBER 30, 1897. 5 CENTS A COPY.
BINDER SERIES VOL. LI. \$1.00 A YEAR.

CONTENTS OF THIS ISSUE:									
American Institute Fair	Dana, The Late Chas. A.	743	Lazy Club, The.....	749	Readers' Notes.....	747	W Va. Horticulturists	744	
Fifth Notice.....	Fall Planting.....	750	Market Reports: N. Y.,		Rhododendrons in La.....	747	Window Gardening	752	
Apple Ben Davis, Original of.....	Fall Work.....	746	Phila., Boston.....	754	Roses Under Glass.....	742			Illustrations.
Berries, Washing.....	Fruit Garden, The.....	746	Marketing.....	746	Season's Vagaries, The	742	Cucumbers, English, A		
Blanching.....	Glass, Cheap.....	747	Mushroom Culture.....	744	Societies, Reports of.....	750	Fine Showing of.....	741	
Cucumbers, English.....	Grapery, Early or Forcing.....	747	Planting.....	744	Sew Bugs.....	747	Dana, The Late C. A.,		
Fungous Diseases.....	Home Plot, All About The.....	743	Poison Ivy, Remedy for.....	747	Trees, Suggested Specimens.....	747	(Supplement).		
Grapery, Construction of Early.....	Inquiries Answered.....	743	Potash, The.....	745	Vegetable Garden.....	747	Grapery, Construction		
		740	Poultry Notes.....	752	Vegetables, Storing.....	747	of Early.....		745
			Private Gardeners.....	750					

THE CULTIVATION OF ENGLISH CUCUMBERS.

Considerable interest attaches to the English cucumber as a crop under glass and we take pleasure in presenting herewith an illustration, from a photograph, of one of the most successful results that have been brought under our notice. The picture speaks for itself and for the skill of the grower whose notes are attached. The variety is Rollison's Telegraph. Mr. Rollison, superintendent to J. E. Brown, Bellport, L. I., gives the following details as to his methods of procedure:

bottom heat. After the plants are well up, give plenty of light, and when the pots are filled with roots give a shift into 3½ or 4-inch pots, and when necessary a further shift into 6-inch pots is given.

"By the time these sizes are full of roots, it is the middle of May and at that time, all the bedding plants being transferred to cold frames to make room, the plants are planted in the benches. I place one wheelbarrow full of rich, light, turfy loam

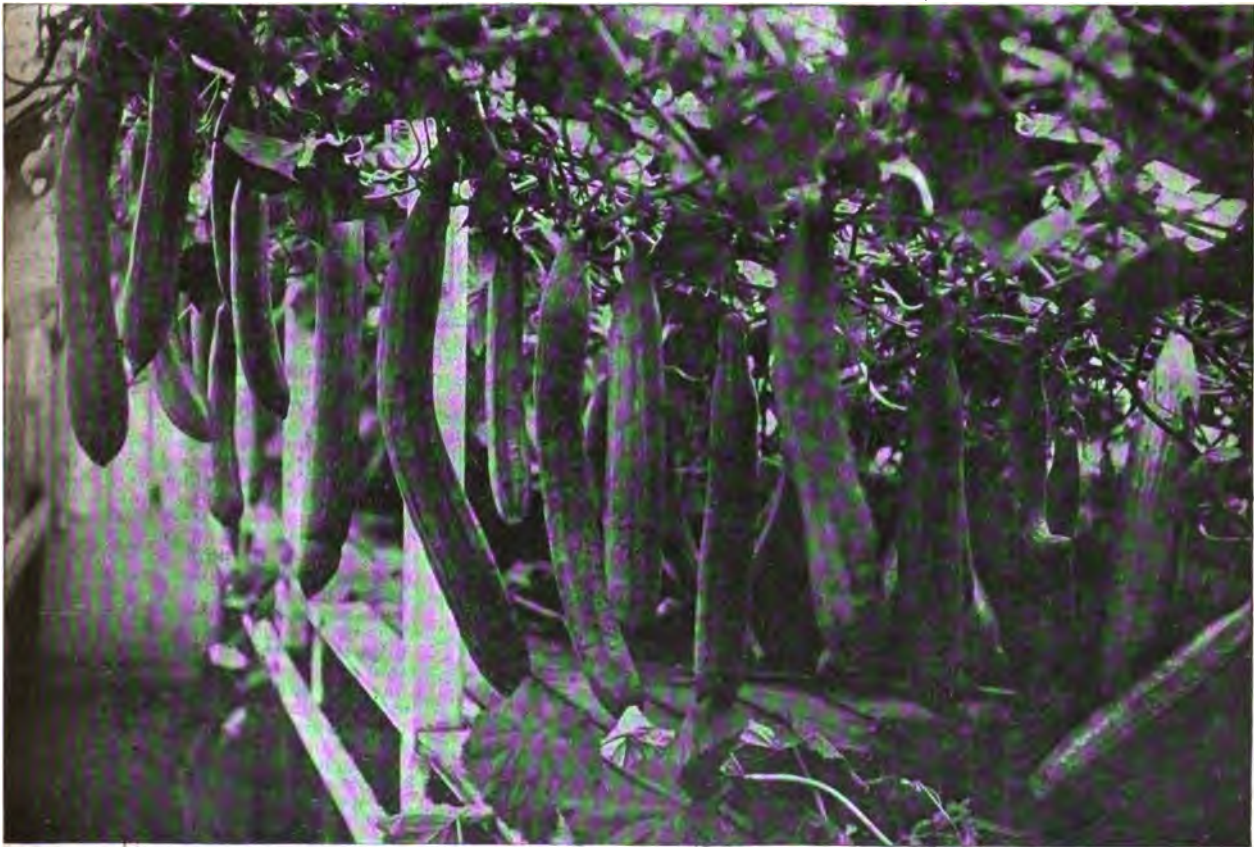


FIG. 209 — A FINE SHOWING OF ENGLISH CUCUMBERS.

Rollison's Telegraph cucumber is a very free fruiting variety and very tender, the fruit growing from 20 to 35 inches in length. In order to have good results the plants must be kept growing and in good health from the time the seedling appears above ground, and the crop can be had all the year round by sowing seed every three or four months. For summer crop I sow seed in March in a temperature of 65°, using a single seed in a 2½-inch pot and plunging in a mild

every six or eight feet on the bench, adding to each barrow load of soil one 5-inch pot of fine bone dust such as is used for Roses, and mix thoroughly. Put the plant on the top of the mound after having allowed sufficient time for it to warm up and from this time on it must be kept well syringed twice a day during fine weather. "The temperature of the house at night is 60 to 65 degrees and by day 85 to 90 degrees, the atmosphere being kept well

charged with moisture during hot days. "I train the growths on a wire trellis about nine inches from the glass, letting the leader run to the centre of the span before stopping it in order to obtain ramifications for covering the trellis. The growths must be regulated by thinning out all useless wood, such as unfruitful laterals, etc., or they would soon become over-crowded and greatly weakened.

"The fruit laterals should be stopped at one, two, three, or four joints above the fruit, according to the space to be filled, and should be trained regularly and not too thickly. By so doing they will be less subject to disease, and will bear an abundance of fruit in succession.

"In former times great pains were taken to fertilize the female flowers, but that is all unnecessary except where fruit is grown for seed, as without such attention the fruit grows to the same size and for table use is all the better for the absence of seeds.

It is necessary to watch closely for thrips, red spider, and green fly, and fumigating must be done lightly and often. The syringe or hose is the best preventive of and cure for red spider if used properly.

"Additional soil should be given as a top dressing every time the white roots appear on the surface of the mound."

Roses Under Glass.

What I call improper watering is a dribble; such quantity applied every day only going down an inch or so and keeping the surface wet all the time. As I have stated before, some varieties need larger quantities of water than others; but that does not mean that the former should be kept in the manner just described. Let my beds get on the dry side, according to the varieties; then they get a thorough watering to the bottom. Of course, there always will be found a few wet and dry spots, and these receive due attention.

There is another matter of equal importance just now. Where plants have made a large growth, they will begin to show signs that they could stand a little extra nourishment. This will be all the more noticeable where very little manure was used in the soil. Last winter I described the formula that gave me both practical and efficient returns for making and distributing manure water, and for the benefit of those who did not read it, or who have since come to the conclusion that feeding with liquid manure is a good thing (which it most assuredly is when properly done), I will repeat it: One pound nitrate of soda and one bushel of cow manure to a barrel of water; or if sheep manure is used, one-half the quantity will be sufficient. This is reduced to one-half when applied with the Kinney pump, which device has my heartiest approval for distributing purposes. This pump, although a very plain affair, is easily put out of working order if the manure water is not properly screened. I find it best to run the liquid through ¼-inch wire mesh netting, before using. A ¾-inch hose must be used for distributing, while ½-inch can be used for suction. As long as you have enough hose to reach through a house the liquid can be made outdoors or in the shop, as the pump will draw it any distance. It is also essential that good hoses and washers be used, as the job must be as nearly air-tight as possible. As the making of the manure water, screening, etc., can be done in a great many ways, I leave that part to your inventive genius. Don't use the liquid too often—once in ten days will be sufficient—and when applying it do it in the same manner as you would apply clean water by allowing the soil to become in such a condition that it will take a good dose to reach the bottom. It is a great mistake to use it when the beds are wet. The nitrate of soda should be discontinued after the plants have attained their deep rich color, but keep on giving the animal manure.

The Late Charles A. Dana.

[See Special Supplement for Portrait.]

Charles Anderson Dana, whose death was briefly recorded in our last issue, was a man prominent in many ways, and best known publicly, perhaps, as the editor of the New York Sun. Of his career as a journalist it is not our province to speak; to our readers Mr. Dana will be remembered as the owner of that fair garden, Dosoris, Long Island, in which was such a collection of rare and interesting plants. In his youth Mr. Dana was a member of the Brook Farm community where his attention was devoted to the care of the fruit, and it is not improbable that the associations of that period, working on his spiritual composition, fostered and brought into stronger manifestation his innate love for nature.

Charles A. Dana had a deeply-seated taste for the natural and the beautiful, with an instinctive love for fine landscape effects, noble trees, and pretty flowers—they were poetry to him, and from his early life he made himself familiar with them. A country home and its restful country associations were to him, as they are to all progressive men, the ideal home, and when prosperity smiled generously upon his business efforts, about twenty-five years ago, he bought West Island, Dosoris, Glen Cove, L. I., and at once set about to convert it from a plain, old-time place, to what a country home consistent with his ideas should be. He built heavy walls of masonry around his island home to protect its banks from the inroads of the sea, graded and rearranged his grounds and otherwise plunged deeply into the gratification of his taste for advanced horticulture, and thus did Dosoris become famed.

The island, consisting of nearly 50 acres, is all a garden and pleasure ground, laid out on advanced common sense principles, giving beauty of landscape with diversity in planting. From the first Mr. Dana began to gather together trees and shrubs and other plants, both native and exotic, the best and rarest of everything, till Dosoris Island was more like a museum of living plants than a busy gentleman's private garden. And Mr. Dana knew his trees and loved them as he did his children. Every one was cultivated as a perfect specimen and to-day the trees on the estate stand unrivaled in the country for fullness, beauty and symmetry of form.

Mr. Dana knew plants intimately, he knew them by their botanical names as well as by their common ones, and he knew their geography, history, and uses. He was, moreover, a connoisseur in the matter of fine fruits, and no garden in the country surpassed his in the way of variety or quality of culinary vegetables, and the growing of mushrooms was a specialty.

Every year he took a two to three month's vacation, and went at various times to some part of Europe, the Holy Land, Egypt, or Mexico and elsewhere, invariably visiting the public parks, botanical gardens, famous nurseries, or arboreta, and his noble, cordial, manly presence, splendid education, and love and knowledge of plants, made friends for him wherever he went. Many a seed and little plant has he brought home from his trips abroad to enrich his collection. He never visited England without visiting the Veitch's nurseries and Kew gardens; and four years ago, when Mr. Nicholson, the curator of Kew, was in this country, he was the guest of Mr. Dana for some days.

Charles Anderson Dana was born in Hinsdale, Cheshire Co., N. H., August 8, 1819, and died October 17, 1897.

"It is over 20 years ago that I first knew Mr. Dana personally and visited Dosoris, and even then he was the friend of such men as Prof. C. S. Sargent, Frederick Law Olmstead, George Such, Samuel Parsons, Dr. Thurber, and other noted botanists and horticulturists, and his love for trees and flowers, his enthusiasm and knowledge soon brought him into contact with most of the progres-

sive horticulturists of this and other countries.

"There were two gardens in Europe Mr. Dana never tired speaking about: they were Fota Island in Ireland, and Castle Kennedy in Scotland, both remarkable for their magnificent coniferous trees.

"Once a year Mr. Dana arranged for a garden party to entertain his horticultural friends, and what delightful gatherings they were! Among the guests who foregathered on these occasions were such men as Judge Addison Brown, Dr. Barstow, Dr. Britton, Sam. Parsons, Sr. and Jr.; Andrew S. Fuller, Thomas Meehan, John Saul, W. R. Smith, George Such, W. A. Stiles, Donald Nicholson, Isaac Hicks, Peter Henderson, J. R. Trumphy, Dr. F. M. Hexamer, and such like kindred spirits. And, alas, how the ranks of these have been thinned by death within the last few years.

"Mr. Dana was at his office in New York for the last time on June 9 of this year. He did not go to the city on the 10th, because he felt unwell, and on the 11th he had his garden party. We all noticed a failing change in our grand old host, and felt it keenly, but not one of us expected that that was to be the last time we should see him alive. Each of us who was there and yet survive, mourn for Charles Anderson Dana, as we would for a brother or a father." W. I.

The Season's Vagaries.

It's a queer land we are living in now. We can gather Hawthorn in no small bits on October 20, and here too is soft bedding stuff as Coleus, Heliotrope, and the host of general summer plants looking as if they were come to stay, but would rather not, after having done the regular summer duty. But perforce, they must, when the temperature reaches 59 degrees in the shade. Cannas, who thought ten days ago, when the temperature dropped to 40, that it was time to lay me down and rest, feel now there was a slight mistake somewhere, and have once more got their eyes wide open and accepting the change are quite gay again in their summer finery, barring the slight disfigurement of worn-out clothing near the feet.

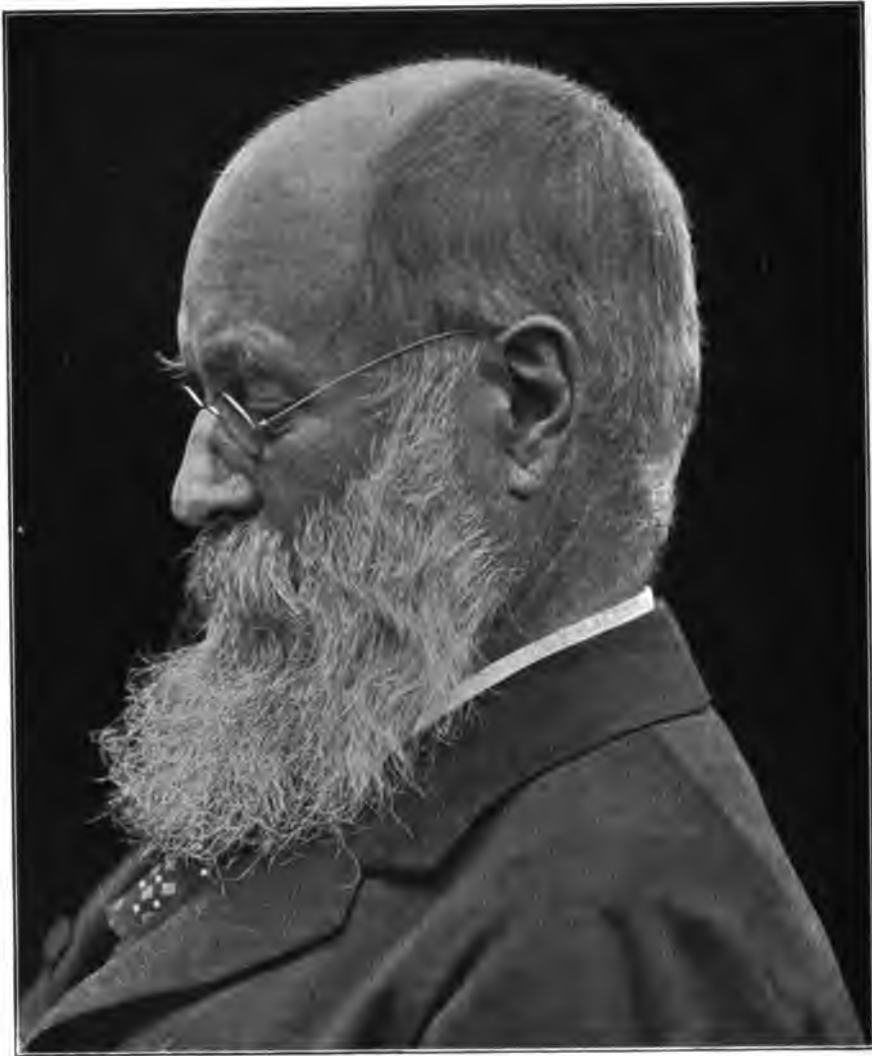
But when we drop around by the late sown Sweet Alyssum and Mignonette, we get the real sniff of early summer, and praise our great wisdom in forgetting to sow it earlier; not that any fault can be found with that sown in early summer and now past the middle age and beauty of its life and usefulness, but sweet sixteen is about the same age now as in grandmother's days, and it is not a bad thing for us to sow a little seed of Mignonette and Alyssum in any vacant spots during August, for indeed their growths seem to look even sweeter when an old brown leaf or two snuggles up to them.

Another showy thing is a border of Helichrysum sown in May—such a contrast to those from seed sown inside and planted out! Rosa Wichuriana near by, has many of its pure white flowers expanded, while a large clump of Salvia Pitcheri shows up well in the distance. The Chrysanthemums worked into spots between the shrubs are looking fine and brighten up things considerably; and farther on it is strange to see a specimen bush of Colutea halepica in full flower and still holding a number of its reddish bladder-like pods from the last crop of flowers in July.

Strolling into the kitchen garden grounds things are much the same, too, for we can see flowers on the currant bushes, ay, and even fruits but of course no leaves, and there are full-grown winter Nellis pears with a batch of younger fruits three-eighths of an inch in thickness on the same tree, while red raspberries are almost plentiful.

But we think it well to stop before the readers believe we have, in this favored spot, everything they have not, and are perfectly satisfied. Well, we are not satisfied, we want rain.

J. HOLLOWAY, Glen Cove, N. Y.



CHARLES A. DANA.

Born August 8, 1819.

Died October 17, 1897.

Some Fungous Diseases of the Celery.

BY BYRON D. HALSTED.

The Celery Blight, or "Rust" (*Cercospora Apli, Fr.*)

The trouble known as celery "rust" is due to a fungus bearing the name *Cercospora Apli, Fr.* This blight, as it should be termed, for there is a genuine rust of the celery, has long been known in this country. Celery plants that are attacked by this disease have their leaves at first dotted here and there with yellowish patches that soon become brown. At first the green is destroyed and then there follows the appearance of the fungus upon the surface, when it produces minute tufts of threads that are brown and bear long spores upon their tips. These are peculiar in shape and resemble that of a base-ball club, with the handle end more tapering. Those who are familiar with a billiard cue may see in the *Cercospora* spore a shape that is not unlike the cue. Some of the spores have the tips drawn out so that the whole is not unlike an ox whip when hung by its tip. The spores are here mentioned in detail as they are so different from those of any other celery fungus and the reader may understand that these blights, while quite alike in their effect upon the host plant, are very different microscopically. This while it is the leading fungus trouble of celery will not be further treated of here, as an article upon the subject has recently appeared in this journal (page 725).

The Celery Leaf Spot (*Phyllosticta Apli, Hal.*)

This fungus was first discovered while examining the leaves for the *Cercospora*. After becoming familiar with it there is no trouble in distinguishing the two, even when growing upon the same leaf. The *Phyllosticta* differs in the nature of the spot, which begins as a dull brown patch, never becoming of the light ashy color so characteristic of the *Cercospora* in one of its stages. In the *Phyllosticta* the leaflet may be attacked only in one spot, which, continuing to enlarge, causes the whole to become brown and lifeless, followed by a torn condition. Two or three of these large, dead, shredded places may be all that the leaf contains, while the balance is healthy and deep green.

When the *Phyllosticta* was first found, the suspicion arose that it and the *Cercospora* might be genetically related, as both of these genera of fungi are considered as simply stages or forms in the life cycle of other species. With this in mind, a careful study was made of the *Phyllosticta* and *Cercospora* by means of cultures. Each reproduced its own kind in every instance. It was particularly easy to grow the *Phyllosticta* upon sterilized petioles in test tubes, and transfers were repeatedly made from pure cultures of this fungus without a trace of *Cercospora* appearing. The pycnidia would form and mature in great abundance within five days, and even upon the surface of the liquid, at the bottom of the tube, as well as the petiole itself. While the proof is all negative, it at least reduced the probability that there is any connection between the *Cercospora* and the *Phyllosticta* of the celery, except the accidental one of sometimes growing upon the same leaf, and this is an occurrence not uncommon to many other species of parasites.

Another Celery Leaf Blight (*Septoria Petroselin, Des.*)

While looking for specimens of the *Phyllosticta* previously mentioned, a blight was found in considerable quantity that proved to be a *Septoria*. This disease differs from the others, to the naked eye, in the more complete killing of the leaf affected. It has been shown that the *Cercospora* gives a spotted appearance, while the *Phyllosticta* produces an occasional large patch that is dark brown and dead. The blight now under consideration often causes the whole leaf to become brown, with small black dots scattered over the surface. A plant at all affected is quite apt to have the whole foliage diseased.

Professor Chester, of the Delaware Experiment Station, has found this species in his state and reports it as quite destructive, "causing in extreme cases a complete wilting of the leaves, and in the case of younger growths a complete destruction of the entire plant."

The Celery Rust Proper (*Puccinia bullata (Pers.) Wint.*)

There are two true rusts of the celery as recorded in the books. The *Puccinia bullata (Pers.) Wint.*, which has a wide range geographically, being found throughout Europe, North America, and Australia, thrives upon a large number of the members of the order (*Umbelliferae*) to which the celery belongs. Prof. W. G. Smith* mentions it as very destructive in England. Dr. O. E. K. Zimmernann† gives six figures to this species, showing various views and stages of the fungus, and mentions a large number of hosts, including the following cultivated species: parsley, dill, and celery. Like many another fungus, its inroads may be expected at any time in this country upon our cultivated umbelliferae.

The other species of celery rust (*Puccinia Castagnei, Thum.*), should it be distinct from the one mentioned above, is perhaps confined to France, where it was discovered.

A Bacterial Disease of Celery.

Celery fields near Greenville and Bayonne, N. J., and elsewhere have been attacked by a peculiar blight of the celery, and particularly the Golden Plume variety. The affected leaves are badly blotched with brown, the diseased spots having a watery appearance that suggested the work of nematodes (eel-worms). A microscopic examination of the infested leaves shows that while nematodes and all forms of filamentous fungi were absent, there was an abundance of bacteria uniformly in all the diseased patches. It was an easy matter to isolate these germs and grow them free from anything else, for inoculation. Leaves of celery were treated with the pure bacteria, and at the end of the third day, as a rule, the disease had spread throughout their whole extent. The germs when introduced into the core of a plant cause this tender portion to decay with greater rapidity than when placed in leaf tissue. The leaf affected turns brown and in all the dark portions abounds in germs. The central portion of a celery plant may be infested when the outermost leaf stalks decay and fall. Dark wavy bands upon the base of the outermost petiole show where the bacteria are at work, and marks the progress of the disease as it spreads through the tender substance of the celery.

It was observed that the bacteria increased most rapidly when the celery is kept constantly moist, but not submerged. Thus, stalks placed partly under water to which germs had been added decayed quickly near the surface, while the portion submerged was the last to spoil. The practical lesson from this is to keep the celery dry or else place it under pure water. That this disease is serious may be judged from the fact that a large grower has lost nearly his whole last crop, the heart of each plant melting away to a worthless mass of rotteness. The same trucker has lost a large per cent. of his carrots from bacterial decay, and this suggests the probable connection between the two.

The spraying with Bordeaux and Cupram, that has proved effective against the *Cercospora* and other blights, will doubtless check the bacteria if applied at the proper time. [See last issue.—Ed.]

The above statements have been drawn largely from special bulletin Q of the New Jersey Experiment Station. New Brunswick, N. J., October 20, 1897.

*Gardeners' Chronicle, Dec. 11, 1886, p. 756, with engravings.

†Atlas der Pflanzen-Krankheiten, heft 3 (1886).

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere

Storing Celery for Winter.

Another Method Described.

To the Editor of American Gardening.

IN AMERICAN GARDENING of October 16 there were discussed some methods for storing celery for winter use, and in connection therewith, I would like to submit to your readers the following plan which is saving me a good deal of labor, besides being much more satisfactory.

About the last week in October I begin to take the crop up. On one side of the field I set a row of boards on edge, and drive stakes on both sides of the boards to hold them in place. Then, with a spading fork I dig the celery, taking up a lump of soil on the roots. The celery is set against the boards, and after one row is in place I draw a little soil against the roots with a hoe and proceed to put in another row in the same way and so continue the operation, until a space three or four feet wide has been filled in when another board is set up. In this way I make a bed of plants 15 or 20 feet wide.

If wide boards are not used so that the tops do not reach a few inches above the celery, another board should be placed on top of the first, and nailed to the stakes, as it is important to have an air space between the tops of the celery and the covering.

The celery will keep better if it is set in rather loosely, as it will then dry out after a rain; and I advise leaving it uncovered as long as can be safely done. When it is time to cover the bed of celery to prevent its freezing, a few boards may be placed across the bed and other boards laid lengthwise on these, leaving some opening for ventilation to be filled with straw on cold days.

The foregoing is often all the covering that is needed before Thanksgiving, and a light covering of cornstalks or some other refuse from the garden will keep out the frost until Christmas, when if it is desired to keep the celery longer, a thick covering of straw or manure may be added.

If an opening is left, and a hotbed sash placed over it to let in the light, the celery will keep longer. The sash may be covered with matting or straw during the coldest weather.

The conditions of preserving celery are keeping the roots moist and the leaves dry, having the plants a few inches apart so that they will not heat, plenty of ventilation, and protection from too hard freezing.

The same boards may be used as were used for blanching the early celery, and the celery may be stored in this way in less than one-half the time required to carry it to the cellar, or to trench it in the ground; further it is more easily taken out and prepared for market.

The outside boards should be banked with straw or manure if the celery is left out until very cold weather, and this has only to be removed to get to the celery, which comes out without any digging, and as no earth comes in contact with it, it is clean and needs no washing, thus saving a good deal of disagreeable work in cold weather.

I have not used this method for keeping celery longer than Christmas, but I think if it is properly put in and covered at the right time, and attention given to ventilation it will keep well until spring. On warm days in the winter the celery may be taken out and removed to the cellar, or a warm room and prepared for marketing as it is wanted.

W. H. JENKINS, Delaware Co., N. Y.

Frosts in some of the late grape districts of New York have resulted in what is practically a total loss. Very little of the crop had been harvested as yet, and although fires were built in different parts of the vineyards, most of the fruit was ruined.

Ellwanger & Barry, nurserymen of Rochester, N. Y., have received notice that medals have been awarded them for their exhibit of fruit at the Hamburg, Exhibition. Two of these medals are gold, two silver, and two bronze.

The Fruit Garden.

Raspberries and Blackberries.—At the approach of winter weather, the tender varieties of these will need some protection. The time for doing the work depending on the locality, always waiting until there is danger of the ground freezing solid, which around New York City will not be for three or four weeks yet.

Planting.—There will be time and opportunity yet to continue the planting or moving of the hundred and one things found necessary in a place of any size. The work should be carefully done, so as not to expose the roots to sun or wind for any length of time. It may be well to remind some of the danger of planting too deeply; few trees will stand it. This is a very common fault, and is accountable for more deaths than all others combined. A sensible way and sure is to have a light straight rod handy to drop across the hole when setting the trees and bushes until you become accurate enough to be able to finish off a hole without covering more than an inch above the original surface mark on the trees. Another point, by which trees and time are often saved, is to always cut back or else thin out the branches of all things moved of extra size, unless a good ball of soil is attached to the roots.

If the Fruit Picking is Done, make a point to clean every fruit, bad or good, from the trees, especially from plums and peaches, and finish the job by then cleaning them from the ground.

Storing Apples.—This mild weather is very bad for apples. If they can be kept dry, outside is much the better place, provided they are where some straw or hay is at hand to be thrown over the barrels at the sign of a cold snap.

Grapes.—The vines are looking fine, the wood hard and brown. If the wood appear green and the foliage is beginning to drop, a sharp shake of the trellis now will help by letting more sun into the center. To get fruit, there must first be ripe wood.

J. HOLLOWAY, N. Y.

Points in Mushroom Culture.

Will you please give me what information you can on the raising of mushrooms? We have a stone quarry on the southeast side of a large hill. It is about 200 feet long, 40 feet wide, and about 15 to 20 feet deep. Our idea was to wall up the open side with stone which would cost us nothing but digging out, also build up stone piers where needed to support the roof which we expected to be of earth about three feet deep. Would this be a suitable arrangement for the purpose? Are there any books on the methods of raising of mushrooms?—W. H. LONG.

—The quarry above described would undoubtedly make an ideal structure for the growth of mushrooms, if our correspondent carries out his ideas as he suggests by walling up the open side, and making a substantial roof which will prevent the entrance of any rain water. In order to support three feet of earth, the roof should be made very strong; this could be done with the aid of sufficient stone pillars underneath; these, if numerous, would necessarily take up much valuable space, and would, moreover, be in the way. Instead of stone pillars we would prefer to use old 4-inch greenhouse hot-water pipes. These can frequently be bought very cheaply; second-hand pipes are often offered in the florists' papers at 5 to 8 cents per foot; they can be cut to any lengths desired.

The length and width of quarry is suitable, but 15 to 20 feet is entirely too deep, and is impracticable, a depth of 8 to 10 feet is ample for all purposes. Nearby builders could suggest some method to roof this; our correspondent does not inform us on this point. A flat roof would be convenient, if large beams are laid across, with suitable supporting timbers lengthwise, and two rows of pillars running the whole length should be sufficient; we would prefer to put a layer of concrete before putting on any earth, by putting the timbers close enough to hold a layer of coarse stone; upon this a layer of cement concrete, and upon this place

the earth as suggested, but 18 inches well tamped would answer the purpose admirably. If good clay can be conveniently found, it could be substituted for the concrete, and will answer the same purpose by putting on a good layer, then puddling.

We would plant some vines on the roof (as Honeysuckle or American Ivy) to bind it together, and moderate the temperature inside; this latter is the most important point in all structures intended for the growth of mushrooms. Such a building may correctly be termed a cave, and if its exterior walls and roof were thickly covered with the vines as suggested above, it should be possible to keep the temperature in the summer down to 58 degrees and mushrooms could be successfully grown all the year round.

In Europe, especially in France, the culture of mushrooms in caves and old tunnels is an important industry. The natural heat of the earth underground being exactly suited for growing them, there is no reason why the same should not be done here equally successfully, if given the same intelligent attention. One of the best books I have ever read on the culture of mushrooms is "Mushrooms for the Million," an English publication recording the remarkable success and methods of a grower for the London market. The methods carried out there would not apply here, owing to the difference in climate. The same system applied in the cave would unquestionably be successful. The only American book on this subject I know of is by Mr. William Falconer, a well-known practical grower. I cannot speak of its merit, as I have never yet perused it; it can, however, be counted a standard work on the subject. (Either of these can be supplied by the publishers: prices respectively 50c. and \$1.50.)

If our correspondent has never before grown mushrooms he should not expect great success the first year. They are easily grown, if given the right conditions, but they will sometimes fail to grow; if some beds prove fickle, don't be discouraged, try again. I have grown mushrooms for 14 successive years both here and in Europe, without one real failure. Then a few years ago I failed utterly for two seasons, and could not grow one pound, although the same methods were practised. After a great deal of disappointment and all kinds of imaginations as to the cause of this failure, I finally proved to my satisfaction, that it was caused by unconsciously using unhealthy manure. I have frequently alluded to this point before in this paper; its importance will warrant its appearance again; it is no small matter to go to a large expense to provide suitable conditions only to be baffled by failure, disappointment and loss.

Regular horsemen like many other human beings, have an uncontrollable weakness for doctoring the horses; to make them spirited and sleek, I have known oil, arsenic, savin, and various other strange compounds given horses, also carrots, potatoes, all of which have the same effect on the mushroom bed, that is utter failure every time; manure from animals thus doctored will not produce mushrooms. Many such failures are attributed to the incapacity of the gardener when the real cause may have its origin in the other hemisphere.

Before utilizing any manure for mushroom beds, be sure and see for yourself if the horses are unnaturally sleek looking; if possible, watch how they are bedged; if anything more is given other than hay and grain, don't use the manure.

Procure manure from plain healthy horses, they may be bedded with German peat moss, leaves or straw; anything that is saturated with ammonia may be used with the droppings. Every morning as the stables are cleaned out the manure should be carried out to a suitable place to cure, and some protection from sun and rain should be given. An open shed is the place to prepare the manure. It should be carefully turned over with a fork four or five times a week, according to its condition, and should be kept warm without allowing "fire fang"; this is done until it is wholly decomposed, and the whole of a brown

color, just moist enough all through without being either wet or dry. In this condition it is ready to be made into beds.

If possible, and for convenience in working, all mushroom structures should be provided at each end with a door large enough for a cart to go right through, so that material can be carted on the spot. In such a cave a space of eight feet wide may be left to give room for the cart. In making the beds commence at one end, and make the beds in ridges 8 feet wide and 2½ feet high; a space of 2 feet may be allowed between each bed, beds to run parallel across on each side of center path, until the whole length is filled.

Do not attempt to grow these without the best spawn purchased from a reliable house. Cheap spawn may prove very expensive, and the best and freshest is surest. Permit no draughts near the beds; and spawn when the heat of the bed is declining and registers about 85 degrees. After the bed is cooled off to 70 it should be covered with two inches of good sod from a pasture. Mushrooms can be expected in six to eight weeks.

W. M. EDWARDS, Conn.

West Virginia Horticulturists Meet.

The Horticultural Society held its annual meeting at Lynchburg, October 14, President Woods in the chair.

Prof. Wm. B. Alwood, of Virginia Polytechnic Institute, delivered an address on the "Present Status of the San José Scale," in which he stated that the first year's inspection revealed the fact that sixteen counties were infested, and in these about sixty private premises were discovered to have scale infested stock. Several nurseries were among the infested premises. The present year's work shows nineteen counties with one hundred premises infested. These cover the entire state. Prof. Alwood stated only in a few instances is the scale spreading in a serious manner, in fact, most of the cases have been so well treated as to largely check the further spread of the trouble, but in some few instances an alarming spread is still going on, and that, unfortunately, the inspector is without funds to properly execute the law. Wherever the law has been properly executed the danger is subsiding.

The discussion took a wide range and resulted in the Society fully endorsing the inspection law as it now stands and resolving to ask the Legislature for an appropriation of \$2,000 to be expended in a more thorough inspection and enforcement of the present law.

A resolution was also adopted endorsing the proposed congressional enactment to prevent shipment of scale-infested stock between the states.

Mr. J. W. Kerr, of Maryland, gave a paper on "Culture of Native Plums," which was a most valuable article. He recommended native plums very decidedly over the Japanese or European plums, and gave direction as to selection of varieties and culture.

The Society after attending to routine business elected the following officers for the ensuing year: President, Samuel B. Woods; vice-presidents, A. F. Mosby, J. B. Watkins, W. H. Boaz, W. B. Alwood, S. L. Lupton; secretary and treasurer, George E. Murrell.

A number of market gardeners and fruit growers met lately at Peoria, Ill., for the purpose of establishing and maintaining a vegetable and produce market. Having been deprived of the use of the market house that had been established over 35 years to make room for a new city hall, the men were obliged to take the matter into their own hands. The secretary would like to hear from other similar organizations. W. H. SIBBOLD, Box 702, Peoria, Ill.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

Early or Forcing Grapery.

To the Editor of American Gardening.

It is not possible, in the limits of this short article, to go into the details of forcing grapes, nor is it necessary so to do, as the subject has lately been given publicity in your columns on several occasions. By reason of the better prices obtained for really good fruit when placed on the market either very early or very late in the season, there is now considerable discussion as to the construction of the early grapery, and this opportunity is taken to present the writer's ideas on the subject.

It will be seen by a reference to the accompanying illustration that the side and top ventilation of the suggested house is regular. The pitch of the roof is 45 degrees which is considerably more than is in common practice. The heat pipes are two-inch wrought iron, and are securely fastened to the iron posts and columns. This size of heating surface is admittedly the best, and the pipes are out of the way, and as they do not come in contact with the grapery border, they do not unduly influence the temperature of the border in places, and are not an obstruction.

The bed for the border is formed of four

can be pulled down to admit air. Then if the paneled ventilation connecting this framework with the grapery is slightly opened, the outside air will be tempered in its passage over the warm outside border, and through the heat pipes of the grapery.

The heat pipe placed along the inside of the retaining wall will assist to temper the air, and at all times allow the operator to maintain any desired temperature, and control the moisture of the border.

Concerning the superstructure of this grapery, there are many points of merit which will appeal to the mind of the professional grower, but the writer's main object is to call attention to the importance of having the entire grape plant under control. The old custom gave us control of the vine, but the root ran at will, to the great detriment of the life and usefulness of the plant. It is a well-known fact that these roots will travel long distances and to great depths, so that our ordinary borders contain little more than the main roots, while the feeding, or fibrous roots, are working in a soil unprepared for, and not congenial to them. This we have learned by digging up old vines that gave no appearance of feeding roots, and were one mass of knots, or root galls. Again under the old methods,

would be to spade out the outer or inner two-thirds of the border taking out roots and all, the other third to be removed with a spading fork (this will leave all the roots for two feet from the vine), toss the roots upwards and backwards so that all the old soil is removed, then refill the border and replace the roots as near the surface and as well apart as possible.

This lot of pruned roots will take hold when the vine is started and produce surprising results. This operation may seem radical, but remember that you destroy but 80 per cent. of the roots every second year, and the vines, if they could speak, would thank you for it.

D. E. HOWATT, Jersey City, N. J.

Different Forms of Potash in Fertilizers.

Potash, like phosphoric acid and nitrogen, does not exist as such in fertilizers, but is held in combination by some other materials. Different substances serve to hold it and modify its properties so that it will serve as food for plants. The nearest approach to pure potash which we have in commerce is "potash lye;" the properties of this material are well

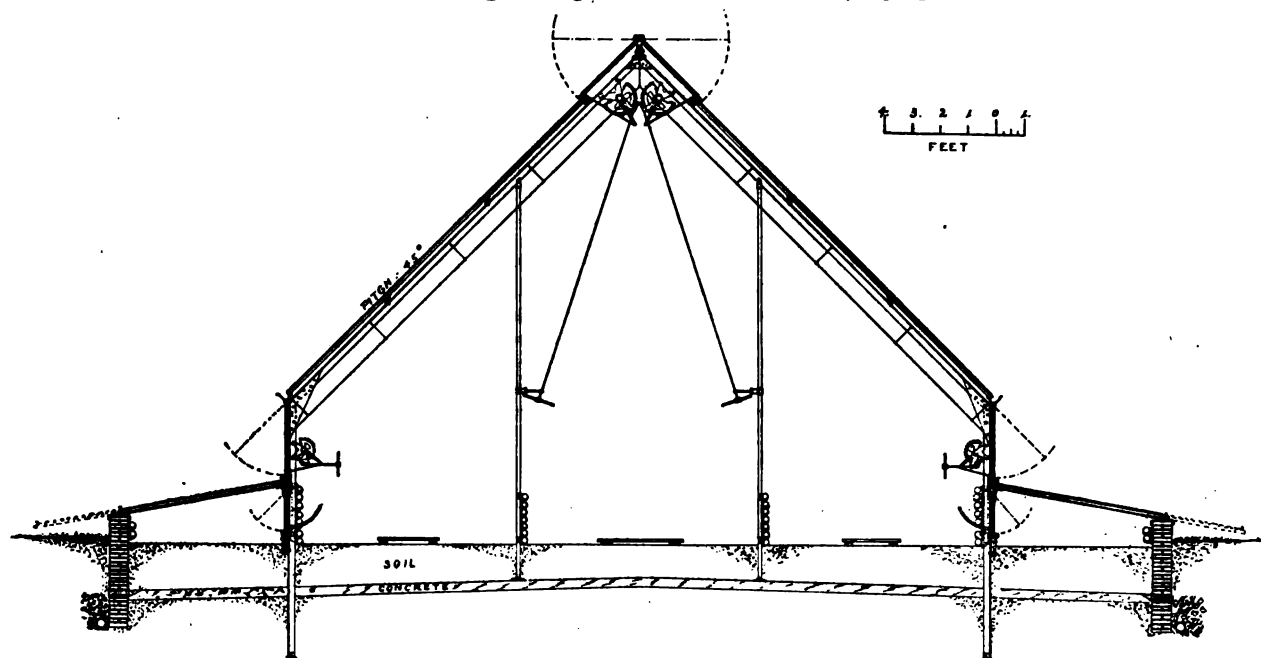


FIG. 210.—CONSTRUCTION OF A FORCING GRAPERY.

inches good concrete, thoroughly laid and finished with a smooth surface. This concrete bed is to have a fall of seven inches from the center of the grapery to its connection with the retaining wall, at the edge of the outside border. The retaining wall, which is placed about six feet from the grapery, to be an eight-inch wall as shown. The surface of the concrete bed to be connected to the outside drain by a three-inch tile leading through the retaining wall, for the purpose of carrying all surplus water from the grapery borders into the outside drain. Such tile openings through the wall to occur every eight or ten feet along the length of the border, and the location of all such border outlets to be carefully marked so that when the vines are ripe, an opening may be made through the border for the purpose of removing roots and other obstructions that would otherwise eventually obstruct the drain. The material for the grape border to be made in the usual manner and placed on this concrete bed as shown.

The sash along the outside of the grapery to be built in a proper manner, and so arranged that when pushed up they form a tight cover and protection for the outside borders. These sash can be used in bad weather to ventilate the grapery at times when it is injurious to open the top ventilation. The bottom of the frame sash can be raised up or the sash

the vines were taken up for forcing early in January, and while the vines themselves, and a few of the inside roots, were in a growing atmosphere, the outside roots, which should be working for the development of the crop, are surrounded by frozen soil, or ice-cold and moisture-laden clods of lifeless earth. Confining the roots as shown overcomes these difficulties, and many others not mentioned.

In addition to the above, it would seem but natural that the vines would flourish in new soil, rather than when forced with their roots working in a border, anywhere from five to thirty years old. To give them this new soil, I would plant the vines in the new border, and at the expiration of the third year, at the time the vines are pruned, I would remove the outside border and replace it. The second year thereafter remove that side of the inside border, and replace it with new soil. Thus making one-half of the grapery border of new material every second year. This method would enable the operator to force his vines as early and as hard as necessary, the vines remaining strong and vigorous, repaying the expenses one hundredfold.

The writer in a somewhat modified form, successfully carried out this principle of root-pruning and border-making, at a period beginning nearly twenty-three years ago.

The best way to remove the old soil

known; it is extremely corrosive in its action and unfit to be applied to the soil.

There are in Germany large natural deposits of material containing potash in combination with muriatic (hydrochloric) acid, and others in which the potash is combined with sulphuric acid. The former is the source of muriate of potash, and the latter of sulphate of potash which is used in fertilizers. The former costs less than the latter and is less valuable as a fertilizer because the chlorine which it contains is detrimental to the growth and quality of some crops. As an example, potatoes and tobacco grown with fertilizers containing muriate of potash are not of as good quality as when grown with fertilizers containing potash as sulphate.

There is no practical difference in the quickness of availability of the two forms, both being soluble in water and in a condition to be immediately taken up by plants.

For field crops such as corn, wheat, grass, clovers, etc., the muriate is cheaper and just as good. For garden crops, tobacco, potatoes, etc., the sulphate should be used.

Different brands contain potash in different forms for this reason: some are intended for one purpose where chlorine does no harm, others for purposes where it is harmful.

JOHN FIELDER.

AMERICAN GARDENING

\$1.60 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1894.

PUBLISHED BY

A. T. DELAMARE PTC. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1597.

REGISTERED CABLE ADDRESS
Commercial Cable) Florenz, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1597, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per agate line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

The Henry Strawberry.

Arrangements have been made whereby a bountiful supply of these plants will be ready for spring delivery to subscribers and agents, and in this connection we beg to call the attention of our readers to our generous offer of these plants in another column. We do not think that a more liberal offer has ever been made than the one now advertised, whereby the agent or worker sending us in a club of ten new names, at \$1 each, becomes entitled to 100 Henry Strawberry plants, while five plants will be sent postpaid to each person in his club. This offer will not apply to a club of less than ten. It may be a very long time before such an offer of such a plant can be made again. The wonderful success which has accompanied our premium offer this fall, in the short time at our disposal to advertise it, leads us to believe that the orders for the Henry Strawberry next spring may exceed all anticipations; however, we have planned for a large supply for delivery and trust to be able to meet all demands upon us. Mr. Jerolaman's series of articles is now being placed in pamphlet form, and copies will be mailed free to all who desire to use same in the canvas for new subscriptions.

All the premium Henry Strawberry plants due to date, have been shipped, except where a request has been made to hold them till spring, and judging by the unsolicited acknowledgments received, they are giving immense satisfaction. In order to reduce weight and hinder excessive transpiration some of the leaves are cut off before shipping, this is especially beneficial during a hot spell, and readers can rest assured all is done for the best.

Origin of the Ben Davis Apple.

COMMENTING upon a statement credited Governor Tanner, of Missouri, with the claim that Ben Davis was raised from seed by a gentleman named Funkhouser, at Burnt Prairie, near the line of White and Wayne counties (this accounting for the synonym, Funkhouser, and which he considers the true name of the apple), the National Stockman gives the following interesting details: It must be well on to forty years since the late J. S. Downer, a careful pomologist of Todd county, in southwestern Kentucky, introduced Ben Davis to Downing, Warder and other pomological authorities. His statement was that old trees were growing in his vicinity which had evidently been sprouts, as sprouts taken from them were identical; but he did not know where the original sprouts came from. According to Warder (American Pomology, page 585) the variety was cultivated years ago—grafted trees in all probability—by Verry Aldrich, in Bureau county, northern Illinois, under the name of New York Pippin. In other sections it was called Baltimore Red, Victoria Pippin, Carolina Red Streak, etc., and also Funkhouser, as has been already mentioned.

Recently investigators in Tennessee would seem to make good the claim that Ben Davis originated in that state. At least this is the light thrown on the matter in the bulletin for May, 1896, issued by the Tennessee Station at Knoxville. The bulletin quotes from the proceedings of the American Pomological Society, in which the late Dr. W. M. Howsley, of Kansas—a pomologist of extensive knowledge—makes the statement that: "In the year 1799 William Davis and John D. Hill emigrated to Kentucky and settled in the part of Logan county now called Butler county. They located near Capt. Ben Davis, the brother of William Davis, and the brother-in-law of Hill. A few years afterward Hill returned to Virginia on business, and when he returned to Kentucky, he brought some apple grafts with him. Hill and William Davis raised fruit from these grafts. Capt. Ben Davis, finding the apple a desirable one, grafted the same for himself, as well as raised a young nursery of it. These trees were sold throughout the county, and for want of knowing any other name the people called it the Ben Davis apple. The Davis family, however, call it the Virginia Pippin."

The defect in this account, says our contemporary, is the unlikelihood of grafting being done in that section as early as the beginning of the present century. It is well known that the Dyehouse cherry, which originated in central Kentucky about 1825 perhaps, was for thirty years or more multiplied by sprouts dug up from the original tree and taken into the adjoining neighborhoods, and that it is only in recent years that it has been budded and grafted. If the term 'grafts' above could be taken to mean 'sprouts' (as Mr. Downer has it) the history would be clearer.

A somewhat different statement is contained in a letter from J. C. Hodges, of Hamblen county, Tennessee, vice-president of the East Tennessee Horticultural Society, and which is copied into the bulletin previously mentioned. Mr. Hodges

writes: "During most of the first half of the present century and up to 1860, or thereabout, there lived on Nolichucky river, within this (Hamblen) county, a wealthy farmer whose name was Ben Davis. His son, B. A. Davis, resides now at White Pine, Jefferson county, Tennessee. On the farm owned by Ben Davis originated the apple in question. From the original tree others were propagated, and for many years before the death of Ben Davis he raised and harvested large quantities of these apples. The house of Ben Davis was on the great stock route from Kentucky to the Carolinas. Many drovers made it a point to stop with him in going and returning from the South. It was his custom to supply their saddlebags with these apples, especially on their return trips. There was no name for the apple known to them, so they called it the Ben Davis. Grafts or clones were taken to Kentucky and the apple was propagated and disseminated there before it was in Tennessee. I have obtained these facts on personal inquiry from the son of Ben Davis above mentioned. And besides, these facts are well known in the neighborhood among the older people."

It would be of public interest if any further light could be thrown on the origin of this apple, and our readers are invited to add any information they may be able to give.

We wish it to be distinctly understood that no notice whatever can be taken of unsigned communications. This will be an explanation to some correspondents who have not received any reply to their questions.

Marketing Farm Produce.

The scope of this latest farmers' bulletin issued by the U. S. Department of Agriculture (No. 62, Marketing Farm Produce, by George G. Hill, formerly manager and editor of the American Farmer, Illinois, pp. 28, figs. 7) does not include a discussion of the present conditions of the trade, but, taking the trade as it is now constituted, aims to give to producer and shipper the benefit of such information as a careful study of the situation at the market end indicates they badly need.

The success of the average farmer, being dependent upon an aggregate of small profits, is probably more threatened by the careless manner in which his produce is packed than by any other one thing, as the expected profit may be turned into loss by the imperfect or improper condition in which an article reaches market, when if proper care had been exercised, or judgment used, there would have been a prime article offered for sale, and perhaps a handsome net profit, instead of a demand for money to pay freight bill returned to the shipper.

The bulletin, after giving a description of the trade, general rules about packing, and an exposition of the commission merchants' position, goes into the detail of particular directions for packing various kinds of produce, and can be secured free of charge by sending a request to the Secretary of Agriculture, Washington, D. C.

The full contents are: The trade in farm produce; general rules; packing; the commission merchant; particular directions; butter, eggs, poultry and game, meats and potatoes, small fruits, vegetables, and honey.

Died.—At the Charterhouse, London, Eng., as the result of a street accident, Peter Lund Simmonds, aged 83 years. Mr. Simmonds was the author of several encyclopaedic works in connection with the uses of plants and plant products; he also compiled voluminous statistics regarding their commercial importance, and was the author of Tropical Agriculture.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Washing Strawberries.—Mr. Jerolaman speaks of sandy strawberries being washed. The only successful way I ever tried was to take a common screen sieve with mesh about one-eighth to one-quarter inch, and tack it to convenient sized frames made of 1x2-inch slats. Carefully pour the berries on the sieve, one layer thick, and while one person pumps, the other keeps moving the screen in such a manner as to allow all berries to come under the pump spout; by having a number of screens made, the berries can be allowed to drain before being placed in boxes. Washed berries should never be shipped, and enough mulch should always be used to give the gloss to a berry instead of having to wash it. Washing berries, no matter how neatly done, never gives full satisfaction to either the grower or the consumer.—C. C. N.

Sow Bugs.—In your issue of October 16, page 717, W. F. Preston, Ill., inquires how to get rid of sow bugs. Take Paris green and mix with sugar until same shows green color. In the evening put it near the place where the bugs lodge and in the morning it will be eaten. Should there be any sow bugs left, repeat the process. Sow bugs certainly eat young plant growth, and they are especially fond of Violet buds, and if our entomologists will not believe it, they ought to try by putting a handful of sow bugs in a Violet bed. It will save them the trouble of picking Violets.—N. BUTTERBACH.

—On page 717 of your issue of October 16, W. F. Preston inquires about the sow bug, and it is stated the entomologists claim they do not eat. In preparing soil for my greenhouse I worked a lot of them into the dirt through the manure, and as soon as my cabbage, lettuce, or Parsnips came up they began to eat them. As I had to fire up at 10 or 11 P.M. sometimes I had a good chance to watch them. On going from the furnace room I have seen them scamper off leaving fresh cut plants. I tried Slug Shot without effect. I expect to try dusting and spraying with Paris green. Can we fumigate with anything that will kill animal and not plant life?—C. E. K.

—On page 717, Preston asks about sow bugs. Entomologists may be O. K. in theory, but facts show differently. The sow bug cost me more than one hundred dollars on my greenhouse crop of cucumbers last spring. They gnawed the bark off the vines and attacked the young cucumbers, and eat them up until the cucumbers outgrew them. They go down in the ground daytime and come up and work at night, but I caught them at work both night and day. I kept them down some with slacked lime. I shall use both lime and tobacco tea this next crop if they bother again. I am quite sure the tobacco will fix them if strong enough.—J. J. THOMAS, Colo.

Remedy for Poison Ivy.—I have noticed in recent issues quite a number of receipts to kill Poison Ivy. Here is a simple and with most people a sure remedy: Sweet spirits of nitre. Apply whenever itching begins, or at least three or four times a day. I hope this may be a boon to some sufferer.—C. E. K.

Specimen Trees Suggested.—There is quite a long list of desirable ornamental trees that would answer the purpose indicated by the inquiry of South Michigan, p. 715. There are, however, few trees that would "draw the attention of passersby" as would a Magnolia Soulangiana while in bloom. It grows 20 to 30 feet high, spreading round top, should be kept low. Also wants the protection of leaves about the roots and evergreen branches to shade the top the first two

winters. The double flowering Crab is very showy and attractive. Of the Maples, Wier's Cut Leaved and Schwendler's Purple Leaved are the most showy. Salisburia, (Maiden-hair tree), from Japan is not beautiful, but attracts attention, being so different from our trees. Paul's double-flowering Thorn is a very desirable small tree. Birch, Cut-leaved Weeping, is very graceful and unsurpassed in beauty. Catalpa speciosa, large leaves, showy.—C. D. ZIMMERMAN, N. Y.

Cheap Greenhouse Glass.—Possibly some of the readers of AMERICAN GARDENING would build a greenhouse were it not for the expense of glass. If they will go to their photographer, they will be able to get old negatives, 8x10 inches, for about \$1 a hundred. They can be easily cleaned by soda and warm water. They make the best of glass for the purpose, being free from defects.—COLUMBUS.

Blanching Celery.—I find one of the neatest ways to blanch celery for fall use is by using paper. I use "The Best" Red Rope Roofing, manufactured by Fay Manilla Roofing Co., of Camden, N. J., which can be bought for one cent a square foot. Cut it into pieces 18 inches square, wrapping it around each bunch and tie with a string, selecting the best bunches, and you will have the best all the time. The papers can be raised up to see when it is blanched enough, replacing them on others through the season. When through using them in the fall, put them away, and they will last many years. For the idea I am indebted to my friend Branson, who has his ad. in this journal.—COLUMBUS.

Rhododendrons.—Will some of the readers living in Louisiana write something of their treatment of Rhododendrons? I have bought plants several times, and friends have sent me fine plants, but I have never succeeded in keeping one long enough to see it bloom. I have used wood's earth, rotted sods and river sand, digging out all the other soil, have tried in sun and shade, but always to fail. It is the same with Azaleas, except the native ones. I have taken AMERICAN GARDENING a number of years and never find it lacking in good things, still I do wish some wise Southern folks would write an article for it once in a while. I am an old woman of sixty, and find time to scratch.—MARGARET E. CAMPBELL, Louisiana.

Fruit dealers in Chicago have to keep a sharp lookout for their safety. Recently Justice Gibbons signed warrants for the arrest of twenty-eight fruit dealers in South Water street. They are charged by the health department with violating the city ordinance which requires fruit to be of uniform size in all baskets, boxes, and barrels, and makes it illegal to cover fruit with any kind of netting.

More lay nonsense.—"Nature will have to hustle if she's going to keep up with the modern horticulturist. A Maryland fruit grower has succeeded in raising peaches this week with skin like that of apples, and next season he intends to grow a peach with a skin that can be removed like that of an orange." The foregoing is from a Maine Journal. Who is it that sends such paragraphs to the papers?

Local variations.—It is a queer country where one has half a dozen different climates in his back yard, so to say. And the joke of it is, one is always discovering others. In fact, the farmer and fruit grower are obliged to make a special study of their individual climatic conditions to obtain the best results. In the cultivation of flowers the peculiarity is even more marked.—In November Lipincott's.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

The Vegetable Garden.

The Fall Work.—This season is now so far advanced that it is necessary to have all crops secured from frost, by placing them in a cool cellar, or they may be pitted outside. The best and simplest method to keep roots in good condition late into the spring, is by the use of any ordinary barrels, partially sunk into the ground, thus forming nice cool pits. Into the barrels so placed, and in a sheltered situation in the garden, lay the roots closely and compactly until the barrels are full; if the interspaces are filled with fine sand, so much the better. Such roots as carrots, salsify, turnips, parsnips, horse radish, beets, will keep in good condition a long time, if they are covered securely from frost. Do not be in too much hurry to cover heavily in the fall; give covering only when frost occurs, and as cold weather approaches put on enough to keep out the frost. When they are eventually covered for the winter, they should not be disturbed until needed for use.

Parsnips keep much better if left where they grew and heavily mulched. The required number of rows needed for winter use should be covered deeply with leaves and coarse litter so that they can be dug up readily when wanted in hard weather.

Cabbages are very easily kept through the winter, if merely pulled up by the roots and laid in rows of about three for convenience. Put them heads down, roots up, as close together as they can be laid; then cover with soil dug up from each side, putting on about 10 inches, higher in the middle to make it ridge fashion, so as to shed off the water. The whole may then be covered with a mulch of coarse litter, to prevent the frequent thawing and freezing from alternating too quickly. Otherwise they will not keep well.

Leeks can be earthed up in much the same way as celery, and stored in a similar manner. If they are earthed up where growing, they will generally keep well by covering them over with some coarse material.

Brussels Sprouts.—In very cold latitudes these could be dug up with good roots, and planted quite thickly together in batches of about five rows each, covering them over with leaves, litter or salt hay, but not before settled cold weather. They keep admirably in cold frames or cold graperies, in which case they should also be covered over with hay to prevent too much sun heat from rotting them.

Rhubarb and Sea Kale.—Dig now old clumps for winter forcing, leaving them out to the action of frost and they force better; they should not, however, be permitted to freeze solid, as when needed they cannot be conveniently handled. A few good roots of these placed in heat every two weeks will give constant supply.

Horse Radish.—Dig this up before ground freezes hard; the thick pieces can be used for culinary purposes, and the small roots of ¼ to ½ inch in diameter will make excellent slips to set out in the spring.

Asparagus tops should be cut and left where dropped. Scatter a little of anything that will quickly burn, as dry weeds, leaves, or straw, then set fire to the whole, endeavoring at the same time to cover all the bed with fire for at least a few minutes. This is to destroy the spores of asparagus rust.

Pole Beans will now be over. The poles may be pulled up and stood on end in some out of the way place until needed again next spring. Quite frequently when these beans are frozen, there are many fine pods on the vines; if these are not required for immediate use, they should be left upon the vines, and these in turn can be put anywhere out of the reach of frost. The beans if left thus will keep fresh for several weeks.

W. M. EDWARDS, Conn.

There is Not a Home in the Land

But calls for a yearly Calendar.

Every family tries to get one or more; generally more.

There are Calendars and Calendars

Some are good, some bad, most of them indifferent.

There Will Not be a Calendar Issued for 1898

To exceed in artistic elegance, finish, beauty of designs and effective coloring, the one we to-day offer as a premium to every subscription to **AMERICAN GARDENING** received before December 31, 1897.

EVERY SUBSCRIBER IS ENTITLED TO ONE

AND CAN EASILY EARN TWENTY.

OUR magnificent **Rose and Girl 1898** six sheet **Art Calendar**, two months to a sheet, each sheet $8\frac{1}{2} \times 11\frac{1}{4}$ inches, is superbly lithographed in eleven colors, and printed on hammered paper; the whole tastefully tied with silk bow—undoubtedly a work of art fit for the most elegant home, and as handsome a Calendar as was ever published. Each one of the six designs presents a distinct type of female loveliness and a fresh study in roses, the coloring on each sheet being rendered in harmony with the design. There is not a line of advertising on the Calendars to detract from their value. They will not be sold by us for less than \$1.00 each.

Description

Who is Entitled to a Calendar?

EVERY SUBSCRIBER renewing before **December 31, 1897**, enclosing Five Cents additional to pay packing and postage.

EVERY NEW SUBSCRIPTION—To induce people to test the value of **AMERICAN GARDENING** we will send the Calendar absolutely free to every name received direct not previously on our mailing list. Remit \$1.00 for A. G. 12 months.

EVERY ONE sending us a club of Four 3-month trial subscriptions at twenty-five cents each, will get a Calendar, free as a premium, by return mail.

EVERY NEW name sent in by an agent.

NOTE.—We have ordered manufactured for us a large stock of these superb Calendars in the endeavor to have sufficient supply for all demands, but will not guarantee to fill orders after supply is exhausted. Therefore, order yours now.

Special to Agents

A copy of our Art Calendar to show people will clinch the argument and obtain the subscription. Bona fide Agents will be mailed one copy, securely wrapped, on receipt of only Twenty-five cents (one-fourth its value.) Armed with this superb Calendar we misjudge human nature greatly if any ordinary mortal cannot secure a big list of new subscriptions every day. Every new subscriber you send us gets a Calendar by return mail.

We Pay Agents

Every new subscription at \$1.00 entitles the agent to **Five of the Wonderful Henry Strawberry Plants**, to be delivered next Spring. Thus 100 new subscriptions would secure agents 500 plants; a possession worthy of your consideration. Every new subscriber taken by agent will receive one of our Art Calendars free by return mail.

Agents who do not want the Henry Strawberry Plants can retain as their payment **20 cents in cash** on each subscription they take, or will be credited **twenty-five cents** on any book, magazine or publication they wish to obtain through us.

Address all
correspondence

AMERICAN GARDENING, P. O. Box 1697, New York.

REMIT BY P. O. or EXPRESS MONEY ORDER—IT IS SAFEST.

The Horticulturists' Lazy Club Once More.

With the beginning of another collegiate year, the Horticulturists' Lazy Club, which was such an interesting feature of the horticultural department at Cornell last year, renewed its former activities. To say that the interest was renewed would hardly be to accord with facts, since that has experienced no waning even during the summer vacation. A half-dozen or so of those who have always been in the habit of attending the meetings, spent the summer about the University, and each Monday night during the vacation they met at the club room and there discussed some question or talked over some problem which had presented itself. The attendance was, of course, small, as compared with the number which attends during the term, yet the interest in the meetings was in no wise abated, and it may not be inconsistent to say that since the opening of the fall term a year ago, every Monday night has found enough members present at the club room to hold a meeting.

Since the present term began, which was about the middle of September, the meetings have been well attended, and while numbers are not essential to a successful meeting, yet a good large company is conducive to enthusiasm, there, as well as at most other assemblies.

Analyzing the Sugar Beet.

At the meeting of September 11, the experiment station chemists, Mr. Cavanaugh and Mr. Kinsely, explained the method of analyzing the sugar beet. As it is very largely a mechanical process the various pieces of apparatus used in making the determinations were brought into the room and a beet was analyzed, each step in the process being fully explained, thereby clearly demonstrating the entire process.

While a subject like this is not, strictly speaking, a horticultural subject, yet on account of the prominence of the sugar beet question at the present time, such a topic is a pertinent one even to horticulturists.

Some Old Horticulturists.

The subject of the last meeting (September 18), was a biographical one. Several members of the club had looked up something concerning certain "old patriarchs" of horticulture who lived during the last of last century and the first of this, and at this meeting there were given short biographical sketches of the lives and work of four men who exerted a powerful influence in their time. Their names were: Thomas Fessenden, Thomas Bridgman, Grant Thorburn, and William Cobbett.

The average horticulturist of to-day little appreciates the part which these men, with many others, have played in shaping the course of horticulture in America, and it is a lamentable fact that so little effort is made to become enlightened in this phase of our horticultural history.

H. P. G., Ithaca, N. Y.

Florida's orange crop for 1897-'98 will soon be going forward to market, and a good many estimates are being made as to what the crop in the state will figure up. Last season it amounted to about 125,000 boxes. That was the first year's fruit after the freeze, and the crop was accordingly very small, especially when it is recollected that the product of the state had been numbered in millions rather than in thousands of boxes. A careful estimate made by a gentleman who is well informed, places it in round numbers at about 200,000 boxes.

English Nursery and Seed Trade.—We are in receipt of a copy of Wynne's newly issued "Nursery and Seed Trade Postal and Telegraphic Address List for 1897." This is a useful and reliable list in three sections: General, Telegraphic, and London Trade, and cannot fail to be of use to those having dealings with the trade in the United Kingdom. The book can be had for 50c.

Questions Answered.

Our Inquiry Department is a Bureau of Information, to which subscribers can apply freely for advice on all subjects in the field of horticulture.

* * We cannot undertake to reply by mail.

Spring or Fall Planting.

I expect to transplant a lot of old shrubs this fall, half being Altheas. Please state if fall or spring is the most suitable time for it to be done.—J. H. C.

—There is but little to choose between either fall or spring; our own preference always goes toward fall planting when possible; there is more time then.

Lettuce in Hotbeds.

Can lettuce be profitably grown in winter in hotbeds, running hot-water pipes through the beds?—H. C. C. M., Conn.

—Fully good results may be obtained, but as to whether it would be profitable is quite another matter. Frames are apt to cause damping, etc., unless very carefully handled. A frame unlike a house is dependent upon the weather as to ventilation, etc.

Wintering Hydrangeas.

How should I treat a Hydrangea Otaksa that finished blooming in August?—H. C. M., Conn.

—Store in a dry cellar or barn and keep partially dry. In the early spring cut away the old flowering heads and new growths will break out from below.

Bigonia venusta.

I have one placed in ground under bench in greenhouse which last year bloomed profusely. This year with same treatment it has grown very large, spreading all over roof, but not a single blossom has it had. What can be done to make it bloom?—M. W., New Jersey.

—Possibly the plant has been growing a little too vigorously and has thus failed to ripen up. There is a good chance of its flowering freely next season.

Wood Shavings and Mushrooms.

Do you believe that the use of shavings from a planing mill, for bedding, renders the horse manure unfit for mushroom raising? Of course I shake out the coarse stuff.—J. L.

—Wood shavings of any kind in manure used for mushroom growing cannot fail to be injurious to the spawn and have its effect upon the crop later. Some growers go so far that they will not use such manure under any circumstances, neither will they if sawdust has been used in the bedding. We do not go quite so far as that. But on the other hand, we would certainly prefer to have the manure free from either.

Linnæus Rhubarb is the Best.

Is there any earlier and better variety of rhubarb or pie plant than Linnæus? If so, what is it?—W. H. W.

—It is the earliest and best on the market for all-round purposes.

Chrysanthemum Lists.

I am interested very much in your journal, and also in Chrysanthemums, and would like if you would, at some early date, furnish a list of Chrysanthemums with height of growth, time of blooming, color, and shape of flower. I think the same would be of great interest to a number of readers, as not one of the catalogues which I have consulted gives the time of flowering nor height of growth.—W. C. L.

—This subject was treated upon thoroughly one and two years ago in AMERICAN GARDENING. However, in a short time after we have completed making our notes on the behavior and character of the varieties now in bloom and those following, just such an article as suggested will be published.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

The Free Seed Humbug.—The government contract for the supply of seeds for free distribution has been awarded to Henry Phillips Seed and Implement Co., of Toledo, Ohio. There were 42 bids ranging from \$69,000 to \$144,000. How much longer will this fraud be tolerated?

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

Business Cards.

O. D. Zimmerman, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished.

LAND DEVELOPMENT. consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1897, New York City.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER. English, married, no children, wants charge of lady's or gentleman's private gardens; proficient, strictly temperate, disengaged Oct. 27. D., Eldred, Sullivan Co., N. Y.

SITUATION wanted, by competent gardener on private place, 22 years experience; for further reference apply to James C. Clark, Supt. Seawanhaka Greenhouses, Oyster Bay, N. Y.

SITUATION wanted, as gardener; life experience in all branches, greenhouse, grapes, fruits and vegetables; 45, married, no family. Protestant. Address, P. E., Norwich Town, Conn.

COMPETENT hothouse operator desires position with responsible parties having extensive ranges; experience with mushrooms, cucumbers, tomatoes, and ordinary crops. "Hothouse," care American Gardening.

SINGLE young man desires position as foreman in private or commercial place; good experience in all branches; 12 years' best references from leading nurseries in Europe and America. Address F. A. J., care American Gardening.

WANTED. position as head gardener and manager of private place; thoroughly versed in all branches of horticulture and landscape work; accustomed to the management of help. 25 years' experience. References. H. J. Smith, Millbrook, N. Y.

WANTED.

[Rates, etc., same as in "For Sale" column.]

WANTED to buy novelties in flower seeds and specially choice strains of florists' flower seeds, etc., to introduce in Australia. Give references when writing. Fred. C. Smith, Seedsman, Angaston, So. Australia.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

RASPBERRY and Strawberry plants. Chas. C. Nash, Three Rivers, Michigan.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boekoop, Holland.

TO LET, \$100; fine truck or garden farm, 12 acres adjoining shore; warm fertile soil; one hour out; daily boat; good big house; barn. S., Room 705, 56 Pine St., New York.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

CELERY blanched with paper tubes and grown by a little boy; outwold all others on the Syracuse market Saturday the 23d. Full information with photo. of second crop. Price one dollar. Richard Branson, Box 451, Syracuse, N. Y.

CALIFORNIA Privet make the finest ornamental hedge, and are perfectly hardy. Fine large plants grown at seashore, two years old, \$5 per hundred. Cash with order. References, First National Bank, Asbury Park, N. J., State Bank, Newark, N. J., Atlantic Coast Nursery, James H. Cornell, Proprietor. Office, 606 4th Ave., Asbury Park, N. J.

W. & D's.
CELEBRATED SURE CROP.
MUSHROOM SPAWN.
8 LBS. FOR \$1.00.
 Liliam Harriet, Roman Hyacinths, Freesias,
 Paper White Narcissus, Caldas,
 Etc., Etc.
 Special PRICES on application.
WEEBER & DON,
 Seed Merchants and Growers,
 114 Chambers St., N. Y. CITY.
 Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and
 Dealers in Cut Flowers
 50 West 30th St., NEW YORK CITY.
 Solicit Shipments of Cut Flowers on Com-
 mission. Best market prices guaranteed.
 Mention American Gardening when you write.


Lane's Steel Car-
riage Jack
 Ask your hardware
 dealer.
 Makers **LANE BROS.**
 Poughkeepsie, N. Y.
 Mention American Gardening when you write.


Peach Trees for everybody. Wholesale and retail
 R. E. JONES, Box 11, Stockley, Del.
 Mention American Gardening when you write.

FREE ILLUSTRATED
CATALOGUE...
 Ornamental Trees, Evergreens and Plants. Prices
 never so low. Japan Ivy, 2 1/2 ft. strong, \$3.50 per 100.
MONTROSE NURSERY, Montrose, N. Y.
 Mention American Gardening when you write.

PEACH TREES, \$3 PER 100.
 All kinds of Trees and Plants CHEAP. Cat. FREE.
RELIANCE NURSERY CO., Box 1410, Geneva, N. Y.
 Mention American Gardening when you write.

Miller Rod Raspberry Plants
 GENUINE, own growing. Reasonable prices. Get
 Price List of other stock and worthy specialties.
P. EMERSON, Nurseryman, Wyoming, Del.
 Mention American Gardening when you write.

JAPAN PLUMS Large stock of
 best varieties at
 lowest rates. Full
 assortment of
 Trees and Plants. Get our prices before ordering else-
 where. Catalogue free. Established 1890. 150 acres.
THE GEE, A. SWEET NURSERY CO.,
 Box 1848, Danville, New York.
 Mention American Gardening when you write.

GROW BISMARCKS IN POTS

 Wonderful Midget Bismarcks bear
 beautiful large Apples in Pots or
 Garden when two years old. \$1.00
 each. **CALSON HANSEN ROSES.**
 Magnificent Climber for Porch, 60c
 each, prepaid. Send for beautiful
 colored Lithographs giving descrip-
 tions. Address,
Manhattan Nursery Co.,
 47 U Day Street, New York.
 Mention American Gardening when you write.

1840 OLD COLONY NURSERIES. 1897
Hardy Shrubs, Trees, Vines,
Evergreens and Perennials.
 A large and fine stock of well-rooted plants,
 grown in a sandy loam. Good plants, best
 sizes for planting; very cheap.
 Priced Catalogue free on application.
T. R. WATSON, Plymouth, Mass.
 Mention American Gardening when you write.

We are
 ready to
 fill your
 order for
PEACH TREES
 Guaranteed free from Yellows, Rosette, or San
 Jose Scale. State Inspectors certificate with
 each order. All standard varieties including
 Elberta, Emma, and Triumph. Also Pear,
 Plum, Apple, and other Trees and small Fruit
 plants. Catalogue on application.
CHAS. WRIGHT, Seaford, Dela.
 Mention American Gardening when you write.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Mr. Pettigrew, Superintendent of Parks, Boston, Mass., is at present on a tour of inspection to the park systems of other cities.

John N. Hauser, said to have been the oldest florist in New York City, died on Sunday, October 24. He was born in Bavaria in 1816, and after an education in Leipzig, Vienna, and Paris, returned to his home. Before he was 25 his reputation as a horticulturist was such that the post of landscape artist at the Imperial Palace at Paris was offered to him. This post he held until 1844, when he came to this country, and, in partnership with Eugene Ball, a former Parisian and an old friend, started a greenhouse business on what was then the old Bloomington road, at a place which is now Fifth street and Broadway. Three years later the firm was dissolved, and Mr. Hauser went into business at Twenty-eighth street and Third avenue.

Boston, Mass.

The following were the awards by the Massachusetts Horticultural Society at the exhibition on October 16:

For plants—Gratuites, John L. Gardner, display of Orchids; J. E. Rothwell, display of Orchids; Mrs. A. O. Simes, collection of wild plants.

For flowers—Chrysanthemums, six blooms, distinct named varieties, James L. Little; second, Robert Laurie; third, J. W. Howard; Ten blooms of one variety, long-stemmed, in vase, Robert Laurie; second, the same; third, J. W. Howard. Gratuites—J. H. Leach & Son, Ivory Chrysanthemums; C. E. Richardson, tuberous Begonias; James Conley, display; Mrs. E. M. Gill, display.

For fruits—Gratuites, Elbridge Torrey, Sheldon pears; William C. Clapp, Sheldon pears; S. S. Crosby, quinces; F. W. Damon, Iowa grapes.

For vegetables—Gratuites, Mrs. E. M. Gill, lima beans; W. Heustis & Son, celery and cucumbers.

Philadelphia, Pa.

The improvement about the grounds of the University of Pennsylvania is still going on. During the past weeks a large amount of shrubbery has been planted about the lawns and College Hall, and arrangements have been made in the botanical gardens for the planting of a large variety of bulbs recently received from Holland. A new building 60 feet long and 28 feet wide for the accommodation of the large collections of palms now at the botanical gardens is under the course of erection.

Several men employed about Horticultural Hall in Fairmount Park, are nursing very sore hands, and one of them is just sure that he is out of danger from blood-poisoning from stings received in handling prickly cactus plants. All summer the tall, slender cacti have stood with soldierly erectness in a bed at the east end of the hall. When frost threatened the head gardener gave orders for their removal into winter quarters, and the men having the job, went about it without the usual precaution of wearing buckskin gloves. They were stung in many places by the needles that bristled from the stalks, but, as the pain at the time was not great, they kept at the work until all the cacti had been housed. A few hours later their hands began to puff up and soon swelled to ungainly proportions. They suffered intensely for several days.

New York.

The floral part of the great horticultural exhibition at the American Institute Fair, Madison Square Garden, has since our last issue improved greatly. Excellent it has been, during the previous

weeks, the fifth week eclipses all others for quality and general display; Chrysanthemums, of course, predominating. Several years ago it was supposed the limit was reached for quality and size in these, and that was gained at exhibitions held in November. At that time early flowering varieties were considered too small for exhibition purposes, but at the cup contest on Thursday, October 21, and again on Monday of this week, blooms equal to anything ever seen in this city were staged. The National Chrysanthemum Society deserves credit for the encouragement given to early varieties by the gift of silver plate for the best six varieties, six blooms of each.

The Cup Contest.

The earliness of the season prevented several exhibitors, who had intimated their intention of competing in this contest, from carrying out their desire; five of such sent in notice at the last minute of their inability to complete their set. Only three exhibitors materialized—John N. May, Summit, N. J.; Mr. Hobart M. Park (gardener, W. H. Harvey), Port Chester, N. Y.; and A. Herrington, gardener to Mr. H. McKay Twombly, Madison, N. J. These competitors, however, made a grand showing, considering the early date. The cup went to A. Herrington with the following varieties: Miss Georgienne Bramhall, Vivand-Morel, Mrs. Henry Robinson, Ethel Addison (English), Major Bonaffon, and Mayflower. The blooms were generally larger and possessed more body and stem than the second prize lot, which came from Mr. May, whose flowers, though, showed remarkable chasteness and beauty; and it is rare that six fresher or better bred blooms are shown. His vase of Evangeline will long be remembered as one of the most exquisite exhibits. Henry Hurrell was also very strong; Sunrise and Nemesis were his weakest vases. Mrs. Robinson also lacked the size of his rival's. Mr. May was awarded the Medal of Merit of the American Institute. Mr. Park came third with the following sorts: H. L. Sunderbruch, Iora, Sunrise, Australian Gold, W. Simpson, and Mrs. Henry Robinson. This gentleman's blooms were uniformly good, but failed to average up in the totals. Mr. Park received the American Institute Diploma.

On Monday, October 25, the contest was renewed and in greater force. The class for five varieties, six blooms of each, brought three strong competitors, only a very few points dividing first and second. A. Herrington was again first with Major Bonaffon, Vivand-Morel, Frank Hardy, Mrs. Henry Robinson, and Miss Georgienne Bramhall. Messrs. Dailedouze Bros. were second with a grand lot, but having failed to get their Mrs. Trainor L. Park ready in time threw them out, and their Mrs. H. Robinson was not equal to Mr. Herrington's monsters of the same variety. Mr. J. N. May followed with the same exquisite chaste kinds as he had put up previously.

For three vases Mr. Herrington was again first and Dailedouze Bros. second. For 12 distinct blooms shown singly, W. Duckham, gardener to D. Willis James, Madison, N. J., was first with a marvelous lot. His varieties were Lady Lyon, Playfair, Gladys Vanderbilt, Philadelphia, Iora, Mayflower, H. L. Sunderbruch, Mrs. J. Peabody, Charles Davies, Miss Helen Wright, Modesto, Miss Georgienne Bramhall, Mrs. H. Robinson. Dailedouze Bros. were second.

The best vase of yellow again brought Major Bonaffon and Mrs. Trainor L. Park in competition, and the new aspirant to public favor had to lower its colors to the older kind. If it had been judged on the second day the awards would have been reversed, for Mr. Herrington's winning lot failed to keep up and expand as did Mr. Asmus' Trainor L. Park.

For the best white Mr. Herrington was again first with the six best Robinson in the show; G. H. Hale was second with Mutual Friend.

Dailedouze Bros. secured first for the best pink with Mr. Hale second. For any other color Robert Laurie, gardener to Cornellus Vanderbilt, Newport, R. I., was first with his new variety Peter Kay. A remarkable feature about these six

wonderful blooms was that they were the same six that had been certificated by the Chrysanthemum Society on the previous Saturday. The blooms keeping in such a manner that they were good even four days later.

Pompons and hardy kinds were exhibited by A. D. Rose, Jersey City, and J. G. Aitken, gardener to M. R. Cook, Esq. Bayonne, N. J., Mr. Rose securing first with the largest display.

Julius Roehrs, Carlton Hill, covered the entire stage 400 square feet, with a most charming group of Palms and other foliage plants aided by a few Chrysanthemums to give color effect. It is seldom that such a well-arranged lot of plants and of such quality is seen in an exhibition. The Medal of Superiority which was awarded seems almost inadequate for such a grand lot.

Mr. Herrington also deserves more than ordinary notice for a table 6x13 feet, which he covered in a masterly manner with Orchids and Ferns. He easily won the Medal of Excellence which was the award for the winning lot. George Savage, Rochester, N. Y., exhibited a new Cypripedium named Anna Savage, which received a first-class certificate, a description of which together with the Orchids in the above named will be held over till next issue. The F. R. Pierson Co., was again first for Beauty and Meteor Roses, thus winning four times consecutively. J. N. May, L. M. Noe, and J. H. Taylor were the principal prize winners in other classes. Carnations were well shown by Dalledouse Bros., H. Weber & Son, Oakland, Md., and G. Smith, Orange, N. J.

Coming Exhibitions.

Sept. 27 to Nov. 4—NEW YORK: American Institute (Horticultural Section), Madison Square Garden. James W. Withers, Box 1897, superintendent.

Nov. 2-5—BOSTON: Massachusetts Horticultural Society, Horticultural Hall. Robert Manning, secretary.

MILWAUKEE, WIS.: Florists' Club, Lincoln Hall. A. Klokner, manager.

Nov. 3-4—MOORESTOWN, N. J.: Morris County Gardeners' and Florists' Club, McAlpin's Hall. W. H. Thomas, Convent Station, N. J., secretary.

Nov. 3-5—FORT WAYNE, IND.

FREDERICK, MD.: Frederick Co. Horticultural Society.

POUGHKEEPSIE, N. Y.: Dutchess County Horticultural Society, Armory. Wallace G. Gomersall, Fishkill-on-Hudson, N. Y., secretary.

Nov. 3-6—INDIANAPOLIS, IND.: State Florists' Association of Indiana, Tomlinson Hall. R. A. McKeand, Garfield Park, secretary.

Nov. 4-6—NORTHAMPTON, MASS.: Northampton Horticultural Society, City Hall. E. J. Canning, Smith College Botanic Gardens, secretary.

NEW BEDFORD, MASS.: Gardeners' and Florists' Club, Adelphi Rink. A. J. Fish, secretary.

Nov. 5 and 6—PORT CHESTER, N. Y.: The Westchester County Gardeners' Association, Fehr's Opera House. A. Grierson, Rye, N. Y., secretary.

ANDOVER, MASS.: Florists' and Gardeners' Club, in Town Hall. J. D. Fairweather, P. O. Box 597, secretary.

Nov. 9-11—SYRACUSE, N. Y.: Central New York Horticultural Society, in the Alhambra. D. Campbell, secretary.

WORCESTER, MASS.: Worcester County Horticultural Society. Adin A. Hixon, Worcester, Mass., secretary.

Nov. 9-12—MT. KISCO, N. Y.: Bedford Flower Club, under management of Westchester County Horticultural Society, Opera House. H. Spavins, Box 52, Secretary.

Nov. 9-13—CHICAGO: Horticultural Society, Armory, Lake Front. W. N. Rudd, Room 202, 185 Dearborn street, manager.

PHILADELPHIA: Pennsylvania Horticultural Society, Horticultural Hall, Broad street. David Rust, secretary.

Nov. 10-12—SPRINGFIELD, MASS.: Hampden County Horticultural Society, International Chrysanthemum Exhibition. William F. Gale, 881 Main street, manager of exhibitions.

WACO, TEX.: Waco Floral Society. Mrs. M. B. Davis, secretary.

Nov. 10-13—LOUISVILLE, KY.: Kentucky Society of Florists. F. C. Haupt, 241 W. Jefferson street, secretary.

TORONTO, ONT.: Gardeners' and Florists' Association, The Pavilion. E. H. Carter, 280 Gerrard street, East, secretary.

Nov. 11-13—PROVIDENCE, R. I.: Rhode Island Horticultural Society, Music Hall.

Charles W. Smith, 61 Westminster street, secretary.

Nov. 12 and 13—NEW YORK: N. Y. Gardeners' Society, Hotel Astoria, 84th street and Fifth avenue. J. H. Troy, manager, 865 Fifth avenue.

Nov. 16-19—CLEVELAND, OHIO: Florists' Club. G. A. Tilton, 85-87 Woodland avenue, secretary.

Nov. 20—BOSTON, MASS.: Horticultural Society's Prize Exhibition, Horticultural Hall. Robert Manning, secretary.

Not Fixed—SAN FRANCISCO, CAL.: California State Floral Society. Emory E. Smith, manager.

Chrysanthemum Society of America.

Seedlings.—The committees judging new seedlings will be in session this and every Saturday up to and including November 27.

Exhibitors should make their entries (a fee of \$2 is charged for each variety exhibited) to the secretary, not later than Tuesday of the week in which the blooms are to be shown.

Blooms may be sent to any of the following addresses, express prepaid:

Boston.—A. H. Fewkes, Horticultural Hall.

New York.—Eugene Dalledouse, care of Dr. F. M. Hexamer, Madison Square Garden.

Philadelphia.—Edwin Lonsdale, 1514 Chestnut street.

Cincinnati.—B. Witterstaetter, corner Fourth and Walnut streets.

Chicago.—W. N. Rudd, room 202, 185 Dearborn street.

Secretary's Official Report.

Reports of Committees of Chrysanthemum Society of America on seedlings exhibited on Saturday, October 16, 1897.

AT NEW YORK.

Mrs. Arthur J. Caton, Exhibited by W. N. Rudd, Mt. Greenwood, Ill., Japanese; Light mahogany. Scored 55 points.

Ben Nevil, Exhibited by Wm. Anderson, Mamaroneck, N. Y., Japanese Reflexed; Creamy white, striped pink. Scored 80 points.

AT CINCINNATI.

Boundless Snow, Exhibited by E. G. Hill & Co., for H. Yoshiki, Oakland, Cal., Japanese white. Scored 87 points.

Mrs. Arthur J. Caton, Exhibited by W. N. Rudd, Mt. Greenwood, Ill. Japanese Bronze. Second 75 points.

AT PHILADELPHIA.

Mrs. Arthur J. Caton. Exhibited by W. N. Rudd, Mount Greenwood, Ill., Japanese Reflexed; Bronze. Scored, commercial 88; exhibition 91.

AT BOSTON.

Mrs. Arthur J. Caton. Exhibited by W. N. Rudd, Mount Greenwood, Ill., Japanese; Reddish orange, reflex orange-yellow. Scored 75 points.

There is more Catarrh in this section of the country than all other diseases put together, and until the last few years was supposed to be incurable. For a great many years doctors pronounced it a local disease, and prescribed local remedies, and by constantly failing to cure with local treatment, pronounced it incurable. Science has proven catarrh to be a constitutional disease, and, therefore, requires constitutional treatment. Hall's Catarrh Cure, manufactured by F. J. Cheney & Co., Toledo, Ohio, is the only constitutional cure on the market. It is taken internally in doses from 10 drops to a teaspoonful. It acts directly on the blood and mucous surfaces of the system. They offer one hundred dollars for any case it fails to cure. Send for circulars and testimonials. Address, F. J. CHENEY & CO., Toledo, O. Sold by Druggists, 75c.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

IBOUBATORS

Self-regulating Catalogue free
C. S. SINGER, Gardington, 9

Mention American Gardening when you write

A \$1.00 Raisin Seeder for 50c.

POSTPAID.



We are tired of selling dealers and waiting 90 days for our money, so we will sell house-keepers at Jobbers' prices.

Send 50 cents, and we will mail you postpaid one of our best

BAY STATE RAISIN SEEDERS

Guaranteed to seed 1 lb. of raisins in 5 minutes. Simple to operate and easy to clean.

EASTON MFG. CO. D. 10, 64 Federal Street, BOSTON.

Mention American Gardening when you write.

Palmer's Hot-bed Mats,

For Cold Frames and Hotbeds.



These mats are made of strong burlap lined with wool and quilted.

They are warmer than straw, more easily handled, do not retain moisture, do not freeze, rot, mildew or harbor vermin as straw does, and cost only one-fourth as much. They are made six feet wide, any length. Horse Blankets of same material. The best, warmest, strongest and cheapest blanket made.

THE E. T. PALMER CO., 118 Worth St., N. Y.

Mention American Gardening when you write.

ESSEX
10c

Flower Food

makes House Plants thrive and bloom.

Use once in ten days the first month and once a month thereafter. The 10c. package will feed twelve plants one year. Full directions in every package.

ASK YOUR DEALER FOR IT.

Save the plants by using Essex Flower Food—then save the wrappers of the 10 cent package. For twelve of these wrappers we will mail a beautiful study of Jacqueminot Roses, by the celebrated artist Paul de Longpre. This picture has no advertising. If your dealer does not have the 10 cent package send eight 4c stamps to Russia Cement Co., Gloucester, Mass., and get full size package by return mail.

POT YOUR PLANTS IN

JADOO FIBRE

WATER YOUR PLANTS WITH

JADOO LIQUID

And they will thrive during the Winter.

Particulars and Prices on Application to

THE AMERICAN JADOO CO.,

813 Fairmount Ave.,

PHILADELPHIA, PA.

Mention American Gardening when you write.

Henry Strawberry Plant Premiums

Will be shipped to all who desire them this season until ground freezes.

Owing to the wonderful run on this unequaled Strawberry we are preparing 100,000 Henry plants for Spring delivery, and in this connection we desire our readers to remember

Two Facts

- 1—The Henry Strawberry can be obtained solely through a subscription to AMERICAN GARDENING; as the publishers will not sell plants under any consideration;
- 2—Neither will Mr. Jerolaman.

Who is Entitled to Plants

New and Renewal Subscribers.—Five plants of the Henry will be mailed, postpaid, as a premium to every Renewal or New Subscriber sending us \$1.00 for a year's subscription. When remitting be sure to state if you want this premium.

To Agents and Workers.—For every \$1.00 received from agents and others for New Subscriptions, we mail, postpaid, Ten Henry plants, Five to the New Subscriber and Five to the Agent.

Special to Club Raisers!

Clubs of Ten.—To every agent sending us in a club of Ten New Names and \$10.00, we will forward in payment therefor One Hundred (100) Henry Strawberry Plants, by express, as well as send Five plants, postpaid, to each person in the club.

Mr. Jerolaman's series of articles has been put in pamphlet form; and agents will be supplied with copies on application. Best campaign matter out.

Address Your Letters,

AMERICAN GARDENING,
P. O. Box 1697, NEW YORK.

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL AMATEUR.

Hellebore for Lice.

One of the poultry papers gives—but without editorial commendation—a note concerning the use of hellebore for lice on chickens. Cheapness and efficiency are the points made for it, and it is said to be entirely safe to use. We have not tried it, nor can we see any reason why it should be more effectual than any other dust (say road dust or coal ashes) inasmuch as the lice do not eat it. We pass the idea on, however, for what it is worth.

Ten Cents a Pound.

An expert tells an inquirer that ten cents a pound isn't much of a price for poultry, and that if food has to be bought, it is useless to expect to raise chickens for this price at a profit. It is true that ten cents is not much of a price, especially to those who have once looked at broiler prices. But a five-pound chick at this price will bring half a dollar, and with judicious feeding, need not cost much more than half this sum to raise. The grower may have at least 40 per cent. of his receipts to pay for time, losses, interest on investment, and actual profit. His investment need not be heavy; his losses depend upon himself; his time may or may not be valuable. Hence, it is largely a matter of circumstance whether ten cents a pound is or is not a paying price for poultry carcasses. We fancy that many a farmer, and indeed, many a business man, might be very glad of an average per cent. of profit equal to that which poultry, even at ten cents a pound, may give.

Bringing Out Chicks.

Those who wish to raise broilers are just about ready to begin their season's work. November finds them ready for the fray, but if they are beginners they may often get ready, yet not go very far. Defeat often comes when just at the point of success. Every incubator worker finds a greater or less number of apparently perfect chicks which are unable to leave the shell. One of the best incubator manufacturers, a man long in the business, says that there are several reasons why these chicks die. They should pip through the air cell and at the large end of the egg. They sometimes fail to pip because of making the effort at the under side of the egg, where it rests on the bottom of the tray; sometimes failure results because the shell is too thick. Some of these difficulties may be avoided by keeping an eye on the eggs, reversing those that are pipping at the wrong point, and removing the large end of the shell for those which are likely to smother because of not having broken through both the shell and its lining. This must not be done until the chick is working hard to get out. Such help must be given rapidly if at all, because the machine must not be kept open long enough to lower the temperature.

Cleaning Duck Feathers.

Some one makes inquiry as to the process. Feathers that are unsouled and dry do not need cleansing, unless so oily as to emit a disagreeable odor. All kinds of feathers may be washed by the use of soap or borax, they being placed in a very light bag before the operation, and loosely enough to dry quickly. Strong heat is necessary that the feathers may dry, instead of decomposing, as they are prone to do.

Where Are the Novelties?

Real novelties in bulbs are almost as hard to find as the proverbial needle in a haystack. The present season shows scarcely an attempt to offer anything entirely new. We have *Camassia cusickii*, and the large-flowering *Freesias*, brought over from last year, and one firm has made a selection from these last of a pure white sort to offer as a novelty. The so-called *Palestine Iris*, and one or two *Hyacinths* (*Flevo* and *Minerva*) are offered

as new, and this about completes the list. The yellow *Oxalis*, both single and double, and the scarlet *Freesias* are trying to masquerade as novelties, appearing in enormous size on a colored plate.

Hyacinths of Best Form.

The choice of color having been made, there is scarcely a grower who will be well satisfied with a *Hyacinth* unless it have either a fine truss of bloom or very large individual bells. These two characteristics make the fine *Hyacinth*. Among those having good spikes, or trusses, are *Queen of the Blues*, *Gertrude*, *Amy*, *La Grandesse*, *La Pluie d'Or* (Rain, or Shower, of Gold) *Regina Victoria*, and *La Virginité*. Prominent among those with large bells are *Grand Lilla*, *Victoria Alexandrina*, *Herman*, *Goethe*, *White Crown*, *Groot Voorst*, and *Sir Walter Scott*. Novices in the culture of *Hyacinths* should note the fact that a fine truss of bloom can never be secured from a poor bulb, nor should it ever be expected from bulbs not allowed to become well rotted. Other things being equal, singles will give best results in such hands, the doubles often refusing to push up from the throat of the bulb.

Buying Pullets.

The fall buyer often finds sale pullets about as scarce as hens' teeth, yet they are to be had if one knows where to look. In the cities, one may go to the wholesale handler of birds, and select pullets from large shipments, at from two to four cents a pound above the regular market rates. The mid-autumn season is really the best time to buy, and the best stock, it is said, comes from the middle west states. Southern stock is available at most seasons, but calls for good judgment in the buyer, and strict quarantining for a considerable period, lest new diseases be introduced into the general flock.

Prize Birds and Prize Condition.

The autumn fairs amount to very little for poultry showing. Birds are seldom in condition to be judged with any degree of fairness. But as the real show season for poultry comes on, condition becomes a matter of skill. To wash birds, to brush their feathers, to manipulate their combs and the droop of their tail feathers, to feed bread and sugar to get them up to their standard weight, to give individual birds a whole yard or pen to themselves, seems like much ado about nothing to the novice. Yet these things may make several points difference, while the prize often hangs upon a half-point, sometimes even upon a quarter-point. When competition is as close as this, exhibiting must be a lottery, even under the most honest judge. It is doubtful that the man exists who can score the same breeding pen twice within a quarter of a point. Yet if one pen scores 475 points, and its close competitor 475¼ points, the latter gets the coveted prize, the advertising, the sales. It isn't just, but how to better it is a problem yet unsolved.

Blue in the Window.

The choice of colors for the window is a matter which has the largest effect upon its general appearance, especially from the outside. The reds and yellows are the most brilliant and showy; the pinks and whites the most dainty; the blues, the least satisfactory of all. The nearer the blues approach to purple, the more nearly true is the foregoing statement. Very pale blues, and clear sky-blues are very pretty from the inside. None of them, however, adds very greatly to the appearance of the window from the outside, simply because they do not show. There is something in the color itself which does not show off against a background of green, especially if the spectator is at a little distance. Blue needs white or yellow to bring it out, and of course it cannot have much of a background of these in the ordinary window.

Hyacinths in Water.

Many people are afraid to try *Hyacinths* in water, just because they never have done so; but it is a very simple matter thus to bloom them. One needs good bulbs, to be sure, but it is not neces-

sary to insist upon the very highest priced exhibition bulbs. When glasses are used, they should be filled with water to such a point that the bases of the bulbs rest in the water. This height of the water should be held as nearly as possible till bloom is past. The dark room for root formation is as necessary as when potting in earth, but the period may be shortened to ten days or two weeks. As the water becomes impure, the bulbs may be taken out and rinsed carefully, the glasses cleaned, and fresh water supplied. The use of glasses is desirable many times both because the bloom may be advanced faster in water, and because the glasses present a better appearance than do pots. It should be remembered that gas light is one of the worst enemies of Hyacinths in water. Of course they have not quite the resistant power of those grown more naturally in earth. The choice of varieties, too, is a matter of moment among the doubles.

Little Gem Calla.

The season's experience with Little Gem Calla may throw a sidelight upon the often unsatisfactory behavior of this desirable little plant. Early in the spring two roots were procured from two different firms, and costing respectively, 15 and 25 cents. As the latter was about the maximum price of the season, it should rightly have secured a plant of the best grade. The two roots were potted together in a three-inch pot where they had abundant room, and were later transferred to the open ground, with the hope of urging them to do their best. Last week they were re-potted, the smaller one showing a diameter of a quarter of an inch, the larger one of a good half-inch. Is it reasonable to expect roots of this size to give bloom? They are mere infants, and must have time to mature before beginning their life work.

La Reine des Jacinthes.

A magnificent and superb dark red is what a prominent firm calls this beautiful sort, and it kindly informs its readers, in addition, that the name means King of Hyacinths. Inasmuch as La Reine really means "the queen," we submit that this looks like a scheme to defraud lovely woman of her plain rights.

MYRA V. NORRIS.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send stamp for our new catalogue.

\$150.00 CASH PRIZE FREE

STASESETUSEMC
TANIRUP
GEKEARARS
RERROT
NHIDDEL
HALMDAEHEDR
YOLPIAM

We herewith give a list of jumbled words from which can be made the names of seven of Uncle Sam's new warships. They are easily transposed when you know how to do it. For instance, the word: RERROT is "Terror." Try it. We will give:

First Prize in Cash—\$50.00 to ten persons first sending correct answers.
Second Prize in Cash—\$50.00 to next 20 persons sending correct answers.
Third Prize in Cash—\$50.00 to next 50 persons sending correct answers.

Fourth Prize—Kombi Camera to each of next 25 persons sending correct answers.

Should more than the required number send correct answers, the awards will be made according to date letter mailed, hence it is advisable that your letter should be among the first. You can win one of these prizes if you are quick and use your brains. The above awards are given free as an inducement to read *New Ideas*, a handsome 16-page illustrated journal covering entirely new field. It gives information about the latest inventions and progress in science, illustrating the most striking novelties for business and household use. Subscription price is the only cheap thing about it. Answer to-day!

UR CONDITIONS.—You must send with your answer 25 cents (stamps or silver) for a Six Months' Trial subscription to *New Ideas*.

ALL SURE OF A PRIZE.

Aside from the prizes above named, we will give a special prize to such persons whose letters fall to us in time for the Cash Prizes, or who do not correctly answer the list, provided that 25 cents in silver stamps be sent for a six months' subscription to *New Ideas*. These special prizes are awarded along the lines of Novelties, Music, Decorative Art, Story and Fiction. Be sure to state in your letter which you want. This contest will close Monday, Nov. 30th, and names of prize winners will be announced in Jan. number of *New Ideas*. Address, *New Ideas*, Sta. K, 224, Philadelphia, Pa.

Mention American Gardening when you write.

A BARGAIN

We have made arrangements to furnish **THE OHIO FARMER** of Cleveland, O., and **AMERICAN GARDENING**, both papers, one year, making a total of 104 great papers, for only \$1.60.

ONLY \$1.60

THE OHIO FARMER

is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the LEADER of the Agricultural Press of America. A 20-page, 80-column paper EVERY WEEK in the year; employs THE VERY BEST WRITERS that money can produce; a strong, fearless defender of the agricultural interest of this country, and CLEAN in both reading and advertising columns. IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE.

Present subscribers can order this combination at once and have their present term of subscription to *AMERICAN GARDENING* extended for one year. New subscribers to *THE OHIO FARMER* will receive the rest of this year free. Address all orders,

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

\$5 Hand Bone, Shell, and Corn Mills for Poultrymen. Daisy Bone Cutter. Power Mills. Circular and testimonials Free. WILSON BROS., Easton, Pa.

Mention American Gardening when you write.

LIFE PRODUCERS
THE SUCCESSFUL INCUBATOR.
LIFE PRESERVERS
THE SUCCESSFUL BROODER.
All about them in our 122 page Catalogue. Sent for 6c, worth a \$1.00. **DES MOINES INCUBATOR CO., Box 93 DES MOINES, IA.**

Mention American Gardening when you write.

A GOLD DOLLAR
is about the actual worth of our new book on Incubation and Poultry. Contains a full and complete description of the Reliable Incubator & the Brooder of same name, together with cuts and instructions for building poultry houses and much of interest and great value to the poultryman. Sent on receipt of 10c. **RELIABLE INCUBATOR & BROODER CO.-QUINCY-ILL.**

Mention American Gardening when you write.

No. 8. STANDARD CO.'S
New line of Automatic Feeding
BONE CUTTERS
with gears moved back to prevent clogging. The principal excellences all others. Nine different sizes ranging in price from \$6.75 to \$29.50. Try them in competition. Sent on trial. Diamond Granite Grit. Clear, strong, lance-like points are the best grinders. Illustrated catalogue.

Standard Green Bone & Vegetable Cutter Co.,
Mifflord, Mass., U.S.A.
Mention American Gardening when you write.

HENS AND EGGS

fruit culture and poultry keeping dovetail together perfectly, each filling a season comparatively dull in the others.

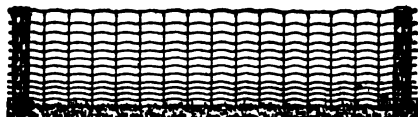
Realizing the above facts, we have arranged with the publishers of **POULTRY MONTHLY**, to offer that journal in club with **AMERICAN GARDENING**, for the coming subscription season, both journals postpaid, one year, for the **SMALL SUM OF \$1.25.**

POULTRY MONTHLY is now in its nineteenth year; it has always been recognized as the leading publication in its particular field. Sound and reliable in its teachings, and not the mouthpiece of cranks, cliques, or rings. Its correspondents are practical and successful men, in the harness to-day. The publishers of *AMERICAN GARDENING* recommend *Poultry Monthly* as being one of the very best poultry papers issued, and advise all interested to accept this Great Combination Offer.

A WONDERFUL OFFER!

American Gardening (Weekly), \$1.00 (Both \$1.25)
Poultry Monthly, - - 1.00 One Year, postpaid.

Present subscribers who are in arrears must pay up in full to become eligible to this offer.
Address **AMERICAN GARDENING, P. O. Box 1697, New York City.**



A FRENCH MOTHER'S ADVICE

to her son, when looking over one of Napoleon's old battle-fields, was: "No matter where, when you get to be a man, if you have any money, buy a few acres of land as a haven to which to retreat in case of storm; because, come war, flood, or cyclone,—if life is spared, you can commence again to raise your own potatoes," to which we add, "be sure to protect it with *Page Fence*."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

Home-Mixed Fertilizers

A man can save hundreds of dollars by mixing his own fertilizers. He saves about half the first cost; he can use the materials best adapted to the particular crop, and consequently secure the best results possible for the money spent. *Nitrate of Soda* should be used to furnish the nitrogen (ammonia). It is not only the *cheapest*, but the most soluble, available, and in every way the best form of nitrogen.

Free A 40-page book, "Food for Plants." Tells all about mixing and using fertilizers. Please ask for it.

S. M. HARRIS, MORETON FARM (P. O.) N. Y.
Mention American Gardening when you write.

WHOLESALE MARKETS.

New York.

The cut flower market continues to be over stocked and prices rule low; Chrysanthemums never sold so badly in the history of the trade.

The market for fruits and vegetables is in a better condition since our last report, and stock has cleared much better and an improved feeling exists all round.

Hot-house grapes are selling poorly, 50 cents per pound being the best price obtainable. This is largely due to the inferior condition of the stock and the much superior condition and appearance of the English arrivals which are at this time extraordinarily good. The Gros Colmar seen would never lead one to think they had journeyed 3,000 miles. Why are our own grapes so poor that are now on the market? This is a pertinent question for American growers and shippers.

Hothouse tomatoes are coming in freely and make 25c., per pound. Some fine outdoor grown are seen which sell at \$1 per box.

Hothouse cucumbers are making \$4 to \$6 per 100.

Mushrooms 50c. to 75. per pound.

Apples—Jonathan, good to fancy, only offered, \$3.50@4.50; Albemarle Pippin, Va., \$2@2.50; good to fancy, \$3 @4; Wine Sap, Va., poor to fair, \$1.50@2; good to fancy, \$2.50@3.50; Johnson's Winter, Va., poor to fair, \$1.50@2; good to fancy, \$2.50@3.50; Snow, state, poor to fair, \$2@2.50; good to fancy, \$3 @4; King, state, poor to fair, \$1.50@2; good to fancy, \$2.50@3; Ben Davis, western, good to fancy, \$2.50@3; Vir-

ginia, poor to fair, \$1.50@1.75; good to fancy, \$2@2.50; Jersey, poor to fair, \$1.50@1.75; good to fancy, \$2@2.50; Greening, state, poor to fair, \$1.50@2; good to fancy, \$2.50@3; Baldwin, state, poor to fair, \$1.25@1.75; good to fancy, \$2@2.50; Phoenix, Jersey, poor to fair, \$1.25@1.75; good to fancy, \$2@2.50; N. Spy, state, poor to fair, \$1.50@2; good to fancy, \$2.25@2.50; mixed lots, poor to fair, \$1@1.75; open heads, poor to fair, \$1@1.50.

Pears—Bartlett, ice house, per barrel, \$1@4; per bushel box, 50c.@1.50; Seckel, per barrel, \$3@5.50; per bushel box, \$1.25@2; per keg, \$1.50@2.50; Beurré Bosc, per barrel, \$2@3.50; Kieffer, Jersey, per barrel, \$1.50@2; up-river, per barrel, \$1@1.25; Beurré d'Anjou, per barrel, \$1.25@1.75; other late sorts, fair to good, per barrel, \$1@1.50.

Quinces—Apple, good to fancy, per barrel, \$2@3; poor to fair, per barrel, \$1@1.50.

Grapes—Delaware, Keuka, per small basket, 10@12c.; other state, per small basket, 9@10c.; Niagara, western N. Y., per small basket, 7@11c.; Catawba, western N. Y., per small basket, 7@8c.; Concord, up-river, per case, 40@55c.; western N. Y., per large basket, 11@12c.; western N. Y., per small basket, 7@8c.; inferior stock, small baskets, 4@5c.

Nuts—Chestnuts are still scarce; sale of fancy northern at \$6@7 per bushel; southern sold mainly at \$4@4.50; hickory nuts quoted at \$1@1.25 as to size and color; Bull nuts 75c. per bushel.

Cañiflowers—Prime to choice, per barrel, \$1.75@2; poor to fair, per barrel, \$1@1.50.

Celery—Choice to fancy, large, per dozen, 25@30c.; fair to prime, per dozen, 12@20c.; small and poor, per dozen, 8@10c.

Cabbages—Jersey and Long Island, per 100, \$3@4; state, per 100, \$2.50@3.

Cucumbers—Florida, per crate, 50c.@ \$1.

Green peas—Virginia, per one-half barrel basket, 75c.@ \$1; N. C., per bushel basket, 50@75c.

Onions—Orange Co., red, prime, per bag, \$1.50@2; Orange Co., yellow, per bag, \$1.50@1.75; Orange Co., white, per bag, \$1.50@3; Orange Co., inferior, per bag, \$1@1.25; state and western, yellow, per barrel, 75c.@ \$1.75; Shelter Island, yellow, per barrel, \$1.75@2; eastern, white, per barrel, \$1.75@4; eastern, red, per barrel, \$2.25@2.50; eastern, yellow, per barrel, \$2@2.25.

Okra—Florida, per carrier, \$1.50@1.75. String beans—Virginia, green, one-half barrel basket, 50@75c.; Virginia, wax, per one-half barrel basket, 50@75c.; Charleston and N. C., bushel basket, 25@35c.

Squash—Hubbard, per barrel, \$1@1.25; Marrow, per barrel, 75c.

Tomatoes—Per box, 40@75c.

Turnips—Russia, Canada, car lots, per barrel, 75@80c.; Russia, Jersey, per barrel, 50@65c.

very slowly, and are selling worse than anything else on the market. Even at the quoted prices a great many baskets go to waste. Concord, 5-pound basket, 6@7c.; per 10-pound basket, 11@12c. Delaware, per 5-pound basket, 10@11c.; Niagara, per 5-pound basket, 9@11c.

Cranberries—Cape Cod, choice and fancy, per barrel, \$5.50@6; medium as to size and color, per barrel, \$4.25@5; per crate, \$1.50@2; Jersey, per crate, \$1.50@1.75.

Cabbage—Per 100, in large lots, \$1.50 @2; small quantities higher.

Cañiflower—Choice, per barrel, \$1.25 @1.50; fair to good, per barrel, 75c.@ \$1.

Celery—Choice, large, per dozen, 25@30c.; fair to good, per dozen, 15@20c.

Cucumbers—Florida, per crate, 50@75c.

Egg plant—Jersey, one-half barrel box, 50@75c.

Green peas—Charleston, per basket, \$1.25@1.40; Virginia, per basket, 75c.@ \$1.25.

Lima beans, per bag, 75c.@ \$1.25; flat, per 100 pounds, \$2.40.

Onions—White, per barrel, \$2.75@3.50; red, per barrel, \$2@2.25; yellow, per barrel, \$1.75@2.25; per bushel, 60@70c.

Peppers—Jersey, red, per barrel, \$1@1.50; green, per barrel, 50@75c.

String beans—Southern, per basket, 30 @50c.

Squash—Hubbard, per barrel, 75@90c.

Potatoes—Receipts have been smaller and prices have ruled firmer. Most of the stock continues to be of inferior grade, and sells at irregular prices; choice to fancy stock in carload lots has sold at, per bushel, 60@65c.; fair to good, 50@55c.

Jersey sweets—Per basket, 25@30c.

Hothouse tomatoes have been scarce on the market, and most growers now sending in have hotel trade; choice fruit is selling at 30@40c. per pound.

Mushrooms—The same condition applies to these also; prices have been from 40@60c. per pound.

Boston.

This market has been well filled with all kinds of fruit and produce last week. Many of the stocks have varied in quality, so that all kinds of prices have ruled; for instance, some extra fancy Ben Davis in large barrels free from heat and sold packed, bring \$2.75; while other Ben Davis, barrels having just a little decay, slack packed, bring from \$1.50 to \$2, according as customers can be found.

Good Greenings, Baldwins and Spies, providing the old-time No. 1 stock can be found, bring \$2.25, but an idea seems to exist in packers' minds that apples are scarce, and it seems as if more cider apples were found in No. 1 packing than ever came to light before.

Choice table apples sell from \$2.50@3.50. Some Gravensteins even bring \$4.50.

Hothouse tomatoes holding their own, 15@20c. a pound.

Pears are sufficient supply for any demand, with prices unchanged from those existing last week.

Hothouse grapes have a demand from a certain class of customers largely invalids, at from 40@75c. a pound.

New York state Delawares are getting towards their end and bring 14c. in pony baskets; Niagaras 9c., Concorde 6@7c., Marthas 6@7c., Catawbas 7c. Just at present time this city is using a large quantity of Concord grapes packed in 9-pound baskets which sell in large quantities, 10@10½c.; truly not much money for the grower.

Very little demand for lettuce, practically none excepting for some very large choice heads.

Onions keep moving at \$2 a barrel; most of the stock coming from New York and Ohio.

Cucumbers from the hothouses move fairly well, 3@5 a hundred; quite a good many orders coming in which are pleasantly filled.

Virginia, North Carolina, and Georgia are putting their second crop of string beans in this market in larger supply

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

DO YOU NEED WATCHING?

Or, to put it another way,
Do You Need a Watch?

We sell them, sell them at such an exceedingly low price that you can't afford to go watchless.

Got 'em all sizes and styles.

But we'll just mention two:
An Eight or Waltham Watch, best movement made, hunting case, accurate time-keeper, handsomely engraved, Beiber Case, heavily gold-plated—last for all time. Ladies' or gentleman's size.

We'll send it to your address with privilege of examination. If it's not entirely as represented, send it back—costs you nothing. If you like it, pay the agent express charges and \$6.50. That's fair. Or this—

A Hunting Case Watch—beautifully engraved case, first-class movement, any size, heavily plated (14k)—looks just like a \$40.00 gold watch—keeps as good time as any of them. Sent to your express agent with privilege of examination—same conditions as all our watches sent out—and if you like it, pay him \$5.45 and express charges.

If you take our word for it, and send money with order, a handsome chain goes with either, and express charges are paid by us, for the prices named above.

Royal Manufacturing Co.

324 Dearborn St., CHICAGO.
Mention American Gardening when you write

Philadelphia.

This market has been overstocked this past week, both in fruit and vegetables, and the demand has fallen off considerably. All buyers being very cautious, prices have not been so firm, and many sales have been made below these quotations, as is always the case when there is an over-supply.

Receipts of apples have been large, but the supply of choice fruit has been limited, the bulk of the receipts being of inferior grades which has been worked off at lower prices. Jonathan, choice and fancy, per barrel, \$3.25@3.50; Twenty-Ounce, choice and fancy, per barrel, \$2.50@2.75; fair to good, per barrel, \$1.75@2; Ben Davis, choice and fancy, per barrel, \$2.25@2.75; fair to good, per barrel, \$1.25@1.75; mixed varieties, choice, per barrel, \$2@2.50; fair to good, per barrel, \$1.25@1.75.

Quinces—No. 1, per barrel, \$1.75@2; No. 2, per barrel, 75c.@ \$1.25.

Pears—Seckel, per barrel, \$2.50@3.50; per one-half barrel, \$1.50@2; Louise Bonne, per barrel, \$1.50@2; per one-half barrel, 75c.@ \$1.25; Duchess, per barrel, \$1.50@2.25. Grapes have been moving

than required; find slow sale, 75c. @ \$1 per bushel. Virginia and North Carolina also have placed a good many peas here, second growing. The average man does not want them at this season of year, consequently do not move very fast, even at 75c. a bushel.

Cabbage plenty, 8@4c. a head; cauliflower unchanged, 10@18c. each; shell beans are plenty enough to supply the demand, with no change in prices.

Cranberries broke away a little and some very good stock being sold \$4.50, and rarely anything good enough to bring over \$5, crates \$1.50.

Limited demand for carrots, 50@75c. a bushel; beets 35@40c., parsnips 60@70c., the purple top turnips 40c. a bushel; while the St. Andrews or large white turnips bring 75c. a barrel.

Squash are a little more plenty than desired; hard-shelled Hubbard, \$15@20 a ton; near-by farmers bring in their Marrow for which they get \$1 a barrel, while for Turbans and Bay State they get \$1.25.

Mint can be had at 40c. a bushel and parsley at 50c.

Potatoes take a wide range; no more so, however, than the range in quality; fine Hebrons can be had at 65c. down to 60c.; stock coming here from Michigan and western New York has given very good satisfaction, sells 50@60c., while that from Minnesota would take a range from 40@60c.

Mushrooms easier at \$1 a pound. Lighter supply of sweet potatoes caused an advance, and \$1.75@2 present quotations.

Quinces, good demand, 35c. a peck for No. 1 stock; New York state stock in barrels, \$3.50@4.

Chestnuts, better demand, \$6.50 a bushel. Shellbarks move freely, \$1.50.

Last week this city experienced in 36 hours a drop in the temperature from 89 down to 32, and some people wonder why those living in Boston are so healthy.

SOME BARGAINS IN CLUBS

FOR

Men, Women and the Young.

Ohio Farmer, a giant among the agricultural weeklies, and American Gardening. The two, one year, For \$1.80.

Farm, Field and Fireside, a 32 to 40 page weekly Farm and Family Journal, the best of its class, and American Gardening. The two, one year, For \$1.50.

Country Gentleman. This weekly amply covers the field its title indicates. Every country gentleman should subscribe to it. And American Gardening. The two, one year, For \$2.75.

Farm Journal, the "little giant" of monthly journalism in matters agricultural, and American Gardening. The two, one year, For \$1.25.

Farm Poultry (semi-monthly), and American Gardening. The two, one year, For \$1.50.

Poultry Monthly and American Gardening. The two, one year, For \$1.25.

Above is your choice of two most excellent poultry magazines. And nearly every one of our readers keeps poultry. Why not subscribe to both? The two poultry papers and American Gardening, one year, For \$2.25.

Meehan's Monthly, a horticultural stand-by, and American Gardening. The two, one year, For \$2.85.

Harper's Magazine, as good as ever; none better among the literary monthlies, and American Gardening. The two, one year, For \$4.25.

Ladies' Home Journal, an unrivaled monthly for women, the standard in its class, and American Gardening. The two, one year, For \$1.90.

Youth's Companion, of Boston. At the head of all journals for both boys and girls, and read by the elders, too. New subscribers only and American Gardening. The two, one year, For \$2.35.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.		A.	B.	General—Con.		A.	B.
American Agriculturist.....		\$1 00	\$1 85	Donahoe's Magazine.....		\$2 00	\$3 00
Breeders' Gazette.....		2 00	2 40	Eclectic Magazine.....		5 00	5 25
Country Gentleman.....		2 00	2 75	Electrical Review.....		3 00	3 20
Farmers' Advocate (Canada)...		1 00	1 75	Engineering Magazine.....		3 00	4 00
Farmers' Magazine.....		1 00	1 75	Forest and Stream (new only)...		4 00	4 20
Farmers' Review.....		1 00	1 90	Forum, The.....		3 00	3 00
Farm, Field and Fireside.....		1 00	1 50	Frank Harrison's Magazine.....		50	1 40
Farm and Fireside.....		50	1 40	Frank Leslie's Popular Monthly		3 00	3 50
Farm and Home.....		50	1 40	Godey's Magazine.....		1 00	1 90
Farm Journal.....		50	1 25	Golden Days.....		3 00	3 35
Farm News.....		50	1 20	Good Housekeeping.....		2 00	2 70
Gleanings in Bee Culture.....		1 00	1 35	Harper's Bazaar.....		4 00	4 25
Home and Farm.....		50	1 45	Harper's Magazine.....		4 00	4 25
Indian Farmer.....		1 00	1 85	Harper's Weekly.....		4 00	4 25
Mass. Ploughman, new.....		2 00	2 60	Harper's Round Table.....		2 00	2 50
Renewals.....		2 00	2 60	Home Queen.....		50	1 35
Michigan Farmer.....		1 00	1 60	Illustrated American.....		4 00	4 30
National Stockman and Farmer		1 00	1 85	Independent.....		3 00	3 60
Nebraska Farmer.....		1 25	1 85	Jennett Miller's Illus. Mag.....		1 00	1 75
New England Farmer.....		2 00	2 50	Judge.....		5 00	5 20
Ohio Farmer.....		1 00	1 60	Judge's Library.....		1 00	1 85
Orange Judd Farmer.....		1 00	1 85	Ladies' Home Journal, The....		1 00	1 90
Pacific Rural Press.....		2 40	3 00	Ladies' Home Companion.....		50	1 45
Practical Dairyman.....		50	1 35	Ladies' World.....		35	1 30
Practical Farmer.....		1 00	1 85	Leslie's Illustrated.....		4 00	4 40
Prairie Farmer.....		1 00	1 85	Life.....		5 00	5 40
Rural New Yorker.....		1 00	1 80	Lippincott's.....		3 00	3 25
Southern Cultivator.....		1 00	1 85	Macmillan's.....		3 00	3 60
Southern Farm.....		1 00	1 85	McClure's Magazine.....		1 00	1 90
Southern Florist and Gardener		1 00	1 75	Munsey's Magazine.....		1 00	1 90
Strawberry Culturist.....		50	1 35	Nation, The.....		3 00	3 30
Strawberry Specialist, new.....		50	1 00	New England Magazine.....		3 00	3 50
Renewals.....		50	1 25	New York Ledger.....		2 00	2 50
Texas Farmer.....		1 00	1 75	" " Tribune (Weekly).....		1 00	1 90
Texas Farm and Ranch.....		1 00	1 85	" " World (Tri-Weekly).....		1 00	1 75
Horticultural, etc.				North American Review, The..		5 00	5 50
Canadian Horticulturist.....		1 00	1 90	Notes and Queries.....		5 00	5 50
Garden and Forest.....		4 00	4 25	Observer, new only.....		3 00	3 25
Gardening (Chicago).....		2 00	2 50	Renewal.....		3 00	4 00
Meehan's Monthly.....		2 00	2 85	Outing.....		3 00	3 35
Vicks.....		50	1 35	Peterson's Magazine.....		1 00	1 85
Poultry.				Philadelphia Press (Weekly)...		1 00	1 85
American Poultry Advocate....		25	1 15	Phrenological Journal.....		1 50	2 25
Fancier's Review.....		50	1 35	Popular Science Monthly.....		5 00	5 65
Farm Poultry.....		1 00	1 50	Popular Science News.....		1 40	2 50
Ohio Poultry Journal.....		65	1 50	Puck.....		5 00	5 10
Poultry Herald.....		50	1 40	Puck's Library.....		1 20	1 95
Poultry Keeper.....		50	1 35	Puritan.....		1 00	1 90
Poultry Monthly.....		1 00	1 25	Review of Reviews.....		2 50	3 25
Reliable Poultry Journal.....		50	1 40	Scientific American.....		3 00	3 60
General.				" " Supplement.....		5 00	5 25
Advance (Cong'l) new.....		2 00	2 60	" " with.....		7 00	7 25
" renewals.....		2 00	2 90	" " Builders' edition.....		2 50	3 10
American Field, new.....		4 00	4 25	" " Inc. B'l'ds' edit.....		5 50	5 75
" renewals.....		4 00	4 50	" " All 3 editions.....		9 00	9 25
American Kitchen Magazine...		1 00	1 75	Scribner's.....		3 00	3 60
American Machinist.....		3 00	3 20	St. Nicholas.....		3 00	3 60
Aquarium.....		1 00	1 75	Sunday School Times.....		1 50	2 10
Arena.....		3 00	3 60	Texas Siftings.....		4 00	4 25
Art Amateur.....		4 00	4 35	The Etude, new only.....		1 50	2 15
Art Interchange (with plates)...		4 00	4 35	renewals.....		1 50	2 35
Atlantic Monthly.....		4 00	4 30	The Outlook.....		3 00	3 35
Ave Maria.....		2 00	2 70	Toledo Blade.....		1 00	1 85
Babyhood.....		1 00	1 90	Turf, Field and Farm, new....		4 00	4 25
Baptist Missionary Magazine...		1 00	1 90	Renewal.....		4 00	4 60
Carpentry and Building.....		1 00	1 85	Womankind.....		50	1 20
Century.....		4 00	4 60	Young Ladies' Journal.....		4 00	4 60
Chicago Herald (Weekly).....		1 50	2 35	Youth's Companion, new only..		1 75	2 35
Chicago Inter-Ocean.....		1 00	1 80	Renewals.....		1 75	2 75
Chicago Weekly Times.....		50	1 40	Foreign.			
Christian Herald.....		1 50	2 15	Farm and Home.....		2 25	3 25
Christian Register.....		3 00	3 85	Field.....		10 50	11 00
Churchman.....		3 50	4 10	Garden.....		4 50	5 25
Colman's Rural World.....		1 00	1 85	Garden Work.....		2 50	3 25
Cosmopolitan.....		1 00	1 90	Gardener's Chronicle.....		4 50	5 25
Delineator (Butterick's).....		1 00	1 90	Gardener's Magazine.....		4 50	5 25
Demorest's Monthly Magazine...		2 00	2 60	Gardening, Illustrated.....		2 25	3 00
Detroit Free Press (Weekly)...		1 00	1 90	Gardening World.....		2 50	3 25
Domestic Monthly.....		1 50	2 15	Journal of Botany.....		4 75	5 25
Address all orders to				Journal of Horticulture.....		4 00	4 85
AMERICAN GARDENING, P. O. Box 1997, New York.				Kew Gardens Bulletin.....		1 50	2 25
				Revue Horticole.....		5 50	6 10

Success

Engenders

Success!

Take our Advice:

Advertise

in the only

Successful

Weekly

Horticultural

Newspaper

Published

American Gardening

Subscribe

to a

Newspaper

which will make you

Successful

in your

Life's

Pursuit

American Gardening

We PAY FREIGHT Box and Pack free. PAPER line all boxes. REPLACE free. Give BUYER'S choice; low WHOLESALE prices. orders large or small; 10 trees at 100 rate, 300 at 1000 rate. Guarantee SAFE ARRIVAL, trees TRUE to name, FREE from SAN JOSE scale, and of BEST quality. Guarantee SATISFACTION, — write for lists, photos and FULL particulars of foregoing Stark 12 CHALLENGE Points. STARK BROS., Louisiana, Mo., Stark, Mo., Indport, N. J., Newark, N. J.

STARK

Mention American Gardening when you write

LORD & BURNHAM CO.,

Horticultural Architects and Builders Steam and Hot Water Heating Engineers.

(Established 1856.)

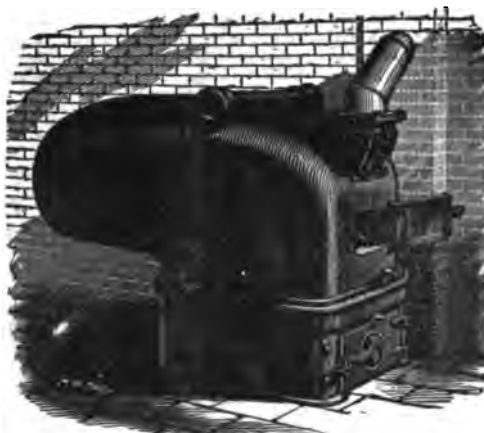
Plans and estimates furnished on application for Greenhouses, Conservatories, and all kinds of Horticultural Buildings, erected complete with our patent iron construction; or for material only, ready for erection.



Largest Builders of Greenhouse Structures. Plans and construction embrace latest improvements. Six highest awards at the World's Fair. Send four stamps to New York office for latest catalogue. NEW YORK 160 FIFTH AVE., COR. 11TH ST. J. M. Watson, Jr., General Office and Works: IRVINGTON-ON-HUDSON, N. Y. Gardening when you write.

GREENHOUSE HEATING AND VENTILATING,

Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

FIVE PATTERNS OF BOILERS
NINETEEN SIZES

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

Iron Frame Benches with the "Perfect Drainage Bench Tile" or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$2.00. 25 per cent. off to subscribers to American Gardening and Florists' Exchange.

This work contains nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work. On heavy enamelled paper. Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., P. O. Box 1697, New York City.

1846.

1898.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 150.
COMBINED SERIES VOL. LI

NEW YORK, NOVEMBER 6, 1897.

5 CENTS A COPY.
\$1.00 A YEAR.

CONTENTS OF THIS ISSUE:

Aphis on Violets	758	Fence, A Portable.....	761	Park Superintendent, The Ideal.....	765	San José Scale.....	763	Raising.....	763
Apple Tree, Sick.....	763	Formalin	761	Poultry Notes.....	768	Scal.....	758	Vegetable Garden.....	761
Bulbs for the Dwelling	759	Fruit Garden	758	Private Gardeners.....	765	Scraping Old Trees.....	761		
Canna, A Yellow.....	763	Gardening in La.....	763	Raspberry Canes, Tying	761	Seakale.....	761	Illustrations.	
Chrysanthemum, The..	759	Home Plot.....	768	Readers' Notes.....	763	Soil Moisture.....	748	Dahlia, Two Flowers of	
Clematis, Dying.....	761	Hotbeds.....	761	Rhubarb.....	761	Sowbugs.....	763	Cactus, Type of... 757-759	
Dahlias.....	762	Intensive Cultivation.....	762	Rose, Unruly.....	763	Strawberries.....	758	Fence, A Portable.....	761
Diseases of Trees.....	760	Lilliums in Pots.....	768			Strawberries, Cost of		Tree Scraper, A.....	761



FIG 211.—CACTUS DAHLIA NYMPHÆA. (See page 762.)

Combating Aphis on Violets.

I am interested to the extent of twenty thousand plants in violet culture and have been growing them with more or less success for five years. The hardest problem found in handling them is to control the aphids. I have used tobacco stems and powder, and while the aphids are kept in check the plants almost invariably suffer severely with spot after the use of tobacco in any form except smoke. My houses are sash-built and are now open or I would fumigate with tobacco, which, as already stated, has been the only safe way I have used it. The plants look more promising now than ever before this season, but are beginning to suffer from the attacks of aphids. What can be done to keep them in check and do the least harm to the foliage? To use the hydrocyanic gas you recommend in the Florists' Exchange is out of the question, as the sashes are all piled up and the houses shaded with lath, mats, and brush.

I have rose-leaf tobacco extract on hand and have been thinking of mixing six ounces of it with two ounces of strong aqua ammonia, saturated with copper carbonate, and let them stand long enough to destroy any fungous spores that might be in the tobacco extract, then add to a six gallon knapsack sprayer of water and use that as a spray once a week. Would that be absolutely safe? I have been using that amount of the copper carbonate solution to the knapsack of water once a week for the spot. It works well. I have also whale-oil soap on hand.

You can understand that with a good crop in prospect, I am exceedingly anxious not to make any mistake. I am afraid of the tobacco extract unless the copper carbonate will make it safer than other forms of tobacco. It would seem that the spot on the leaves of the tobacco was the same as that affecting the violet leaves.—VIOLET GROWER.

—Aphides, especially the black ones, was once the most serious pest with which we had to contend. Since we have adopted the hydrocyanic acid gas treatment, however, as described in a recent number of the paper, we have had no serious trouble. So important do we consider the matter of being able to use this gas that we shall plant in the future throughout the entire season in such a way that the plants may be fumigated at any time.

We abandoned tobacco entirely some time ago, as we found by experience that no matter how used, it would tend to weaken the foliage and make it more susceptible not only to spot, but to other diseases as well. It is a mistake to suppose that the tobacco leaves, stems, or extract contain the spores, or reproductive bodies of the spot fungus, and that when any of these materials are used we are sowing the seed of disease, so to speak. While tobacco in various forms may contain a few spores, there is never a time when the reproductive bodies of the fungus causing spot are not present in the air. If the foliage is kept strong and vigorous, however, the spores cannot infect it. By actual experiments we can tell how many spores of the fungus will fall in a given time on a space, say one inch square. At night, when the air is still, it is not uncommon for twenty-five or thirty spores to fall in three hours on a space the size of a twenty-five cent piece. Every one of these spores is capable, under certain conditions, of germinating and infecting the leaf and producing a spot. It is no wonder, therefore, that we frequently find plants literally eaten up by the disease.

Now when tobacco is used, either as smoke, dust, stems, or extract, it seems to in a measure check the vital functions of the leaf, the little cells of which temporarily lose their vitality and their ability to resist outside influences. Here is the opportunity the fungus needs, and it at once takes advantage of it by sending a thin, thread-like growth into the cells. Once the tissue is entered the fungus continues to grow until the plant is able to check it of its own accord. The spot then turns white, but when conditions are again favorable, the fungus will start anew and the spot will be found soft, greenish, and watery. So the battle goes on. If the grower be wise he will try to

handle his plants so that they can of their own accord check the fungus, for this, in the judgment of the writer, is the only way to master the disease when it once starts.

I would never use copper in any form on the foliage, nor would I use lime, for careful experiments have shown that these materials are of little or no use and sometimes may prove positively dangerous. We can produce most beautiful cases of spot with air-slacked lime alone, and can do the same with Bordeaux mixture under certain conditions.

Coming back, however, to the aphids question, the writer would recommend that the sash be put on at once if possible, and then that the plants be given one or two fumigations with cyanide gas, as already described in these columns. If it is not practicable at this time to put on the sash, then instead of using tobacco, give the plants a thorough treatment with a solution of soap. Possibly it may be necessary to make three applications of this material, say at intervals of four or five days.

Take a 5-cent bar of Ivory soap, and with a knife, or preferably a small plane, shave it up, and then add about two gallons of boiling water. The soap will immediately dissolve, when three gallons more of cold water should be added. With a good, strong force pump, provided with suitable hose and a cyclone nozzle, spray the plants thoroughly with the solution of soap. The nozzle should be held down under the plant, and the spray, which is like mist, should be directed at first upwards and then into the crown. It is necessary to be quick, for a motion of the hand, if properly made, under the plant and then down in the crown will wet every leaf and insect. To give opportunity for rapid movements, about 25 feet of discharge hose should be used. Our hose is only three-eighths of an inch in diameter, and, while strong, is very light, so that it can be pulled directly over the plants without hurting them at all. Six gallons of the solution, put on as described, will cover about 500 full-grown plants; in other words, the soap for the work will cost about ten cents per 1,000 plants for each spraying. A great many experiments have been made and many different kinds of soap have been used, but we have found nothing so good as plain Ivory soap. Strong soaps, such as whale-oil, soft soaps, etc., should never be used, as they will injure the leaves in time and will certainly spot the flowers if the plants are in bloom. By actual experiments we have found that the Ivory soap will kill from 80 to 95 per cent. of the aphides with which it comes in contact, and from 90 to 98 per cent. of the red spiders. It will not kill all the spiders' eggs, nor will it in every case destroy the young ones. The red fellows, however, are killed by the soap almost as soon as they are touched, as any one can see by taking a leaf infested with spiders and dipping it into soap solution. When the soap comes in contact with the aphides they make a few struggles and die in from five minutes to half an hour.

The soap should be put on early in the morning and after it has been on the plants for two or three hours should be syringed off with clear water. This syringing, serves two purposes, (1) it cleans off the soap, and (2) it washes the spiders and aphides down to the ground, where those not killed starve before they can again reach the plants.

Never mix tobacco with the soap, as it adds nothing to the value of the latter and makes a mess that may show on the foliage for a month. Clean, pure, mild soap will do the work; in fact, after using it for several years, we know of nothing better or cheaper for combating many kinds of insects infesting both greenhouse and house plants.

B. T. GALLOWAY.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

The Fruit Garden.

Strawberries.—As at this time of the year we are liable to get very sudden changes of temperature, it will be well to pay some attention to the strawberry beds. For the past two months, since setting the new beds, we have kept the surface loose and free from weeds, so that the young plants are ten to fifteen inches across, according to the variety, which is a good showing when we consider how little rain has fallen here since the plants were set. Now with the refreshing showers of the last week, they will make an extra spurt and keep on growing for a month yet.

In anticipation of more rain, or any kind of weather, we are giving all the lines a coating of rotten manure; that is, all the ground for about ten inches on each side of the lines is covered. Close up to the crowns of the plants a thickness of about half an inch only can be put on, but on the margin it will be two inches thick, and will give the plants the appearance of being in little furrows. It is important that the crown of soft-growing leaves in the center is not covered; in fact, no part of the plant is to be covered with manure, only the ground. Cool nights, heavy dews, and the hoped-for rains will take care of the plants for the balance of this month, unless it be an occasional slight scratching to stop weeds between the lines (2½ feet apart) where the ground is not covered with manure.

Soil Moisture.—There is a great deal written, read, said, and forgotten about retaining moisture in the ground or preventing evaporation therefrom, but I have never had the subject so forced upon my notice as during the past ten days, when planting. Having to use some old sod land, I found that it was nigh impossible to get a spade into it, and had to resort to the use of picks. For two feet down there was perfect dust when broken up, and every plant set had to be soaked with water. Another part where some early flowered annuals had been, and the ground since kept free from weeds, was found to be in perfect condition for planting, while on the same border, fifteen feet distant, where the ground was covered with Zinnias (and could not be cultivated), there was not the least appearance of moisture and watering had to be done.

Scale.—If you are troubled with scale of any kind, now is a good season to sail into it, and cover the whole wood with kerosene emulsion, diluting it to suit the subject treated. I may add that the emulsion has to be extra strong to do any damage to apple, pear, or plum trees, if applied after the foliage has dropped and before next March, providing that the oil does not gather and run down the trunk in quantity enough to reach the top roots. To guard against that, raise a small cone of soil about the base.

It is a healthy sign to see that our nurseryman is protecting his business and customers by using on the cases sent out the state entomologist's notice that no San José scale, yellows, or rosetts exists among the stock.

J. HOLLOWAY, L. I.

Quince Tree.

Is there any remedy for the turning of the quince leaves?—E. W. J.

—Probably the soil lacks alkali. By applying a dressing of soft soap before leafing out in the spring, the trouble may be obviated. Rub the soap well in by hand to all parts of the tree limbs, etc.

Apples are very scarce this season at all the Pawtuxet Valley fruit farms, and but little cider will be manufactured this year. The Peach crop of Bristol County, R. I., has been the largest for many years and nearly all of it has been marketed locally for good prices. Pears were fairly abundant.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send a stamp for our new catalogue.

Bulbs for the Dwelling House.

Among the many bulbs which are now offered every fall, those which can be successfully raised in the dwelling house entirely without the aid of a conservatory, form quite a short list.

Dutch Hyacinths.

Dutch Hyacinths of all kinds prove elegant house subjects. The principal point to bear in mind in their management is to keep the bulbs, if in pots, in a cool dark place until they have formed roots, previous to bringing them indoors. They should not be brought in early either—after the first of January is soon enough. A place in the corner of the yard where the pots can be covered to the depth of several inches with soil or ashes will be found to work all right, or better still, if they can get the shelter of a frame and sash.

Roman Hyacinths.

The white Roman Hyacinth, it is not commonly known, can be grown very successfully in pure sphagnum or swamp moss. The bulbs should be planted in it as soon as possible in the fall and not later than the end of October, that is, if they are wanted in bloom along about Christmas, which is a very easy matter to accomplish. For window decoration they look all right in those narrow glass dishes about two inches deep, which the stores sell for a few cent each; any shallow vessel without holes in the bottom will answer the purpose well; put the moss in moderately firm for about three-quarters of the depth of the vessel, then put the bulbs on top of this, one inch or less apart, filling up the spaces left with little wads of moss. Keep cool, just out of reach of frost and in a week or two the bottom of the dish will be covered with nice healthy roots. If several dishes are filled in this manner a succession of bloom may be had in the house all winter long, with very little expenditure, by taking in one at a time, and when this is coming into bloom, introduce another; they will stand the temperature of the warmest rooms and should, of course, get all the light possible, but not necessarily a sunny window, taking care that they never want for water.

Crocus.

The different varieties of Crocus can be treated in the same manner only they won't stand as much heat as the Hyacinths, but it is a very easy matter to have them in bloom by midwinter, when grown in moss. The Chinese Sacred Lily does well by the same method.

Narciss.

Most of the Narciss are rather difficult to cultivate successfully indoors, but no trouble will be found with the Paper White, or, in fact, any of the varieties in that section. If grown in moss, see that it is firmly packed about the bulbs.

Jonquil.

The Campanelle Jonquil succeeds well if the moss be mixed with soil, half of each.

Freesia.

Freelias are good for the house, provided they be planted early in fairly rich soil and allowed to make foliage before being brought indoors.

Iris.

Iris reticulata and its forms in different shades of purple and violet produce fair-sized flowers every bit as sweetly scented as those of the violet. They naturally bloom in late winter while the snow is melting on the ground. Put say six bulbs in a five-inch pot of soil and plunge in a sunny part of the yard; if taken indoors during any part of January they will bloom in a surprisingly short time.

Oxalis.

The Bermuda Buttercup, *Oxalis corniculata*, is not a bit overpraised in the catalogues. There are several species of *Oxalis* which are just as good; among them are *O. Bowleyi*, *O. versicolor*, and the white and pink forms of *O. multiflora*. The Bermuda Buttercup needs moderately rich soil; if the bulbs grow at all, as they ought to, two of them will be enough for a five-inch pot; they will take all the sun they can get.

Lilium.

Lilium Harrisii can be flowered very successfully in a dwelling house; perfect drainage with good soil packed tight around the bulb are necessary conditions. They should be given pots according to size, but not too large; any position, except in a window facing north, suits them.

Calla.

The Calla Lily, *Richardia æthiopica*, can always be depended upon as a window plant. The dormant bulbs should be started in pots out-of-doors by the beginning of September, to insure the best results.

G. W. OLIVER.

Protecting Celery.

This is my first year in growing celery, and I have a fine bed of Giant Pascal set 6x12 inches (new way), and growing in low moist land, where the sun shines on a small portion of the plot in winter and the ground stays frozen there longer

The Chrysanthemum.

[Paper read by Mr. C. Totty, before the Morris Co., N. J., Gardeners' and Florists' Club, at Madison, N. J.]

When we speak of the Chrysanthemum we usually mean the large Chinese and Japanese varieties, though in its different forms and species the Chrysanthemum is found nearly all over the world. All through Asia on the barren steppes of Siberia is found *C. absinthifolium*; in Africa along the Mediterranean Sea is found *C. pumilum*, all through Europe another, and, in fact, every country contributes its species, and right here in America we have the ox-eye Daisy growing so plentifully as to become a nuisance in many places.

In Japan and China the Chrysanthemum has been cultivated for centuries, and there to-day the flowering season is made the occasion of great festivities in



FIG. 212.—CACTUS DAHLIA W. AGNEW. (See page 762).

than anywhere else near here. Celery averages about 28 to 30 inches high now. No blilling up yet, water will not stand on plot long after big rain. I want to keep most of the celery as long as I can and the question is, had I better keep in the bed and bleach, or take up and set in trenches, say one plant deep (crossways), on same land or remove to drier land. We are about 2,000 feet above sea level, and have zero weather sometimes and occasionally 4 degrees to 10 degrees below, though seldom.—AMATEUR.

—The best plan to adopt for the protection of the celery in question is to board it up in the modern way. If the plants are not standing in line properly, leave those that are and transplant others. Ventilation needs to be provided every eight feet, a good hard wisp straw will suffice. This can be taken out on fine days when ventilation is needed and afterwards be replaced easily. Cover the boards well with pine leaves and frost will never be able to get at plants.

which every one from highest to lowest participates. In Japan the order of the Chrysanthemum is made one of the most distinguished decorations of the kingdom, and a representation of the flower is also used as an official seal.

From time to time we hear that Japan holds and jealously guards the long-sought-for blue Chrysanthemum, but no one has yet seen it, though it is frequently represented on Japanese porcelain and in pictures.

It is about 200 years since the first varieties were imported to Europe under various names, but it was not until about 1835 that the first seedlings were shown in England and about the same time in France. From then until the present day the interest in the Chrysanthemum has never waned, but has gone on steadily increasing as new and beautiful forms came into existence.

In England Mr. Salter and in France M. Deleaux were the most successful raisers of seedlings. In America the names of Messrs. Harris, Thorpe, Spauld-

ing, and May stand out prominently in the annals of Chrysanthemum history, and the late firm of Pitcher & Manda has probably sent out more meritorious kinds than any other firm in the world.

The Chrysanthemum is propagated from cuttings which may be rooted from January to June with good results. If big specimen plants are grown January is the time to strike, but for cut blooms several months later is better; for the general run of pot work March is soon enough; and single stems, as they are called, struck in June are in plenty of time to produce fine flowers if the stock plants have been grown cool and hardy. Select always good healthy cuttings, and it will make a good deal of difference in the vigor of the future plant.

When the cuttings are rooted, don't let them stay in the sand to get drawn up; pot them off into 2½-inch pots, grow them along cool and airy, and pot on as they require it, stopping the plants as soon as they get established. For a 9-inch pot three shoots are enough to keep and carry up, and they should give good flowers in the fall.

Bench culture is the method usually adopted for growing plants to one stem and one flower. Plants for this work may be rooted from the middle of May to the end of June with good results; as soon as they are in fit condition they should be planted out in the benches a foot apart. Then the chief thing is to give the plants all the air possible, keeping the atmosphere in a moist growing condition. Black fly is probably the worst pest, and that should be kept in check by tobacco dust or stems, which is also a good fertilizer. The army worm and divers other bugs are troublesome in their season, and will be cursed and discussed many a time before they are all cleaned out, for hand-picking in most cases is the only remedy.

If the finest flowers are needed the crown bud every time is the proper bud to take, but it must be remembered that to develop a crown bud will need some little artificial heat and a bud that forms before the last week in August almost invariably blasts and never develops. If then the crown bud does not show till the end of August, it is safe to take it, but if the grower have any doubt he should rub it out and take the terminal bud. Here he can make no mistake, and will have the foliage right up to the flower though the flower itself will be smaller. The difference between a crown and terminal bud is easily known. The crown bud has three shoots appear just below it, and if they are not rubbed out soon, take all the strength away from the bud, while the terminal, as its name implies, is the terminus or apex of growth and only has a lot of smaller buds around it.

Once the bud is set the plants must be fed with manure water to help it along, which should be kept up till the buds are opening, when it must cease, and a drier atmosphere be maintained, or the petals will damp.

The rest is easy. Give the plants lots of air in the day, keep a buoyant atmosphere at night, and the flowers will be sure to open well. In proportion to the care given the plants, so will the results be. There are no secrets in growing Chrysanthemums. Nothing but lots of work and watching, and no other plant will give such a return for services rendered. Keep all useless side shoots and suckers cleared away to throw all the strength into the flowers. Keep free from all the myriads of insects, and success is reasonably sure.

Every fall we hear the same old story that the Chrysanthemum is no longer popular and nobody wants it; yet to-day there are more grown than ever before, and while it is in season it still, to use the expression of the Kansas girl, knocks the socks off of the prices of Roses and everything else. A glut, say you? Well, perhaps so; but it brings the Chrysanthemum within the reach of poor and rich, and long may the peerless queen of the autumn reign, say I.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

Diseases of Shade and Ornamental Trees.*

By B. T. GALLOWAY AND ALBERT F. WOODS.
(Continued from page 664.)

Treatment.—It is seldom that a plant once attacked can be saved, as the trouble is not apparent until the root system is nearly destroyed. If there is any reason to fear this disease, trees should not be set on recently cleared land until the roots of the original vegetation have rotted and the soil is cleared of sticks, limbs, etc. If the trouble appear, the diseased trees should be removed with as much of the root system as possible, and the roots burned; or it is still better to cut the tree down, leaving a stump one or two feet high, and then remove the earth about the roots and allow them to dry out. When dry enough the stump should be burned in its original position. Most of the fungus will in this way be burned and that in the neighboring soil killed. Every precaution should be taken to keep the soil well drained, well aerated, and free from weeds.

Honey mushroom (*Agaricus melleus*). Another form of root rot is produced by the mycelium of the honey Agaric, or mushroom. The general appearance of the diseased plant is much the same as when attacked by the southern root rot. Young trees may be killed within a year, but older ones show a weakened, stunted growth, and finally, after several years, dry up suddenly and die when a hot, dry spell comes on. Upon examination the bark at the base of the trunk and on the larger roots will be found to be dead. If a portion of it is removed, a white, leathery growth will be seen between the bark and the wood and between the different layers of bark. It may often be taken out in large sheets of varying thickness. The same will be found between the cortex and wood of the roots. On the outside of the roots and in the surrounding earth dark brown strands, varying in thickness from one twenty-fifth to one-twelfth of an inch, will be found. These may in many cases be traced to the white mycelium between the bark and wood. It is simply the mycelium growing in a different form, as it is not subjected to pressure between the bark and wood. These Rhizomorpha, as they are called, spread a few inches under the surface of the ground from tree to tree, and thus large areas may become diseased from a single center. In the autumn, from the base of the diseased tree and from exposed roots and Rhizomorpha, the fruiting bodies of this fungus develop. They are yellowish brown, and are from three to eight inches high and two to four inches across the top.

Treatment.—When once a tree is attacked by the fungus, there is no hope of saving it. If the tree is one of a group, it should be isolated by digging a ditch around it. The ditch should be dug deep and wide enough to get beyond the point where the brown strands of the fungus have reached. This precaution will be necessary only with the Pines and allied trees, as others are not usually attacked unless first injured.

Polyporus versicolor.—There is good evidence that this fungus, which is a very common one, may produce root rot in many trees. It is probable, however, that such trees have been previously weakened, thus giving the fungus an opportunity to get in. When it occurs on the side of a stump or root, it forms a thin, rigid, shell-shaped growth, extending out at right angles to the surface. Usually many grow together, more or less united to each other at the back. The individual shells vary in size from one-half inch to two inches or more in diameter. The concave surface is always down and is made up of a layer of very small pores, in which the spores are produced. This porous surface is usually of a whitish-yellow color. The upper surface is shining, smooth, and velvety, marked with various dull-colored zones.

The mycelium forms a white, felt-like covering on the roots, penetrating and causing the decay of the bark and wood. The first indication of the disease is in the decreased production or stunted

growth of the wood and a tendency to overproduction of fruit. Examination of the roots of such trees reveals the white felted fungous strands, which continue to increase in abundance until the roots are nearly all rotted off. It is usually several years from the time a tree is first attacked until its death.

The mycelium spreads from tree to tree among decaying roots, so that in the course of years the trees over large areas are destroyed. Healthy, vigorous trees, in good soil, are much less liable to succumb than those growing under less favorable conditions. Trees planted in soil which has been recently cleared are most liable to attack, first, because the fungus is abundant in the decaying roots and, second, for the reason that after a few years the nitrogen becomes greatly decreased, as explained elsewhere. The trees which have up to this time been highly fed and growing vigorously are checked by the decrease of soil food. If this is not at once remedied by fertilization and cultivation of the soil, the fungus may gain a foothold and the tree is doomed.

Treatment.—In all cases the rapid changes in soil conditions which follow clearing should be guarded against by not planting until these changes have taken place and until the roots of the original vegetation have rotted and proper soil conditions have been established. If injuries occur on the larger roots or the base of the trunk, the places should be cleaned and coated with pitch or coal tar. Burning the stumps and roots of diseased trees where they stand is advisable if the conditions are favorable for the spread of the fungus. In the early stages of the disease the tree may often be saved and enabled to outgrow the trouble by removing the earth from the base of the trunk and larger roots, clearing them as thoroughly as possible of diseased tissue, and applying coal tar to the wounds.

DISEASES OF THE TRUNK AND BRANCHES

Red rot of Oak (*Polyporus sulphureus*).—This disease is most common in Oak, but it is also found in the Chestnut, Poplar, Cherry, and Willow. Hartig describes it as parasitic also in Locust, Alder, Walnut, and Pear. As a parasite it gains entrance to the body of the tree through some wound. The mycelium then spreads through the wood, causing it to dry, shrink, crack, and turn reddish brown. In the cracks the mycelium forms large sheets or felted masses, as in the case of the red rot of the Fir and Pine. The inside of a trunk may become completely rotten in a few years from this cause. Whenever any wound permits the mycelium of the fungus to come to the surface, a large group of fruits are produced, extending out from the tree-like brackets. The under surface is made up of a layer of thin-walled pores, whitish at first, then sulphur-yellow. The top is a whitish yellow. The brackets are irregular in shape and size and are usually all grown together in an inseparable mass, which is usually from six to twenty inches or more across and from two to four inches thick.

Treatment.—As the fungus cannot gain entrance except through a wound, it may be readily guarded against by properly caring for wounds, as suggested in other parts of this article.

White Rot of Oak.—This disease is produced by *Polyporus igniarius*, a common fungus, which sometimes attacks the Oak, Hickory, Willow, and other trees. The mycelium of the fungus grows through the wood, reducing it to a yellowish-white, spongy condition. The *Polyporus* itself develops on the surface of the bark or wood. It is at first spherical in shape, but later assumes the form of a hood with the flat side turned down.

Treatment.—The fungus seldom, if ever, attacks sound tissues, hence the proper care of wounds is all that is required to preserve trees from its attacks.

There are numerous other fungi closely related to those described which may produce various kinds of rots in growing trees. Nearly all these gain entrance through cuts and wounds, hence the necessity of properly caring for these, especially during summer, when parasitic enemies of all kinds are active.

(To be concluded.)

*In Yearbook of the U. S. Department of Agriculture 1896.

Clematis Dying Off.

To the Editor of American Gardening.

Concerning the numerous inquiries on this subject, I beg to give herewith my opinions as to the cause of Clematis dying off. There is a little white worm that afterwards turns gray as soon as the vine turns black; the worm is very small and cannot be seen without a microscope. The easiest time to find it is as soon as you notice any withering on the top of the vine, which shows it very quickly. The trouble has been known for several years in the old countries, for we examined Clematis for the same trouble in the months of June, July, and August of 1887, '89, and '90, and always found the same little worm down below on the affected vines, but we were never able to find any after the vine had been dead for a few days. We also experienced that we had more trouble on rich and freshly manured land than anywhere else, and for that reason planting on old, well-cultivated soil, we had pretty good success. Some growers have tried tobacco stems lightly covered by soil among the plants, and others have used pyrethrum powder, but I am not sure of their success.

Last spring I planted three Clematis Jackmanni, and three of other varieties. Before I planted them, I put them under a wooden pail, and had the roots covered up with ground about one inch thick; then I put some carbon bisulphide in a cup under the pail. I gave them this treatment two nights, and had the pail taken off during daytime, while I kept the plants covered with straw during that time. One of them did not start to grow at all, but the other five made a fine growth with no trouble whatever. I hope others will try it too and publish their experience in AMERICAN GARDENING.

I always watch the Clematis very closely, especially in the first part of the summer, and cut off and burn up every affected vine as soon as noticed. I also plant the crown of the roots three or four inches deep, which gives a chance that the plant sprouts out again if it should die off at the top.

SUBSCRIBER.

Catalogues Received.

JOHN FRASER, Huntsville, Ala.—Nursery Stock.

J. H. H. BOYD, Cagle, Tenn.—Price List of Tree Seeds.

Mrs. MAUD M. BRIGGS, El Paso, Tex.—Illustrated Catalogue of Cacti.

PINE TREE FARM, Jamesburg, N. J.—Illustrated list of Poultry, Eggs, etc.

PARSONS & SONS' CO. LTD., Flushing, N. Y.—Select list of Hardy Trees and Shrubs.

D. HAY & SON, Auckland, New Zealand.—Special List of Choice Flowering Plants.

THE LOVETT CO., Little Silver, N. J.—Strawberry, Celery, Cabbage Plants, etc.

ROBERTS MACHINE CO., Collegeville, Pa.—Catalogue of Steam and Hot Water Boilers.

J. M. THORBURN & CO., 15 John St., New York.—List of Sugar Beet Seeds with cultural notes.

CONTINENTAL PLANT CO., Kittrell, N. C.—Standard list of Strawberries with cultural notes.

CLUCAS & BODDINGTON CO., New York.—Offer of Dutch, French, Bermuda and Japan Bulbs.

J. H. BOYD, Cagle, Tenn.—Seeds of Deciduous Trees and Shrubs, also of Evergreens, Forest Seedlings.

JOHN C. MOWING CO., Chicago, Ill.—Catalogue giving the most improved styles and sizes of greenhouse construction timber, with lots of useful data on that subject.

RELIABLE INCUBATOR AND BROODER CO., Quincy, Ill.—A useful list (224 pages) of every thing wanted by the up-to-date poultry raiser, with many valuable hints as to management.

AUGUST ROLKER & SONS, 53 Dey St., New York.—General Illustrated Catalogue of Florists' Supplies, Decorative Goods, Baskets, Fern Dishes, etc. A very complete catalogue well printed and profusely illustrated.

HERRINGMAN MANUFACTURING CO., Geneva, N. Y.—A Treatise on Greenhouse Heating in connection with the Furman Boiler, is fully illustrated and contains much useful information on heating matters, the steam and hot water tables being especially valuable.

The Vegetable Garden.

Ready for Winter.—Active gardening out-of-doors is now practically over for the season. Everything should be ready for winter. As soon as frost comes, the winter spinach should be mulched with some light covering. A liberal dressing of manure should be given the asparagus bed. Along the coast it is the general custom to give the beds a good dressing of sea weed, and where this is done, it is a good plan to put over it a light dressing of strawy manure, or it will shrivel up too much.

Rhubarb.—It is now a good time, wherever needed, to make new plantations by dividing the old roots to two or three good crowns and replanting. And to insure good quick-growing fleshy



FIG. 213.—PORTABLE FENCE.

stalks, it is necessary to give it a liberal dressing of manure, and the soil plowed or dug 15 to 18 inches in depth.

Seakale is not grown as much as it deserves to be grown, as it is a very useful vegetable, and is easily forced for winter use. The roots of this can be dug up now, keeping the best crowns for forcing; for this purpose roots should be about six inches long and straight, about one inch in diameter. Such roots planted in mushroom house or under the greenhouse benches, will soon be fit for use. The best of the remaining roots may be reset for future use.

Cold Frames containing lettuce, parsley, etc., for winter use, should be provided with suitable materials for covering, as hard frost is liable to occur at any moment now.

Mats.—There are now made in New York hotbed mats of burlap, lined with wool waste and quilted, that should prove cheaper, more convenient to handle, and warmer than the straw mats so long used. They are now being

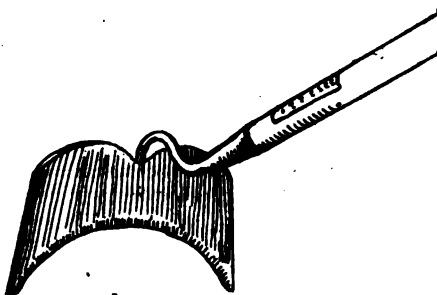


FIG. 214.—FOR SCRAPING OLD TREES.

advertised in this paper. Give ventilation every fine day. Watering, when done, should be early in the day.

Odd Notes.—Examine frequently all roots stored away in cellars or pits outside, removing any that may be rotting. Squashes must be kept in a dry warm place. Up to the present writing frost has not done very serious damage to the tomatoes. If there are still any green ones on the vines, they should be carried indoors, and they will ripen on the vines.

W. M. EDWARDS, Conn.

Last year, \$5,750,000 worth of American fruit was exported, over a third going to England. Of these, considerably more than a fourth (\$1,958,000) were apples.

Missouri State Horticultural Society.—The fortieth annual meeting of the Society will be held in Moberly, Mo., December 7th, 8th, and 9th, 1897, in the Court House.

A Portable Garden Fence.

The cut shows one of the most sensible portable fences that can be devised. Every other panel is rigid, both as regards sidewise and end-to-end motion. This makes the whole fence very firm—a point that is not true of many of the styles of portable fences. It has the advantage also of being put together and taken apart in a moment's time. The construction is plainly shown in the drawing.

For Scraping Old Apple Trees.

Many neglected old orchards ought to have the dead, loose bark scraped from the trunks of the trees. Here eggs are laid by insects, from which great damage results. Besides, the tree will be much more thrifty if the trunk and branches are kept clear of moss and dead bark. A worn-out hoe, cut into the shape shown in the figure, and sharpened, will prove a very serviceable tool in scraping these old tree trunks.

Cauliflower in Sandy Soil.

Will you please ask your correspondents to give their experience in making cauliflower head in sandy soil?—T. H. M.

—Cauliflowers will head when grown in sandy soil providing the climate suits them, this last being more important than the soil. The best heads we have ever seen were grown in sandy soil, but near the sea. We do not know what your climate is like.

Formalin as a Preservative.

In a recent issue, Mr. Jerolaman speaks of preserving strawberries in formalin. Now, I, and perhaps some others of your readers, would like to know something about the process. Does it render the berries unfit for use? Is it used to preserve fruit for show alone?—D. H. BINGHAM.

—Formalin is an aqueous solution of formaldehyde and is used more diluted, simply to preserve form for show; the berries thus kept are absolutely useless for any other purpose.

To Tie Up Raspberry Canes.

What is the best and cheapest way by the acre to tie up raspberry vines? When is the time to prune them and how many stalks to leave to a bush? Also the best time to set out a new bed?—A. W. C., Conn.

—Fasten No. 9 fence wire to anchor posts one at each end of the row. In line with the posts drive stakes so that the top of them will be three-fifths as high as the bushes after they are trimmed. The stakes to be set 40 feet apart.

Fasten the wire to top of the stakes with staples, taking care to not drive the staples too tight that the wire may slip easily when being tightened with the fence wire stretcher.

Tie the canes with any suitable material for the purpose; raffia I prefer to use when convenient, but wool twine does very well. Wire costs a little at first, but as it can be used many years in the same place it is the best and cheapest in the end. We try to have the old wood (fruiting canes) cut out as soon as convenient after berries are picked and the laterals and ends of the new growth trimmed back in spring after freezing weather is over and before the leaf buds begin to start, leaving no more than five canes to each hill; three to four canes give much better satisfaction. Set out a new block of blackcaps in the spring, but I set out red varieties from July to October, in the summer and fall, but if in the spring I find that the earlier the red varieties are out the better.—C. C. N.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1904.

PUBLISHED BY
A. T. DELAMARE PUBLISHING CO. LTD.
ROSE AND DUANE BLDG.
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.
REGISTERED CABLE ADDRESS
Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks. Money Orders, etc., should be made payable to JOSEPH MACILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions.—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

The Henry Strawberry.

Arrangements have been made whereby a bountiful supply of these plants will be ready for spring delivery to subscribers and agents, and in this connection we beg to call the attention of our readers to our generous offer of these plants in another column. We do not think that a more liberal offer has ever been made than the one now advertised, whereby the agent or worker sending us in a club of ten new names, at \$1 each, becomes entitled to 100 Henry Strawberry plants, while five plants will be sent postpaid to each person in his club. This offer will not apply to a club of less than ten. It may be a very long time before such an offer of such a plant can be made again. The wonderful success which has accompanied our premium offer this fall, in the short time at our disposal to advertise it, leads us to believe that the orders for the Henry Strawberry next spring may exceed all anticipations; however, we have planned for a large supply for delivery and trust to be able to meet all demands upon us. Mr. Jerolaman's series of articles is now being placed in pamphlet form, and copies will be mailed free to all who desire to use same in the canvas for new subscriptions.

All the premium Henry Strawberry plants due to date, have been shipped, except where a request has been made to hold them till spring, and judging by the unsolicited acknowledgments received, they are giving immense satisfaction. In order to reduce weight and hinder excessive transpiration some of the leaves are cut off before shipping, this is especially beneficial during a hot spell, and readers can rest assured all is done for the best.

Dahlias. THE favorable season, together with the exhibitions of the Dahlia Society in Philadelphia and the American Institute in New York last season and again this past month, have succeeded beyond question in booming the Dahlia to a marked degree and helped to bring this grand old garden flower into public notice and to all appearances popular favor once again.

That the grand old flower deserves this rejuvenescence there can be no question. For what other garden plant has such a range of color or such distinctions in habit and form? As in the Chrysanthemum, all tastes are provided for. With one it may be singles and favor, and how easily these can be produced too; a packet of seed sown in early spring yields a wealth of color and bloom the same season, which is remarkable.

On the other hand named kinds can be indulged in and by the usual method of propagation such splendid varieties as Paragon, Anna Baroldi, etc., can be perpetuated and all as well by the amateur as the professional. Other tastes are provided for in hundreds of distinct show or fancy varieties; others again may desire the solid, formal pompon, while still more æsthetic tastes can readily be pleased by the various forms of Cactus.

In this last-named class there are now so many fine forms that all tastes and nearly all purposes can be served. Not every one wants the stiff, formal show Dahlia in the house as a cut flower; but no one can object to many of the so-called Cactus varieties with their looser and more irregular outlines. Better still, they bloom, as a rule, earlier in the season and are more prolific. And in this respect too much praise cannot be bestowed upon the charming distinct American variety, which forms the subject of our illustration on page 757.

With us William Agnew began flowering early in July and since that date till the present time has kept up a continuous supply. The plant is a splendid grower and attains a height of about six feet early in the season. The blooms are of great size and the brilliant crimson color makes them very desirable for room decoration. In fact, it makes in our opinion one of the best home Dahlias in existence. As an exhibition sort it is of but little service, for the blooms ship badly. A worthy consort is seen in C. W. Bruton, similar in form, but sulphur-yellow. Both these are the introductions of Messrs. Peacock, of Atco, N. J., to whom is due no small share of credit in fostering the present revival.

The subject of the other illustration, fig. 211, Nymphaea, is another Cactus of great value as a decorative flower, and altogether more dainty than the foregoing. The disposition of the foliage and buds renders it most valuable as a cut flower, while the color, a soft, pleasing pink, makes it still more desirable in that direction; it also has an additional advantage, owing to its good keeping and shipping qualities. The flower is not large, and as an exhibition variety does not count for much. But for home purposes it is all right.

The plant is a good grower and has a long period of blooming; with us up to the same date as the first-named.

Intensive Cultivation. WHEN discussing intensive vegetable farming in our issue of Aug. 14, reference was made to the very successful system of a Long Island farmer, Mr. Hallock, and a correspondent who is struck by the figures then given asks:

How close should the potatoes be planted, and were Mr. Hallock's planted in pieces or whole to get the yield spoken of.

It seems that the subject is of sufficient importance to receive fuller comment here, if only to give a caution. Mr. Hallock grows his potatoes in drills three feet apart and the plants are set one foot apart in the drills. But the secret of his success is due to several causes—"intensive cultivation" tells the whole story. The soil is put in the best possible condition before the plants are set, and they are given all the food they can possibly consume, and of the kind best suited to their necessities.

This is but the beginning. Selection is one of the most important steps taken, and that with a view to productiveness and earliness. Mr. Hallock took up the variety known as the "Early Ohio," the first year of its introduction, having found it well adapted to his purposes, and by systematic selection, annually carried on, he has succeeded in getting a type several days earlier and more prolific than the parent. In his method of selection he had in view the largest amount of tubers, with the least possible growth of vine. The careful observer, on looking over his fields, will be astonished at the smallness of vine of his Improved Early Ohio, when compared with the Early Rose, which he grows to some extent, although it is not as great a cropper.

Why? it may be asked, should Mr. Hallock grow the Early Rose when the Early Ohio is more prolific? Experiment has shown him that where the Early Rose can be grown at a profit, his Early Ohio cannot; that the soil must be in a much higher state of cultivation for the latter than for the former. Another point of importance is that if the Early Rose is given the same cultivation he gives the Early Ohio he would have all tops and no tubers. This shows the importance of selection to suit particular conditions of soil and climate. Mr. Hallock is growing the Early Rose in his rotation of crops on a field he has recently come into possession of, and he says it will be at least three years before he can, with thorough cultivation, get that field up to a degree of fertility that will warrant him in planting it with his favorite variety, after which the Early Rose will not be grown. It is well to say a single trial will not give the success Mr. Hallock has attained; persistent effort alone can give that.

Our Strawberry Pamphlet.

Owing to an expressed desire by the writer to thoroughly revise his series of articles on "Big Berries for All," it may be early in December before we will be able to issue the booklet. It will be well worth waiting for, however, as we confidently anticipate that it will prove the best treatise on the subject ever written, and practical to the core.

READERS' NOTES AND COMMENTS.

This space is devoted to short notes of experience and observation, but not necessarily reflecting our own opinions. You, reader are trying new varieties, new implements, new methods. Let us have your verdict—short, pointedly. Possibly you may wish to comment on statements found in this or previous issues or to offer suggestions; let us hear what you have to say. In the multitude of counsel there is wisdom and safety. Write us often.

Mushrooms Under Benches.—Will some one oblige me by information as to the best manner of building a mushroom bed under bench (30x8) in lettuce house, a 2-inch steam main runs under this bench, no others. I desire to put in a bed as soon as possible in the most expeditious manner.—JAMES L. CARBEY, D.C.

A Yellow Canna.—Kindly give in AMERICAN GARDENING the name of Canna of which I enclose a blossom. It is one of a lot of seedlings which I raised this year from seed taken at random from a bed of French Cannas. The plant is dwarf in habit (18 inches to 2 feet), and a very profuse bloomer.—J. E. G., Md.

—Cannas do not come true from seed and great range of variety may be had by raising one's own seedlings. The blooms sent are of a deep Indian yellow and show the smallest amount of red of any Canna we recall to mind. It seems to us you have a desirable and distinct thing.—Ed.

Gardening in La.—Concerning the remarks in All About the Home Plot August 20, I planted radish Giant Stuttgart and Strasburg. I had raised peas McLean's Extra Early; after peas were off, the ground was spaded again and sugar corn planted. I think it was Cory's White Cob; after the corn was used up the ground was cleaned off again, and September 20 the radish seed were planted in drills opened with the corner of the hoe. I sprinkled ashes pretty thick in the drills, then a sprinkling of top soil, then the seed, lightly covering with top soil. I pulled the first radishes on October 3, fine ones three inches long and an inch thick. Only one rain fell after the seeds were planted. I find little difference in Stuttgart and Strasburg radishes. I always use ashes in the garden, but always put it in under the seed. I use the coffee grounds, tea leaves, and egg shells with the ashes; I open trenches a foot or more deep and put all leaves, pecan hulls, and other litter in, stamp it in well, then throw the soil on. This keeps the soil in good order for almost anything. In my little "patch" I raise all the corn, beans, peas, lettuce, radishes, peppers, and onions we can make use of, and often have enough to give to some of my less fortunate friends. I planted peas to-day; we may have a mess for Christmas, or a cold snap may get them.—MARGARET E. CAMPBELL, La.

What Ails this Apple Tree?—What is the trouble with my apple tree? I have a large vigorous tree standing on high dry land, at the edge of my vegetable garden; soil sandy but well-cultivated and fertilized. The variety of apple is King of Tompkins Co. The tree bears every year very well, but the apples begin to fall badly when nearly grown and those that hang on are few of them good. They look smooth and handsome enough but when cut open more or less of the inside looks as if it had been slightly frozen, or as a partly roasted apple looks when cut open. They are so poor that we use none of them, and although the tree can easily bear four barrels a year, I shall cut it down this winter. Years ago the apples were all right and sound and kept till spring. Some six years ago I put an iron rod through the tree to prevent its splitting apart. Do you think the iron rod causes the trouble?—E. A. SHAW.

An Unruly Rose.—In nearly all old gardens here are roses called St. George. They are among our very best roses; the foliage is smooth, dark, shining green; flowers often come in clusters of three, sometimes one on a stem will be vivid crimson, another paler, with very light center; still another mottled in pink and

red. The flowers are Camellia-shaped and last well. Now two years ago one of my big bushes was badly injured by the unusual cold snap in February and a good part of it died. I cut it back to near the ground; when it began growing in spring it threw out long nearly smooth vines that are now 25 feet long, branching and going everywhere, but there has never been a Rose on any of the vines. Near the ground on short new growth it has bloomed just the same as usual. This Rose is not Greville or Seven Sisters, but a Rose that blooms ten months in the year. I have let this one alone as I have other St. George Roses, but if it does not behave better I shall cut off all vines.—MARGARET E. CAMPBELL, La.

Sow Bugs.—On page 717, I see a query from W. F. Preston, Ill., for advice on wood louse and answer. Now with all due respect to the entomologists, I should advise them to take a little practical experience with these pests before being so certain. Having grown cucumbers for years, especially the tender forcing varieties, I can positively say that the wood louse does, and will, eat the leaves, fruit, and flower of the cucumber, especially so in frames, as they can remain under the leaves undisturbed in the day as well as night, when they destroy a large percentage of the fruit. Their favorite food is the flower, and fruit in that stage is easily damaged. The remedy I have for years, and still practice, and I could not do without, is toads, (not frogs, some people get these two confused). Toads as a rule can be found in most dry rubbish heaps, and if placed in greenhouse will eat the sow bug or wood louse. It may be interesting to the inexperienced, to learn how these toads take their prey; they partly bury themselves in the soil, just their heads above, and when the wood louse comes their way, even if six inches off, they open their mouths, and thrust out their tongues which seem to act like a magnet, and draw their victim in. Now as regards quantity, that depends on the amount of wood lice, if they are very bad put in as many as you can get, as food diminishes they can be taken out in accordance, or they will get out as opportunity presents itself, but if one would not be bothered with wood lice, always keep some toads on hand.—WILLIAM ELURED, San Francisco.

Botanical Study in Detroit, Mich.

President Parker and Commissioner Hoyt and Superintendent Coryell of the park board, Principal F. L. Bliss of the high school, and W. W. Tracy, horticulturist for D. M. Ferry & Co., have been discussing a proposition to turn the central high school grounds into a sort of botanical garden. The park board, of course, has no jurisdiction over the property, but the plan is in the line of that proposed not long since for carrying out future improvements in the parks with a view to making them as useful as possible for the study of botany. The members of the park board have had under consideration an informal plan to improve the balance of the Boulevard, by setting out trees and shrubs in groups of families.

How to Recognize the San Jose Scale.

In looking for this insect most persons will pass it by unnoticed on account of its very small size. The female scale is only about one-twenty-fifth of an inch in diameter, while the male is only about one-half that size. The shape of the female is nearly circular, while the male is more elongated. The female is sharply convex or conical in the center. This last character will help to distinguish it from many of the other more common species. Its color is nearly like the bark on which it is found. Another distinguishing character is found in the reddish discoloration of the bark, immediately surrounding the scale, extending through both the outer and inner bark. These characters will enable one with an ordinary pocket magnifying glass to readily detect the presence of the insect.—Bulletin of Purdue University, Ag. Ex. St'n.

Cost of Raising Strawberries.

To the Editor of American Gardening.

I have read with much interest the "Big Berries for All," by Mr. Henry Jerolaman. As I am about on par in many respects to Mr. Jerolaman in being a leading grower of fancy strawberries for a fancy trade of about the same extent in this section, I am very anxious to find out just how much more he knows about growing strawberries that he is willing to tell through AMERICAN GARDENING that I do not now know; for though I am reckless enough to claim to possess much more knowledge than the average strawberry grower about the business (which has been quite fully demonstrated in the past six years), I am willing to confess that what I really do know about the business would not make near so large a book as that which I do not know, and which is possible to be learned by the most intelligent persons; and that if I should live to continue in the business twenty years longer, I should more fully realize the truth of this than I do now.

My fancy strawberries are all grown for one most reliable commission and retail house in Boston, having branch summer stores at North East and Bar Harbor, Me. The price which I receive for this fruit in all these markets is nearly double that given by the most reliable market quotations at the time. Mr. Jerolaman's secret about "gloss" was not so much a secret as he supposed, as I had discovered it six years ago, and have profited by the discovery ever since. I do not agree with him, however, that it can only be accomplished by mulching, as I can grow just as glossy berries, though not so clean, without mulching, that is, in the way that he would have you understand. Mulching has only an indirect effect in producing this gloss. It only induces certain conditions which are part of the necessities to produce it, and the other parts must be present in order to make mulching effectual in any great degree for this purpose. It is plain to see that by the method of culture thus far described by Mr. Jerolaman, these conditions are likely all to be present; but not so with the average strawberry grower, who grows his strawberries in the matted row. The time that Mr. Jerolaman sets his plants, which appears to be some time soon after the first of September, where layer plants are used, certainly would not be practical for fruit growers in more northern sections with the expectations of getting even a paying crop the next season.

Mr. Jerolaman gives us to understand, on page 651, that he can grow a crop of strawberries ("first class") including cost of preparing land, fertilizers, labor and all, ready for the harvesting, with much less cost than any other crop that is grown, not even excepting hay. Just below he tells of how he received about \$300 for one picking of strawberries from about one-quarter acre; and then asks: "Can any farmer or fruit grower show a profit like that from a single picking from so small a piece?" I think that I can safely answer for them all, No!!!

On page 667 he says: "I have given you my mode of culture for a whole year, and if you follow it, that is, set out plants in clean rich soil, keep clean, mulch in winter if the ground heave by action of frost, mulch between rows in spring, pick, eat, or sell your fruit, that is all there is in strawberry culture; you cannot fail in strawberry culture unless you have or get poor varieties of plants. Simple is it not, and plain, all summed up in less than three lines?" Now, he does not say one word about cutting runners, and it would seem by the way he says it that there were no runners to be cut during the whole year, so we are obliged to presume there were none, which explains, in part, why he is able to grow the crop so cheaply. His profits are indeed marvelous, and I hope he will tell us very soon just how he is able to do it; for to grow a really first-class crop of strawberries, it costs me, ready for the gathering, upwards of \$200 per acre.

E. W. WOOSTER, Me.

[In a later issue these points will be discussed.—Ed.]

There is Not a Home in the Land

But calls for a yearly Calendar.

Every family tries to get one or more; generally more.

There are Calendars and Calendars

Some are good, some bad, most of them indifferent.

There Will Not be a Calendar Issued for 1898

To exceed in artistic elegance, finish, beauty of designs and effective coloring, the one we today offer as a premium to every subscription to AMERICAN GARDENING received before December 31, 1897.

EVERY SUBSCRIBER IS ENTITLED TO ONE

AND CAN EASILY EARN TWENTY.

OUR magnificent **Rose and Girl 1898** six sheet Art Calendar, two months to a sheet, each sheet $8\frac{1}{2} \times 11\frac{1}{4}$ inches, is superbly lithographed in eleven colors, and printed on hammered paper; the whole tastefully tied with silk bow—undoubtedly a work of art fit for the most elegant home, and as handsome a Calendar as was ever published. Each one of the six designs presents a distinct type of female loveliness and a fresh study in roses, the coloring on each sheet being rendered in harmony with the design. There is not a line of advertising on the Calendars to detract from their value. They will not be sold by us for less than \$1.00 each.

Who is Entitled to a Calendar?

EVERY SUBSCRIBER renewing before December 31, 1897, enclosing Five Cents additional to pay packing and postage.

EVERY NEW SUBSCRIPTION—To induce people to test the value of AMERICAN GARDENING we will send the Calendar absolutely free to every name received direct not previously on our mailing list. Remit \$1.00 for A. G. 12 months.

EVERY ONE sending us a club of Four 3-month trial subscriptions at twenty-five cents each, will get a Calendar, free as a premium, by return mail.

EVERY NEW name sent in by an agent.

NOTE.—We have ordered manufactured for us a large stock of these superb Calendars in the endeavor to have sufficient supply for all demands, but will not guarantee to fill orders after supply is exhausted. Therefore, order yours now.

Special to Agents A copy of our Art Calendar to show people will clinch the argument and obtain the subscription. Bona fide Agents will be mailed one copy, securely wrapped, on receipt of only Twenty-five cents (one-fourth its value.) Armed with this superb Calendar we misjudge human nature greatly if any ordinary mortal cannot secure a big list of new subscriptions every day. Every new subscriber you send us gets a Calendar by return mail.

We Pay Agents

Every new subscription at \$1.00 entitles the agent to **Five of the Wonderful Henry Strawberry Plants**, to be delivered next Spring. Thus 100 new subscriptions would secure agents 500 plants; a possession worthy of your consideration. Every new subscriber taken by agent will receive one of our Art Calendars free by return mail. Agents who do not want the Henry Strawberry Plants can retain as their payment **20 cents in cash** on each subscription they take, or will be credited **twenty-five cents** on any book, magazine or publication they wish to obtain through us.

Address all
correspondence

AMERICAN GARDENING, P. O. Box 1697, New York.

REMIT BY P. O. or EXPRESS MONEY ORDER—IT IS SAFEST.

PRIVATE GARDENERS.

Appointments and Doings.
Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

New York.
The horticultural display at Madison square Garden of the American Institute as now closed. C. W. Ward, Queens, N. Y., made a grand display of carnations at Saturday, for which he was awarded the Medal of Excellence. Certificates were also awarded to his new varieties, Mrs. James Dean, Gold Nuggets, New York, and Maceo. The palm for apples during the whole show must be given to E. Boggs, of Waynesville, N. C., his specimens were superb.

A Woman Head Gardener.
Some time back we recorded the fact that the authorities at Kew Gardens had opened the portals to women students as well as to young men. One of them as been appointed head gardener to J. Brogden, Esq., of Iscoed, Ferry Side, Wales.

Newport, R. I.
An enthusiastic meeting of the Horticultural Society was held Wednesday, October 27, and twenty-one new members were elected.
Among the exhibits were; from Robert Laurie, gardener for C. Vanderbilt, Esq., ample bloom of new Chrysanthemum Peter Kay, Nerines, and Begonia semperflorens roseum giganteum.
From Andrew S. Melkie, gardener for V. E. Wells, Esq., came a splendid vase of long-stemmed Gardenias, and from John Allan, "Caswell's" collection of Chrysanthemums. The awards were as follows: to Robert Laurie for new Chrysanthemum Peter Kay, a bronze medal; for vase of Nerines, certificate of merit; Andrew S. Melkie, for vase of Gardenias, a bronze medal for superior culture; John Allan for collection of Chrysanthemums, at blooms, honorable mention; to Thomas Beattie a similar award for strawberry, Four Seasons, in fruit.
At the next meeting, November 10, Arthur Griffin, gardener for J. J. Van Allen, Esq., will read a paper on Chrysanthemums.

Chrysanthemum Society of America.
Seedlings.—The committees judging new seedlings will be in session this and every Saturday up to and including November 27.
Exhibitors should make their entries (a fee of \$2 is charged for each variety exhibited) to the secretary, not later than Tuesday of the week in which the blooms are to be shown.
Blooms may be sent to any of the following addresses, express prepaid:
Boston.—A. H. Fewkes, Horticultural Hall.
New York.—Eugene Dailledouze, care of New York Cut Flower Co., 121 W. 23d street.
Philadelphia.—Edwin Lonsdale, 1514 Chestnut street.
Cincinnati.—B. Witterstaetter, corner fourth and Walnut streets.
Chicago.—W. N. Rudd, room 202, 185 Dearborn street.
Secretary's Official Report.
Below I give reports of chrysanthemum committees' work for the 28th Inst., as far as received:

NEW YORK.
Miss Clara Nevin. Exhibited by Wm. Illebrecht, Union, N. J., Japanese Rexed, white. Scored 72 points.
Peter Kay. Exhibited by Robert Laurie, Newport, R. I., Japanese, amber-bloom. Scored 87 points.
Solar Queen. Exhibited by E. G. Hill Co., Richmond, Ind., Japanese, yellow. Scored 86 points.
H. W. Longfellow. Exhibited by E. G. Hill & Co., Japanese incurved, white. Scored 82 points.

Australian Gold. (Importation), Exhibited by E. G. Hill & Co., Japanese, light yellow. Scored 91 points.
CHICAGO.
W. H. Longfellow. Exhibited by E. G. Hill & Co., Japanese incurved, white, pink shadings on lower petals. Scored 85 points.
R. W. Emerson. Exhibited by E. G. Hill & Co., Japanese, white, shading to yellow at center. Scored 80 points.
Australian Gold. Exhibited by E. G. Hill & Co., Japanese incurved, light yellow. Scored 77 points.
Solar Queen. Exhibited by E. G. Hill & Co., Japanese incurved, light yellow. Scored 88 points.
Mrs. O. P. Bassett. Exhibited by Bassett & Washburn, Hinsdale, Ill., sport from Mrs. H. Robinson; light yellow. Scored 85 points.
No blooms were presented at Philadelphia and we have no report from Boston or Cincinnati.
ELMER D. SMITH, Secretary.

Coming Exhibitions.
Nov. 9-12—SYRACUSE, N. Y.: Central New York Horticultural Society, in the Alhambra. D. Campbell, secretary.
—WORCESTER, MASS.: Worcester County Horticultural Society. Adin A. Hixon, Worcester, Mass., secretary.
Nov. 9-12—MT. KISCO, N. Y.: Bedford Flower Club, under management of Westchester County Horticultural Society. Opera House. H. Spavins, Box 52, Secretary.
Nov. 9-13—CHICAGO: Horticultural Society, Armory, Lake Front. W. N. Rudd, Room 202, 185 Dearborn street, manager.
—PHILADELPHIA: Pennsylvania Horticultural Society. Horticultural Hall, Broad street. David Rust, secretary.
Nov. 10-12—SPRINGFIELD, MASS.: Hampden County Horticultural Society, International Chrysanthemum Exhibition. William F. Gale, 331 Main street, manager of exhibitions.
—WACO, TEX.: Waco Floral Society. Mrs. M. B. Davis, secretary.
Nov. 16-13—LOUISVILLE, KY.: Kentucky Society of Florists. F. C. Haupt, 241 W. Jefferson street, secretary.
—TORONTO, ONT.: Gardeners' and Florists' Association, The Pavilion. E. H. Carter, 280 Gerrard street, East, secretary.
Nov. 11-13—PROVIDENCE, R. I.: Rhode Island Horticultural Society, Music Hall. Charles W. Smith, 61 Westminster street, secretary.
Nov. 12 and 13—NEW YORK: N. Y. Gardeners' Society, Hotel Astoria, 34th street and Fifth avenue. J. H. Troy, manager, 865 Fifth avenue.
Nov. 16-18—CLEVELAND, OHIO: Florists' Club. G. A. Tilton, 85-87 Woodland avenue, secretary.
Nov. 20—BOSTON, MASS.: Horticultural Society's Prize Exhibition, Horticultural Hall. Robert Manning, secretary.
Not Fixed—SAN FRANCISCO, CAL.: California State Floral Society. Emory E. Smith, manager.

The Ideal Park Superintendent.*
It may seem presumptuous for one who has never been a park superintendent to attempt to give the qualifications needed for such a position. Undoubtedly practical experience would add to one's ability to speak with authority on this subject, but I may claim engaged in a similar calling—from having great admiration for parks, from visiting many such institutions, and from studying what has been written on landscape gardening as well as the actual landscape effects.
When Mr. Egan asked me to prepare this paper he inclosed a slip on which was written "What are the qualifications for an ideal park superintendent? As the ideal combination can probably never be found in one man, which qualities can best be spared? Which are of the greatest importance? What is the relative importance of the various essentials, such as engineering, tree planting, administrative ability, etc.?"
A park superintendent should first
*Read before the Chicago, (Ill.) Horticultural Society, by O. C. Simonds, on July 10, 1897.

W. & D's.
CELEBRATED SURE CROP.
MUSHROOM SPAWN.
8 LBS. FOR \$1.00.
Lilium Marriah, Roman Hyacinths, Freesias, Paper White Narcissus, Callas, Etc., Etc.
Special PRICES on application.
WEEBER & DON,
Seed Merchants and Growers,
114 Chambers St., N. Y. CITY.
Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and Dealers in Cut Flowers
150 West 30th St., NEW YORK CITY.
Solicit Shipments of Cut Flowers on Commission. Best market prices guaranteed.
Mention American Gardening when you write.

INCUBATORS Self-regulating Catalogue free
G. S. BINGEM, Cardington, O.
Mention American Gardening when you write

HATCH Chickens BY STEAM—
With the MODEL
EXCELSIOR Incubator
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made.
GEO. H. STAHL,
114 to 122 S. 5th St. Quincy, Ill.
Mention American Gardening when you write.

"Not a Theory, But a Condition."
Time was when land and timber were plentiful and cheap. Then wisdom built the old "worm fence." Now, it is different; and the wise man looks for the best substitute for rails, or plank. A great many are asking us about it.
PAGE WOVEN WIRE FENCE CO., Adrian, Mich.
Mention American Gardening when you write.

SHERIDAN'S
CONDITION
POWDER
WILL MAKE HENS LAY.
It will keep your chickens strong and healthy. It will make young pullets lay early. Worth its weight in gold for moulting hens, and prevents all diseases.
Large Cans Most Economical to Buy.
Sold by Druggists, Grocers and Food Dealers.
It is a powerful Food Digestive.
Therefore, no matter what kind of food you use, mix with it daily Sheridan's Powder. Otherwise, your profit this fall and winter will be lost when the price for eggs is very high. It assures perfect assimilation of the food elements needed to produce health and form eggs. It is absolutely pure. Highly concentrated. In quantity costs less than a tenth of a cent a day. No other kind is like it.
If you can't get it send to us. Ask First
Single pack, 25 cts. Five \$1. Large two-lb. can \$1.50. Six cans, \$1. Exp. paid. Sample "BEST POULTRY FEED" free
L. S. JOHNSON & CO., 25 Custom House St., Boston, Mass.
Mention American Gardening when you write.

Peach Trees for everybody. Wholesale and retail
R.S. JUNKSTON, Box 11 Stockley, Del.
Mention American Gardening when you write.

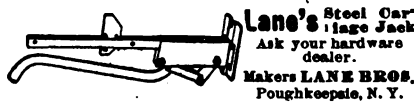
We PAY CASH each WEEK the year round, if
you sell Stark Trees. Outfit free.
STARK NURSERY, LOUISIANA, Mo., Stark, Mo., Budget, N.Y., Danville, N.Y.
Mention American Gardening when you write.

PEACH TREES, \$3 PER 100.

All kinds of Trees and Plants CHEAP. Cat. FREE.
RELIANCE NURSER Y CO., Box 1410, Geneva, N.Y.
Mention American Gardening when you write.

FREE ILLUSTRATED CATALOGUE...
Ornamental Trees, Evergreens and Plants. Prices
never so low. Japan Ivy, 3 ft. strong, \$2.00 per 100.
MONTROSE NURSERIES, Montrose, N.Y.
Mention American Gardening when you write.

AGENTS WANTED, BEATED
GENEVA Nurseries, estab-
lished 1844. Good Pay. Suc-
cess ensured to Workers. Address
W. & T. SMITH, GENEVA, N. Y.
Mention American Gardening when you write.



Mention American Gardening when you write.

THE CELEBRATED FOLIO MUSIC BOOKS

NO other series of music books published
ever attained the popularity enjoyed by
these famous collections; and this is deservedly
so, for no other collections contain an equal
amount of the finest music found in these vol-
umes. There is not an unworthy collection in
the whole series.

Any of the first nine volumes in this list will
be sent, postpaid, on receipt of 65 cts. each.

The Song Folio Vol. I., 207 pages. 115 popular songs.	
The Song Folio Vol. II., 207 pages. 109 vocal gems.	
The Song Folio Vol. III., 207 pages. 85 beautiful lyrics.	
The Song Folio Vol. IV., 207 pages. 107 real favorites.	
Folio of Music Vol. I. 91 popular pianoforte pieces.	
Folio of Music Vol. II. 90 popular pianoforte pieces.	
Folio of Sacred Music 64 sacred solos. All voices.	
Folio of Piano Duets 42 four-hand pieces.	
Folio of Bass and Baritone Songs 88 splendid songs.	
<i>Any of the following volumes sent, post-paid, on receipt of 50 cts. each.</i>	
The Song Folio Vol. V. 41 New and standard favorites.	Sacred Song Folio High voices. 39 standard works.
	Sacred Song Folio Low voices. 46 standard works.
Folio of Organ Music 58 compositions.	

ANY piece or book of music published in
any part of the world can be procured
of us at shortest notice.

CATALOGUES FREE.

OLIVER DITSON COMPANY
453-463 Washington St., Boston
NEW YORK PHILADELPHIA
C. H. Ditson & Co. J. E. Ditson & Co.

Mention American Gardening when you write.

We solicit from our readers notes of experi-
ence and observation. While our space is
limited we will always manage to make room
for any communication that contains germs of
real, practical value to fellow-subscribers.

of all be honest, reliable, conscientious,
gentlemanly—in short, be a man of
good character. The people's money,
which he spends, should secure the best
results for the people. If it goes for
material it should be for the best qual-
ity and the greatest quantity that
the amount expended will command;
if for labor, the work done should
correspond with the wages paid.
But all this is so generally admitted,
and is true of so many other callings,
no time need be spent in its demonstra-
tion.

Next to good character comes a
knowledge of what a park should be.
A superintendent should know for what
purpose the thing he superintends ex-
ists, what should be its leading features
and how these can be preserved or at-
tained. He should know that a park
exists, primarily, for its beauty, for its
varied scenery, for its contrast with
city streets, and for the rest, the recre-
ation, and the pleasure that is given by
this beauty with all its various modes
of expression.

In some cases the superintendent is
also the designer, and then he should
know the general plan of the park is
of more importance than any single
feature. If a building is to be erected
it should not be placed where it will cut
off an important view; if a tree is to
be planted it should stand where it will
improve the landscape rather than
where it will compete with other trees;
if a road is to be made the superin-
tendent should know, first, where to
place it and then how to construct it.

If he cannot have both kinds of
knowledge he should have the first, and
get some one else to build the road,
since there are a dozen who can an-
swer the question, "How?" to one that
can answer the question "Where?" If
there be grading to be done he should
undertake it with the feeling of an
artist rather than with that of an en-
gineer, since the shaping of park sur-
faces is more nearly allied to sculpture
than to the building of railroads. If
people give a monument, a fountain or
a relic of any kind and it must be ac-
cepted, he should know how to subordinate
it to the general effect desired.

But in most cases the superintendent
will be required to carry out the design
furnished by some one else. Even then
it is important he should know some-
thing of the principles of design and
should have a knowledge of trees,
shrubs and flowers, with their various
requirements; he should appreciate the
value of large open spaces and varied
outlines; he should know what consti-
tutes a good road, when it has good
lines and proper construction; he
should know how to make the border of
a lake appear natural and interesting.

To put the whole matter briefly, a
park superintendent, in order to fulfill
his duties in a satisfactory manner,
should have some knowledge of land-
scape gardening. This is just as im-
portant as it is for a man who con-
ducts an orchestra to have some knowl-
edge of music. The conductor may not
be able to compose an opera, but he
should be able to appreciate a good
composition; and putting a man in
charge of work required to maintain
and create beautiful scenery who has
no special knowledge of landscape art
would be like asking a man who cannot
beat time or tell one tune from another
to act as leader for an orchestra.

It is, to be sure, an advantage for a
park superintendent to have some
knowledge of engineering. He should
know how to put in drains, water pipes,
build roads, walks, and do all the var-
ious kinds of engineering work usually
needed in the construction of a park.
He should also know how to prepare
the various plans and records of such
work that may be needed for reference.

I believe this knowledge can be
gained by the person who has also the
desired acquaintance with landscape
gardening, but if the superintendent is
to be deficient in either line the defi-
ciency can be most easily supplied from

(Continued on next page.)

Blindness Prevented

The Absorption Treatment. "A Heaven sent
blessing." Hundreds successfully treated at our Sas-
tarium and at their homes without knife or risk.
A. B. Colvin, State Treasurer of New York and
resident of Glens Falls, says: "The history of the
Bemis Sanitarium and its advance by marriage
strides is due to Edward H. Bemis, Eye Specialist,
whose marvelous success makes his name familiar to
thousands all over the United States and in many
foreign lands, and God speed him."
Pamphlets Free, explaining the treatment for
impaired vision and diseased eyes. Address,
THE BEMIS SANITARIUM, - - Glens Falls, N. Y.
We have no branch offices.

Mention American Gardening when you write.

A Rare Plant Cycas Circinalis

Stem 36 in. tall, 1 1/2
in diameter, 55 leaves over 6 ft. long. A grand specimen
price on application. Send for wholesale list of palms.
W. J. Heaser, Prop. Palm Gardens, Plattsburgh, N.Y.
Mention American Gardening when you write.

PEACH TREES

Guaranteed free from Yellow, Root, or San
Jose Scale. State Inspectors certificate with
each order. All standard varieties including
Elberta, Emma, and Triumph. Also Pear,
Plum, Apple, and other Trees and small fruit
plants. Catalogue on application.

CHAS. WRIGHT, Sanford, Del.
Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them and
10 cts. for Mrs. Theodosia B. Shepherd's
New Catalogue of Rare and Beautiful
Flowers.

Many New Begonias, New Cosmos,
Rare Cacti, etc., not offered by others.
Ventura-by-the-Sea, - California
Mention American Gardening when you write.

Luck With Flowers

You will have no more ill
luck with your plants if you
nourish them with **Peatless
Flower Food**. A scientific
aid to nature. Makes any
kind of plants grow as they
should grow. Clean and odor-
less. Price 25c. per pound
pkg. By mail 40c.
Sharpless & Carpenter,
124 E. Delaware Ave., Phila.

Mention American Gardening when you write.

Established 44 Years. ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.
Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
HOT HOUSE FRUITS A SPECIALTY.
Mention American Gardening when you write.

No. 8. **STANDARD CO.'S**
New line of Automatic
Feeding
**BONE
OUTTERS**



with gears and
back to prevent cir-
cling. The principal
cells all others. New
different sizes ranging
in price from \$2.75 to
\$29.50. Try them in
competition. Sent a
trial. Diamond-Grit
Grit: Clear, strong,
lance-like points are the
best grinders. Dis-
tributed catalogue.

Standard Green Bone &
Vegetable Cutter Co.
Milford, Mass. U.S.A.
For Hand Use.
Mention American Gardening when you write.

other sources if it is lack of knowledge of engineering.

The ideal park superintendent should be thoroughly in love with his work. I have known a number of such men. One had charge of a large tract of land, which was really a public park, although it was not called such, and was not managed by a City Council or by park commissioners. I remember visiting him many years ago; he would call my attention to bits of scenery, the border of a lake, an undulating lawn, or a distant group of red pines, by reflecting them in a mirror which he carried for the purpose, and which framed in and separated the view in question or the picture being examined. He showed these views with as much pleasure as a mother would exhibit in showing her baby.

Again, on going to see him early one morning, I found him greatly interested in a ravine drive. He had actually been laying an important drain with his own hands. On another occasion, at his office, he took great pleasure in showing his various books which treated of landscape gardening and birds. I know another superintendent, who is still living, who for many years was in the employ of the late Henry Shaw, of St. Louis, and who still looks after Tower Grove Park, who shows as much interest and affection for his lawns, trees, shrubs and lilies as a parent would show for a child.

But this deep interest, which is so essential for producing the best results, cannot be expected from a man whose position is insecure; from a man who may be discharged when the other party gets in power. The ideal superintendent should expect to spend his life with the park he cares for. The park is to continue for generations. Many of the effects desired will require years of growth for their production.

It takes time for a man to become acquainted with the various features of even a small park, so the one in charge should have no fear whatever of being replaced by another man; his whole thought should be given to the park, and, moreover, since he is responsible in a large measure for the manner in which the park is conducted, he should have absolute control of all the employees in the park—the laborers, gardeners, policemen, etc. He is called upon to make estimates of what certain work will cost and then is required to execute the work. It is unfair to him to require him to use men hired and controlled by some one else.

In the selection of employees he will satisfy himself in regard to an applicant's ability to do a needed work, but will not inquire as to his nationality, his religion, or his politics. The fact that man is a Buddhist, Presbyterian or agnostic would probably not interfere with his doing a good day's work at mowing grass.

The superintendent should have authority to discharge at once any man who showed no interest in his work; who worked rapidly when some one was looking at him, but rested most of the time when he thought himself alone; who talked too much with his fellow-employees, or attempted in any way to make them discontented.

The ideal superintendent would in time become acquainted with all the workers in the park, and take some interest in them aside from securing the greatest amount of work for money expended. A word of explanation now, and then, calling the attention of a mere laborer to the beauty of a tree or shrub; the statement of an interesting fact in natural history; or possibly a bit of political economy, would give the workman food for thought, and help deprive his labor of a little of its drudgery.

On the other hand, the superintendent can often help to educate the Park Commissioners, or, if fortunately one of the commissioners should be a man of good taste the superintendent should show a readiness to learn and profit by any advice that may be given.

But, although the ideal park superin-

tendent will have an intimate knowledge of the design of the park and be brought in close relations with the Park Commissioners and his fellow-workers, his greatest influence will come from his relation to the public. The park exists for the residents of a city and those who come to visit them. It is a place where people go to get fresh air, to see an expanse of sky and clouds and lawn and meadow, to see foliage and flowers, to get sweet perfume, and to hear the music of birds.

It may be conducted in such a manner as to exert an elevating influence on all who go to see it, to teach them to respect others' rights, to show them what is in good taste and to give them the purest kind of enjoyment. In the domain of landscape art it should take a leading position, keeping up with the best thought of the times.

\$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO., Toledo, O.

Sold by Druggists, 75c.

DO YOU NEED WATCHING?



Or, to put it another way,

Do You Need a Watch?

We sell them, sell them at such an exceedingly low price that you can't afford to go watchless. Got 'em all sizes and styles.

But we'll just mention two:

An Elgin or Waltham Watch, best movement made, hunting case, accurate time-keeper, handsomely engraved. Dumber case, heavily gold-plated—last for all time. Ladies' or gentleman's size.

We'll send it to your address with privilege of examination. If it's not entirely as represented, send it back—costs you nothing. If you like it, pay the agent express charges and \$6.50. That's fair. Or this—



A Hunting Case Watch—beautifully engraved case, first-class movement, any size, heavily plated (14k)—looks just like a \$40.00 gold watch—keeps as good time as any of them. Sent to your express agent with privilege of examination—same conditions as all our watches sent out—and if you like it, pay him \$3.45 and express charges.

If you take our word for it, and send money with order, a handsome chain goes with either, and express charges are paid by us, for the prices named above.

Royal Manufacturing Co.

334 Dearborn St., CHICAGO

Mention American Gardening when you write

Business Cards.

C. D. Zimmermann, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

FOR SALE.

RASPBERRY and Strawberry plants. Chas. C. Nash, Three Rivers, Michigan.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

CALIFORNIA PRIVET for Hedges. Fine, large plants, two years old, three dollars per hundred, cash with order. Reference 1st National Bank, Asbury Park. Atlantic Coast Nursery, James H. Cornell, Proprietor, 606 Fourth Ave., Asbury Park, N. J.

WANTED.

[Rates, etc., same as in "For Sale" column.]

WANTED to buy novelties in flower seeds and specially choice strains of florists' flower seeds, etc. to introduce in Australia. Give references when writing. Fred. C. Smith, Seedsman, Angaston, So. Australia.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION wanted, as gardener; life experience in all branches, greenhouse, graperies, fruits and vegetables; 45, married, no family. Protestant. Address, P. H., Norwich Town, Conn.

WANTED, situation by experienced young nursery foreman and manager with some knowledge of office work; agreeable situation rather than high wages preferred. Address J. J., care American Gardening.

GOOD, all-around man, English, wants situation, either private or commercial: good grower of cut flowers; well up in palms, ferns, orchids, etc., strictly temperate; 1A references; state wages with board. Address H. Y., Box 884 Knoxville, Tenn.

BLINDNESS PREVENTED

The Absorption Treatment is Success. Hundreds successfully treated for all diseases of the eyes or lids without knife or risk at their homes and at our Sanitarium, the largest and most successful institution in America. "Don't want to be blind." Pamphlet Free. THE BENJAMIN EYE SANITARIUM, Glen Falls, N. Y.

GROW BISMARCKS IN POTS

Wonderful Midget Bismarcks bear beautiful large Apples in Pots or Garden when two years old. \$1.00 each. OGDON HAZLETON, ROSS. Magnificent Ulm for Porch, \$5.00 each, prepaid. Send for beautiful colored Lithographs giving descriptions. Address,

Manhattan Nursery Co., 47 U Day Street, New York.

1840 OLD COLONY NURSERIES. 1897

Hardy Shrubs, Trees, Vines, Evergreens and Perennials.

A large and fine stock of well-rooted plants, grown in a sandy loam. Good plants, best sizes for planting; very cheap. Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.

A BARGAIN

We have made arrangements to furnish THE OHIO FARMER of Cleveland, O., and AMERICAN GARDENING, both papers, one year, making a total of 104 great papers, for only \$1.60.

THE OHIO FARMER

is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the LEADER of the Agricultural Press of America. A 20-page, 80-column paper EVERY WEEK in the year; employs THE VERY BEST WRITERS that money can produce; a strong, fearless defender of the agricultural interest of this country, and CLEAN in both reading and advertising columns. IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE.

Present subscribers can order this combination at once and have their present term of subscription to AMERICAN GARDENING extended for one year. New subscribers to THE OHIO FARMER will receive the rest of this year free. Address all orders,

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

ONLY \$1.60

Success

Engenders

Success!

Take our Advice:

Advertise

in the only

Successful

Weekly

Horticultural

Newspaper

Published

American Gardening

Subscribe

to a

Newspaper

which will make you

Successful

in your

Life's

Pursuit

American Gardening

ALL ABOUT THE HOME PLOT

POPULAR NOTES FOR THE SUCCESSFUL
AMATEUR.

Lilliums in Pots.

For the average window gardener, who brings judgment to the growing of plants, it is doubtful if there be another subject in the whole range so satisfying and so magnificent, as well as so easy of handling, as some of the Lilliums. It is hardly necessary to say that among them all, looking at it from all points of view, Lillum Harrisi is far and away the best. It is easy to grow, it is cheap, its size is within window bounds, and it gives more bloom and more perfume for the money than any one ought to expect under artificial conditions. And, indeed, if it be potted early, before the bulbs deteriorate, if it be allowed to become well rooted, and if it be not then subjected to too much heat, it seems virtually impossible to fail with it.

It is well to fix in the mind at first the idea that Lilliums are better without fire heat, but Harrisi may be considered a partial exception to this rule, as it will bear considerable forcing. If they can be grown very cool they will scarcely be troubled by green fly, which is, with much artificial warmth, a great pest.

The compost for Lillies must never contain fresh, unrotted manure, as this always tends to produce disease in the bulbs. A soil obtained by shaking out the earth from a good sod, to which may be added leaf mould, sand, and a small proportion of soot, is perhaps as good as any, and can be prepared from materials at hand, by nearly all growers except those hopelessly shut up in the great cities. To these, the nearest florist will supply proper potting soil.

The habit of growth of the Lillies is a point to be considered on potting the bulbs. Much like field corn, they throw out successive series of stem roots during the growth of the stalk. These are not only feeders, but they help to hold the tall stalks upright, and their needs must be met. First, the pot needs good drainage which may be supplied by almost any rough material, provided that a thin, loose sod, or a layer of moss be placed above it to prevent the soil from settling into the open spaces. With a fair-sized bulb a six-inch pot is necessary, and the bulb needs to be set rather deeply in the pot, but covered at first with little more than a half-inch of soil. After this is shaken down firmly, a layer of loose moss may be placed above it, when the pot may be plunged in ashes outside, or placed in a cellar, and buried in ashes or leaf mould, away from the light.

Florists say that six weeks is sufficient for the hiding-away necessary to produce good roots. Our own practice is to leave them nearer three months, or at least until the top shows signs of being ready for strong, vigorous growth. The pots are then brought carefully to the light in a very cool temperature, the moss being removed. In a few days they are placed in a sunny window, care being taken to turn the pots daily, after the stalk begins to run up. As the whorls of stem roots show successively, layers of the same compost used in potting are added to feed these hungry little roots.

A moderate amount of watering, only when needed, and care to keep down the green aphids if it appear, are all that is now necessary to bring full reward for previous work. The heat may be increased a little, if blooms are wanted earlier, but this is, perhaps, the most dangerous thing for the novice to do. We have bought these bulbs for years, never paying more than 15c. each, and have never had a failure.

Besides Harrisi and its older form, longiflorum, the landfolium Lillies prove satisfactory for potting. Even L. auratum and the beautiful speciosum Melpomene may be grown in this way, but the bulbs cannot be obtained early, nor must flowers be expected early. One of the California Lillies, the yellow Parryi, is offered this year with strong commenda-

tion as a pot Lilly. But there is also strong doubt in the minds of some as to its proving a general success in this direction.

Poultry Notes.

Localities Differ.

One man tells you poultry pays splendidly. Another man insists that it's all bosh; the great money in poultry is the money that's put into it! A third stands, evidently, between the two, and says, "May be." It will generally be noticed that the enthusiast is an Eastern man; that the sceptic is a Westerner; that the man who says "perhaps" is getting moderate prices. But as it happens that price of feed usually goes up or down almost to correspond with prices of poultry in the various localities, there is not the real difference in profits that is found in selling prices. This refers of course, to poultry and its products at market rates. There is always money in fancy poultry, if the raiser is shrewd enough to be able to sell it at what poultry men call "long" prices.

Creating Demand.

The men temporarily out of business (and their number is legion) who have taken agencies of various sorts, do not need to be told that the chief part of their instructions relates to creating a demand for their wares. The shrewd advertiser, too, creates a demand, where none before existed. This creation is the essence of success, in a large number of lines of trade. The poultry raiser needs to learn this trick; and since his products are among the necessities, his part of the trick will consist mainly in producing stuff so good that consumers come to him again and again. Thus trade is deflected his way, and extra coin put into his pocket.

Littering the Floors.

From the moment the fowls are more or less confined to the houses, they need litter of some sort, either on the main floors or in the scratching yards. Hay, straw, cornstalks, leaves, millet in the straw, any of these may furnish scratching litter, but those are best which contain some fine seeds. Fowls make use of nearly all sorts of seeds, but if there are none in the litter, a small amount of fine grain should be scattered there each day. This will furnish exercise, promoting warmth, digestion, and egg laying. It is a point not to be neglected by those who aspire to a full measure of success.

Indigestion.

Whether or not we assent to the statement made that indigestion is the one trouble in the human family, which physicians are called upon oftentimes to treat, we must certainly admit that it is altogether the commonest difficulty among fowls, especially if yarded. A late report of a feeding experiment in which corn alone was given for several successive weeks, to yarded chicks, previously thrifty, showed at its close nearly every bird more or less affected by liver trouble. Mild indigestion (easily curable by the use of sufficient green food and grit, with a varied grain diet) runs almost surely, if neglected, into serious liver difficulty, leading soon to death.

A New Scheme for Producing Pullets.

How to get a large percentage of pullets is the great ante-problem of the egg producer. A shrewd poultryman and writer, Mr. John H. Robinson, suggests that individual characteristics of certain birds may yet prove to be the key to the puzzle. He instances a bird once owned by himself which, under three different matings, gave always the same result, five-sixths of all the progeny being pullets. His mates were of the same age, older, and younger than himself, but the proportion never varied. Moreover, the trials were not all during the same year. Here is at least a hint to note conditions closely when an excess of numbers of either sex is produced.

Fighting Lice.

A great many people complain that they still have lice on the fowls while using kerosene and other standard lice

killers *ad libitum* about the houses. Such may, perhaps, not recognize the fact that there are several kinds of lice that harbor only upon the bodies of fowls, and which remedies applied to the houses and perches cannot reach, unless of the kind that give off fumes. The caretaker must therefore provide some agent for removing vermin from its shelter among the feathers. The fowls will attend to this themselves pretty faithfully, if given an abundant dust bath of loose and very dry earth, which may be made more effective by the addition of carbolic powder, or tobacco dust. If the box containing this be set in a sunny place, the birds will patronize it with evident pleasure at all hours of the day.

Whitewashing.

There are many poultry raisers who get along entirely without the use of whitewash. But it is certainly one of the most helpful adjuncts to success with fowls. In the form of thin cream, it is easily applied with a small force pump. It not only sweetens the quarters as nothing else will, but the reflection from white walls makes the pens appreciably lighter, and thus adds much to the comfort and welfare of the fowls. Lime in every form is an enemy of vermin. And it seems as though every argument were in favor of the use of whitewash. We have never heard one against it, unless the fact that it is some trouble to use it may be considered such.

MYRA V. NORRIS.

LETTUCE PLANTS.

Big Boston, Boston Market, Tennis Ball, White Leaf, Grand Rapids, and Reichenher's Forcing. 15 cts. per 100; \$1.00 per 1000. If by mail add 10 cts. per 100.

CASH WITH ORDER.

R. VINCENT JR. & SON, White Marsh, Md.

Mention American Gardening when you write.

SOME BARGAINS IN CLUBS

FOR

Men, Women and the Young.

Ohio Farmer, a giant among the agricultural weeklies, and American Gardening. The two, one year, For \$1.60.

Farm, Field and Fireside, a \$2 to 40 page weekly Farm and Family Journal, the best of its class, and American Gardening. The two, one year, For \$1.50.

Country Gentleman. This weekly amply covers the field its title indicates. Every country gentleman should subscribe to it. And American Gardening. The two, one year, For \$2.75.

Farm Journal, the "little giant" of monthly journalism in matters agricultural, and American Gardening. The two, one year, For \$1.25.

Farm Poultry (semi-monthly), and American Gardening. The two, one year, For \$1.50.

Poultry Monthly and American Gardening. The two, one year, For \$1.25.

Above is your choice of two most excellent poultry magazines. And nearly every one of our readers keeps poultry. Why not subscribe to both? The two poultry papers and American Gardening, one year, For \$2.25.

Meehan's Monthly, a horticultural stand-by, and American Gardening. The two, one year, For \$2.85.

Harper's Magazine, as good as ever; none better among the literary monthlies, and American Gardening. The two, one year, For \$4.25.

Ladies' Home Journal, an unrivaled monthly for women, the standard in its class, and American Gardening. The two, one year, For \$1.90.

Youth's Companion, of Boston. At the head of all journals for both boys and girls, and read by the elders, too. New Subscribers Only and American Gardening. The two, one year, For \$2.85.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.		A.	B.	General—Con.		A.	B.
American Agriculturist.....		\$1 00	\$1 85	Donahoe's Magazine.....		\$2 90	\$3 60
Breeders' Gazette.....		2 00	2 40	Eclectic Magazine.....		5 00	5 25
Country Gentleman.....		3 00	2 75	Electrical Review.....		8 00	8 20
Farmers' Advocate (Canada)...		1 00	1 75	Engineering Magazine.....		8 00	4 00
Farmers' Magazine.....		1 00	1 75	Forest and Stream (new only)...		4 00	4 20
Farmers' Review.....		1 00	1 90	Forum, The.....		5 00	5 00
Farm, Field and Fireside.....		1 00	1 50	Frank Harrison's Magazine.....		50	1 40
Farm and Fireside.....		50	1 40	Frank Leslie's Popular Monthly		3 00	3 50
Farm and Home.....		50	1 40	Godey's Magazine.....		1 00	1 90
Farm Journal.....		50	1 25	Golden Days.....		8 00	8 35
Farm News.....		50	1 20	Good Housekeeping.....		2 00	2 70
Gleanings in Bee Culture.....		1 00	1 85	Harper's Bazaar.....		4 00	4 25
Home and Farm.....		50	1 45	Harper's Magazine.....		4 00	4 25
Indiana Farmer.....		1 00	1 85	Harper's Weekly.....		4 00	4 25
Mass. Ploughman, new.....		2 00	2 60	Harper's Round Table.....		2 00	2 50
Renewals.....		2 00	2 90	Home Queen.....		50	1 35
Michigan Farmer.....		1 00	1 60	Illustrated American.....		4 00	4 30
National Stockman and Farmer		1 00	1 85	Independent.....		8 00	8 60
Nebraska Farmer.....		1 25	1 85	Jenness Miller's Illus. Mag.....		1 00	1 75
New England Farmer.....		2 00	2 50	Judge.....		5 00	5 20
Ohio Farmer.....		1 00	1 60	Judge's Library.....		1 00	1 85
Orange Judd Farmer.....		1 00	1 85	Ladies' Home Journal, The.....		1 00	1 90
Pacific Rural Press.....		2 40	3 00	Ladies' Home Companion.....		50	1 45
Practical Dairyman.....		50	1 85	Ladies' World.....		35	1 80
Practical Farmer.....		1 00	1 85	Leslie's Illustrated.....		4 00	4 40
Prairie Farmer.....		1 00	1 85	Life.....		5 00	5 40
Rural New Yorker.....		1 00	1 80	Lippincott's.....		8 00	8 25
Southern Cultivator.....		1 00	1 85	Macmillan's.....		8 00	8 60
Southern Farm.....		1 00	1 85	McClure's Magazine.....		1 00	1 90
Southern Florist and Gardener		1 00	1 75	Munsey's Magazine.....		1 00	1 90
Strawberry Cultivist.....		50	1 85	Nation, The.....		8 00	8 80
Strawberry Specialist, new.....		50	1 00	New England Magazine.....		3 00	3 50
Renewals.....		50	1 25	New York Ledger.....		2 00	2 50
Texas Farmer.....		1 00	1 75	" " Tribune (Weekly).....		1 00	1 90
Texas Farm and Ranch.....		1 00	1 85	" " World (Tri-Weekly).....		1 00	1 75
Horticultural, etc.				North American Review, The.....		5 00	5 50
Canadian Horticulturist.....		1 00	1 90	Notes and Queries.....		5 00	5 50
Garden and Forest.....		4 00	4 25	Observer, new only.....		8 00	8 25
Gardening (Chicago).....		2 00	2 30	Renewal.....		8 00	4 00
Meehan's Monthly.....		2 00	2 85	Outing.....		3 00	3 35
Vicks.....		50	1 85	Peterson's Magazine.....		1 00	1 85
Poultry.				Philadelphia Press (Weekly).....		1 00	1 85
American Poultry Advocate.....		25	1 15	Phrenological Journal.....		1 50	2 25
Fancier's Review.....		50	1 85	Popular Science Monthly.....		5 00	5 65
Farm Poultry.....		1 00	1 50	Popular Science News.....		1 00	2 50
Ohio Poultry Journal.....		65	1 50	Puck.....		5 00	5 10
Poultry Herald.....		50	1 40	Puck's Library.....		1 20	1 95
Poultry Keeper.....		50	1 85	Paritan.....		1 00	1 90
Poultry Monthly.....		1 00	1 25	Review of Reviews.....		2 50	3 25
Reliable Poultry Journal.....		50	1 40	Scientific American.....		3 00	3 60
General.				" " Supplement.....		5 00	5 25
Advance (Cong'l) new.....		2 00	2 60	" " with.....		7 00	7 25
Renewals.....		2 00	2 90	" " Builders' edition.....		2 50	3 10
American Field, new.....		4 00	4 25	" " inc. B'l'ds' edit.....		5 50	5 75
Renewals.....		4 00	4 50	" " All 3 editions.....		9 00	9 25
American Kitchen Magazine.....		1 00	1 75	Scribner's.....		3 00	3 60
American Machinist.....		8 00	8 20	St. Nicholas.....		3 00	3 60
Aquarium.....		1 00	1 75	Sunday School Times.....		1 50	2 10
Arena.....		8 00	8 60	Texas Siftings.....		4 00	4 25
Art Amateur.....		4 00	4 85	The Etude, new only.....		1 50	2 15
Art Interchange (with plates)...		4 00	4 85	Renewals.....		1 50	2 25
Atlantic Monthly.....		4 00	4 30	The Outlook.....		3 00	3 85
Ave Maria.....		2 00	2 70	Toledo Blade.....		1 00	1 85
Babyhood.....		1 00	1 90	Turf, Field and Farm, new.....		4 00	4 25
Baptist Missionary Magazine.....		1 00	1 90	Renewal.....		4 00	4 60
Carpenry and Building.....		1 00	1 85	Womankind.....		50	1 20
Century.....		4 00	4 60	Young Ladies' Journal.....		4 00	4 60
Chicago Herald (Weekly).....		1 50	2 35	Youth's Companion, new only.....		1 75	2 35
Chicago Inter-Ocean.....		1 00	1 80	Renewals.....		1 75	2 75
Chicago Weekly Times.....		50	1 40	Foreign.			
Christian Herald.....		1 50	2 15	Farm and Home.....		2 25	3 25
Christian Register.....		3 00	3 85	Field.....		10 50	11 00
Churchman.....		8 50	4 10	Garden.....		4 50	5 25
Colman's Rural World.....		1 00	1 85	Garden Work.....		2 50	3 25
Cosmopolitan.....		1 00	1 90	Gardener's Chronicle.....		4 50	5 25
Delineator (Butterick's).....		1 00	1 90	Gardener's Magazine.....		4 50	5 25
Demorest's Monthly Magazine.....		2 00	2 60	Gardening, Illustrated.....		2 25	3 00
Detroit Free Press (Weekly).....		1 00	1 90	Gardening World.....		2 50	3 25
Domestic Monthly.....		1 50	2 15	Journal of Botany.....		4 75	5 25
				Journal of Horticulture.....		4 00	4 85
				Kew Gardens Bulletin.....		1 50	2 25
				Revue Horticole.....		5 50	6 10

Address all
Orders to

AMERICAN GARDENING, P. O. Box 1697, New York.

A \$1.00 Raisin Seeder for 50c.**POSTPAID.**

We are tired of selling dealers and waiting 90 days for our money, so we will sell housekeepers at Jobbers' prices.

Send 50 cents, and we will mail you postpaid one of our best

BAY STATE RAISIN SEEDERS

Guaranteed to seed 1 lb. of raisins in 5 minutes. Simple to operate and easy to clean.

EASTON MFG. CO. D. 10, 64 Federal Street, BOSTON.

Mention American Gardening when you write.

Oak-tanned leather Harness

Send your address with 2-cent stamp for Illustrated Catalogue, all kinds of Single and Double Carriage Harness, sold direct to the consumer at wholesale price. **WE CAN SAVE YOU MONEY.**

KING HARNESS CO., No. 3 Church St., Orange, N.Y.

**Steel Wheels****Staggered Oval Spokes.**

BUY A SET TO FIT YOUR NEW OR OLD WAGON

CHEAPEST AND BEST

way to get a low wagon. Any size wheel, any width tire. Catal. FREE.

ELECTRIC WHEEL CO., Quincy, Ill.

FRUITS OF EXPERIENCE.**JOTTINGS FROM OBSERVATION.**

Currant cuttings now.

Sow Pansy seed.

Set bulbs for spring flowering.

Red Jacket proves unproductive with us.

Plant out the best plants and sow the best seeds.

Our grape market was steady and firm, although prices were not high.

Sandy berries are generally the result of the lack of "stir around and mulch."

Our canned Enhance strawberries present a good appearance.

Try the new varieties, but plant most extensively of those tried and found worthy.

Never pack mulch too tightly around the bark of young trees. Leave an air space between bark and mulch.

We prefer to buy our seeds of a strictly reliable seedsman even if they do cost a little extra. Such practice generally gives the best satisfaction and is cheapest in the end.

The bed of flowering bulbs which you are setting this fall will come out in much better shape in the spring if covered with from four to six inches of leaves which should be fastened down with evergreen boughs or any other handy material to keep them from blowing off.

If the old fruiting canes are not cut out of the raspberry hills yet, it would be well to attend to it at the earliest convenience.

An experiment plot of ground on which to test different varieties of fruits, vegetables, and flowers is a good source of pleasure.

The older I get the more I see that an untiring and continuous energy is one of the greatest elements necessary to success in any line of business.

If we have done our work this season better than any time in the past what a pleasure it is to think of the prospects for next season's crops, and the grade of fruit, which we expect to be superior to any in the past.

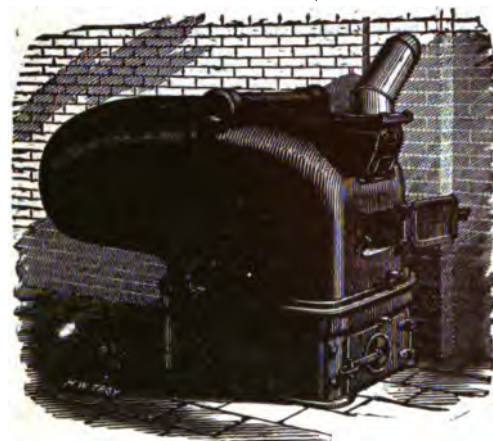
The quality of the good old Delaware grape this season reminds us of the good days of our boyhood. It is a good standby yet, and at least one vine should be found in every home garden. It has brought as high a price here as the best this season, and really when I come to think of it, I never saw it "begging for a market."

What a fine growth the new plants of the Marshall strawberry have made this season. It is too bad that the parent hill will rust so badly in the latter part of the season. This is the one great objection to this variety; we only wish it could be free from rust, as it is such a fine grower.

Our Dew strawberry plants are growing nicely and making heavy crowns, but we cannot speak as to fruiting qualities, as ours are spring-set plants.

Save all the hen manure and scatter it two inches thick between alternate layers of sod, each six inches thick, late this fall; shovel over two or three times next season and a most excellent fertilizer for the bottom of melon, squash and cucumber hills will be the result. A scoop shovel full to each hill.

If your soil is poor and you wish to grow some fine currant plants from cuttings, procure the cuttings now and set in nursery rows; then with the one-horse garden plow turn a furrow two to three inches deep away from each side of the row, not coming closer than four to five inches to the row. Now fill the furrow on each side of the row one-half full with well-rotted manure (horse manure to be preferred); on top of this hoe back the furrow thrown out, then mulch the surface of the ground close to the cuttings with long or coarse manure about two inches thick to keep them from heaving during winter, and if the soil is of a clayish nature, mulch still more heavily. About May 10th of the next spring, rake the coarse manure between the rows and cultivate once each week and you will

GREENHOUSE HEATING AND VENTILATING,**Horticultural Architecture and Building.****Hitchings & Co**

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

FIVE PATTERNS OF BOILERS

NINETEEN SIZES.

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

Iron Frame Benches with the "Perfect Drainage Bench Tile" or Slate Tops.

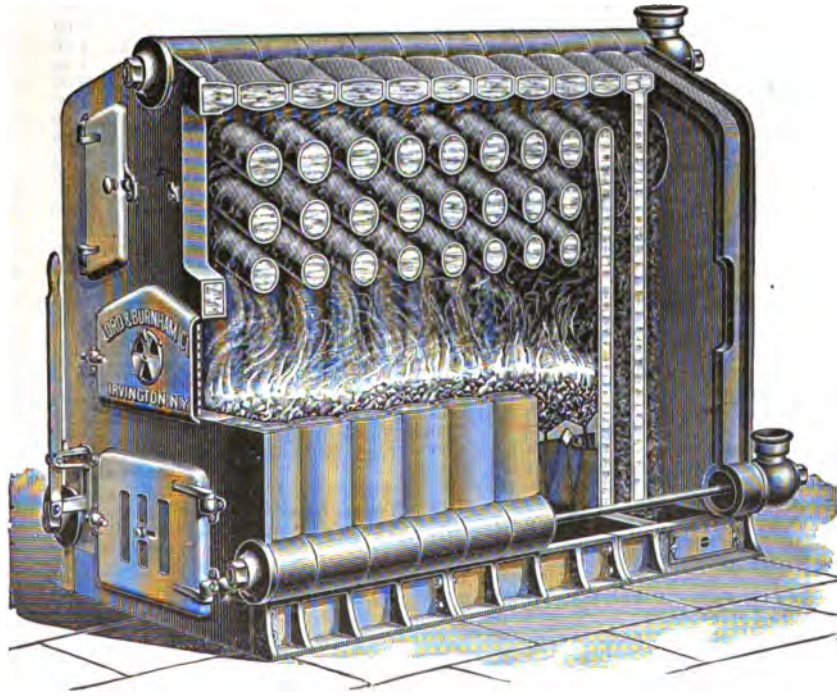
SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.

LORD & BURNHAM CO.,
Horticultural Architects and Builders and Manufacturers of Heating and Ventilating Apparatus.

(Established 1856.)

Plans and estimates furnished on application for Heating and Ventilating Apparatus erected complete, or for material only. Highest Awards at the World's Fair.



NEW SECTIONAL HOT-WATER HEATER.

Specially adapted to large ranges. Will heat up to 16,500 feet of glass. Highest economy. Moderate cost. Also heaters for smaller work. Send six cents postage to New York office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

have no trouble in raising nice currant plants, providing you do not plant on ground that is too high and dry.

CHARLES NASH.

WHOLESALE MARKETS.

Boston.

Market on most all vegetables is easier, with not much change in figures, although purchases can be made at a little less than a week ago.

Hard-shelled Hubbard squash has been coming freely from Michigan, bringing \$17@20 a ton; Minnesota has also been putting a good many cars upon this market, being mixed soft and hard-shelled; consequently a range of prices from \$12@17 a ton. Near-by farmers supply a certain set of customers each morning with choice narrow at about \$1 a barrel, letting them have Bay State or Turbans at \$1.25 the same quantity.

Choice, well-dried onions are steady at \$2 per barrel; a few cars of green stock, rather of a second grade, caused a little uneasiness a few days since; but stock being finally placed at 25@50c. less, we think it is out of the way and no further scare need be feared. Spanish onions in crates supposed to hold 50 pounds, but do not, selling \$1.50.

No change can be noted in shell beans; demand is light, supply lighter, and a range would be from 50c.@\$1.25 a bushel.

The second crop of Massachusetts peas placed on the market and bring \$2@2.50 a bushel; large majority of consumers, however, are not hungry for peas at this season of year.

White French turnip 75c.@\$1 a barrel, yellow 75@80c., white flat \$1.

Cauliflower steady, fancy 10@15c. a head; mint 40c. a bushel, parsley 50c., radishes 28c. a dozen, spinach 25c. a bushel, parsnips 75c., carrots 75c., beets 50c.

Some new beet greens put on the market yesterday part sold 10c. a bushel, balance thrown away; this will show readers how some things are not wanted out of season.

Florida oranges 150-176 count bring \$4; grape fruit in boxes holding 60-80 each, bring \$6@7.

Cabbages very good demand, 8@4c. each; corn beef and cabbage very healthy diet at this season of year.

Hothouse cucumbers are firmer and higher \$6@8 a hundred; some fancy assorted even bringing more money.

A few red raspberries were brought in from our near-by city of Malden this morning, said to be from a last spring shoot.

Hothouse lettuce has very fair demand, mostly used for decorating the dinner table; outdoor stock finished.

A certain demand for mushrooms at 75c. a pound.

Hothouse tomatoes plentiful, 10@13c. a pound.

Hothouse grapes slow demand, 25@50c. a pound.

Potatoes having a little boom, Green Mountains or Rurals 75@80c.; market getting cleaned of the "sculch" which has been here from different parts of the United States. Red stock is neglected. Hebrons are always wanted, and selling at 82c.

Apple market is in better condition, lower prices about equaling the inferior qualities have caused the street peddlers to take a good many apples and that means they get used up in some manner very quickly. Boom on Ben Davis across the water has excited some of our speculators so that some fancy solid packed Ben Davis have brought \$2.75 in car lots. York State Greenings, better demand, and to-day could quote \$2.50@2.75; some Baldwins are inquired for, but choice cannot be found; those that come here are knotty and wormy. Jonathans and Snow apples \$3@3.50, while some high-colored Gravensteins move off at \$5. There should be a better trade for apples with better prices from now forward.

The lighter arrivals of sweet potatoes caused a jump, and while Jersey double-head barrels bringing \$2.50@2.75, Virginia stock brings \$2.25@2.50 in cloth heads.

The state elections will be settled next Tuesday, and we can all get right down to a better business.

Philadelphia.

Apples are gradually working into better shape, as surplus stocks have been well cleaned up. Choice to fancy fruit is in fair demand and firm.

Grapes are in moderate supply, and prices rule firm, with a good demand.

Choice Seckel pears are scarce and wanted, the market is well supplied with Duches, which are dull and easier in price.

Cranberries are plentiful and quiet, much of the supply consists of soft and inferior fruit.

Apples—Jonathan, choice and fancy, per barrel, \$8.25@8.50; Kings, choice and fancy, per barrel, \$2.75@3.25; Twenty-Ounce, choice, per barrel, \$2.75@3; fair to good, per barrel, \$1.75@2.25; Ben Davis, choice and fancy, per barrel, \$2.25@2.75; fair to good, \$1.25@1.75; mixed varieties, choice, per barrel, \$2@2.50; fair to good, \$1.50@1.75.

Quinces—No. 1, per barrel, \$1.75@2; No. 2, per barrel, 75c.@\$1.25.

Pears—Seckel, per barrel, \$4@6; per bushel keg, \$1.75@2; Louise Bonne, per barrel, \$1.50@2; per one-half barrel, 75c.@1; Duches, per barrel, \$1.25@2.

Grapes—N. Y. Concord, per 5-pound basket, 7@7½c.; per 10-pound basket,

11@12c.; N. Y. Niagara, per 5-pound basket, 8@10c.; N. Y. Catawba, per 5-pound basket, 7@8c.

Cranberries—Cape Cod, choice to fancy, per barrel, \$5.50@6; medium, color and size, \$4.25@5; inferior, per barrel, \$2.50@3; per crate, \$1.50@2; Jersey, per crate, \$1.25@1.75.

Receipts of potatoes have fallen off and the market for choice stock is firm, with a fair demand. Most of the supply consists of poorly-graded stock which has to be worked off at best price obtainable.

Receipts of sweets have been light, the market being firmer with a good demand.

Onions are very plentiful and in moderate demand.

Receipts of cabbage are light and three has been a good outlet for choice stock at firm rates; Jersey, choice, per 100, \$2.75@3.25; fair to good, \$2@2.50.

Cauliflower—Choice, per barrel, \$1.75@2; fair to good, per barrel, \$1@1.50.

Celery—Choice, large, per dozen, 25@30c.; fair, per dozen, 15@20c.

Cucumbers—Florida, per crate, 50@75c.

Green peas—Per one-half barrel basket, 80c.@\$1.25; Charleston, per bushel basket, 60@70c.

Onions—Per barrel, \$1.75@2; per bushel, 60@65c.

String beans—Virginia, per one-half barrel basket, 60@70c.; Charleston, per bushel basket, 30@35c.

Squash—Hubbard, per barrel, 75c.@\$1.

The trees recommended as being most suitable for planting in New York streets are the Norway Maple, silver Maple, Tulip, Poplar, Carolina Poplar or Cottonwood, and the Oriental Plane tree.

PHYSICIANS BAFFLED.

Prof. R. S. Bowman, Instructor of Natural Science in Hartsville College, Cured of a Severe Illness by Dr. Williams' Pink Pills for Pale People after Physicians Failed.

From the Republican, Columbus, Ind.

Prof. R. S. Bowman, the able instructor of natural science in the famous Hartsville, (Ind.), College, is well and favorably known, not only as an educator, but also as a minister of the gospel, as for a number of years he was pastor of the United Brethren church at Charlotte, Mich., before coming to Hartsville,



PROF. R. S. BOWMAN.

Some time ago he had a severe illness which was cured almost miraculously. A reporter hearing of this, interviewed him regarding his experience. Prof. Bowman was in the midst of his work when the reporter called, but he cheerfully gave him a hearing.

"A year ago last fall," said the professor, "I broke down with nervous exhaustion, and was unable to properly attend to my duties. I tried different physicians but with no relief, and also

used many different proprietary medicines, spending almost fifty dollars for these medicines alone. I then succumbed to a siege of the grip in the middle of winter, and was left in a much worse condition. My kidneys were fearfully disordered, and my digestion became very poor. I was indeed in a bad condition.

"A minister in conference learning of my condition advised me to try Dr. Williams' Pink Pills for Pale People. I had heard much about the wonderful curative powers of this medicine, but it was with reluctance that I was finally persuaded to try it, as it seemed that nothing could do me any good. However, I procured three boxes of pills and took them strictly according to directions. By the time the last dose was taken I was almost cured, and in better health than I had been for years. I continued using the pills awhile longer and was entirely cured. I can cheerfully recommend Dr. Williams' Pink Pills for Pale People."

Such was Professor Bowman's wonderful story which was further endorsed by the following affidavit.

HARTSVILLE, Ind., March 16, 1897.

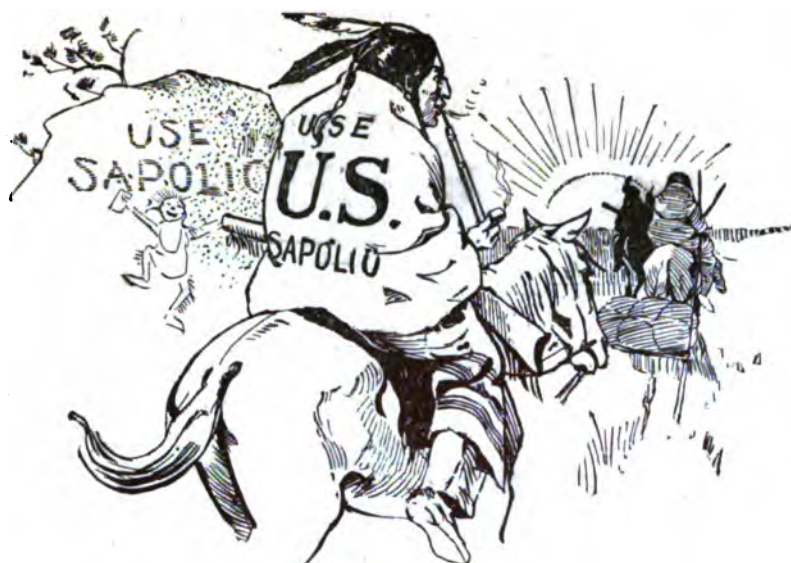
I affirm that the above accords with the facts in my case. R. S. BOWMAN.

Subscribed and sworn to before me this 16th day of March, 1897.

LYMAN J. SCUDDER, Notary Public.

STATE OF INDIANA, ss.

Dr. Williams' Pink Pills for Pale People contain all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are sold in boxes (never in loose form, by the dozen or hundred) at 50 cents a box, or six boxes for \$2.50, and may be had of all druggists or directly by mail from Dr. Williams' Medicine Co., Schenectady, N. Y.



If we could teach the
Indians
to USE **SAPOLIO**
it would quickly civilize them

Mention American Gardening when you write.

THE CROWN Bone Cutter
for cutting green bones. For the poultryman
Best in the world. Lowest in price. Send for
circular and testimonials. Wilson Bros., Easton,
Pa.

Mention American Gardening when you write.

**Palmer's Hot-
bed Mats,**
For Cold Frames
and Hotbeds.



These mats
are made
of strong
burlap lined
with wool
and quilted.

They are warmer than straw, more easily handled, do
not retain moisture, do not freeze, rot, mildew or
harbor vermin as straw does, and cost only one-fourth
as much. They are made six feet wide, any length.
Horse Blankets of same material. The best, warmest,
strongest and cheapest blanket made.
THE R. T. PALMER CO., 118 Worth St., N. Y.

Mention American Gardening when you write.

POT YOUR PLANTS IN

FIBRE
B.M. Watson, Jr.
Bussey Inst. South St.
Jamaica Plain, Mass.
JADOO LIQUID

And they will thrive
during the Winter.

Particulars and Prices on Application to

THE AMERICAN JADOO CO.,

813 Fairmount Ave.,

PHILADELPHIA, PA.

Mention American Gardening when you write.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$2.00. 25 per cent. off to subscribers to American Gardening
and Florists' Exchange.

This work contains nine beautiful plates, eighteen full page descriptive
views of leading Water Gardens and Ponds, and numerous
smaller pictures prepared with special reference to
this work. On heavy enamelled paper.
Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the
large water garden, excavation of grounds, construction of ponds, adapting
natural streams, planting, hybridizing, seed saving, propagation, the aquatic
house, wintering, correct designing and planting of banks and margins, and
all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., P. O. Box 1697, New York City.

Henry Strawberry Plant Premiums

Will be shipped to all who desire
them this season until ground freeze.

Owing to the wonderful
run on this un-
equaled Straw-
berry we are preparing 100,000
Henry plants for Spring de-
livery, and in this connection
we desire our readers to re-
member

Two Facts

1—The Henry Strawberry can be
obtained solely through a subscrip-
tion to AMERICAN GARDENING; as the
publishers will not sell plants under
any consideration;

2—Neither will Mr. Jerolaman.

Who is Entitled to Plants

New and Renewal Subscribers.—Five
plants of the Henry will be mailed,
postpaid, as a premium to every Re-
newal or New Subscriber sending us
\$1.00 for a year's subscription. When
remitting be sure to state if you want
this premium.

To Agents and Workers.—For every
\$1.00 received from agents and others
for New Subscriptions, we mail, post-
paid, Ten Henry plants, Five to the
New Subscriber and Five to the Agent.

Special to Club Raisers!

Clubs of Ten.—To every agent sending
us in a club of Ten New Names and
\$10.00, we will forward in payment
therefor One Hundred (100) Henry Straw-
berry Plants, by express, as well as
send Five plants, postpaid, to each
person in the club.

Mr. Jerolaman's series of articles has
been put in pamphlet form; and agent
will be supplied with copies on appli-
cation. Best campaign matter out.

Address Your Letters,

AMERICAN GARDENING,
P. O. Box 1697, NEW YORK.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 181.
COMBINED SERIES VOL. LI.

NEW YORK, NOVEMBER 13, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Apples, Imperfect, Cause of.....	777	tificated.....	782	Benches.....	775	Private Gardeners.....	782	Tradescantia discolor..	774
Apples, Stored.....	777	Diseases of Trees.....	776	Nitrate of Soda, Effect of	775	Prospectus, A.....	778	Vegetable Garden.....	775
Arbor Day.....	774	Edgings, Useful.....	775	Peach Culture, National	774	Question Box, The.....	779	Window Garden, The..	781
Book—The Water Garden.....	776	Exhibitions, Reports of.....	782	Experiments in.....	774	Raspberries in the South.....	776	Illustrations.	
Brown Leghorn, The....	785	Fruit Garden.....	777	Peach, Everbearing.....	777	Rose Suckering.....	775	Chrysanthemums, Vase of.....	773
Cabbage in Winter.....	775	Lettuce, Winter Forcing of.....	774	Pears in Season.....	777	Sow Bugs Eat Plants..	775	Hotbed Mat, Palmer's..	775
Cauliflower, Storing....	775	Market Reports.....	786	Plans for the Garden... 775		Strawberries, Station Tests of.....	774	Rose Suckering.....	775
Chrysanthemums, Cer-		Mushrooms Under		Plant, A New.....	777	Terracing a Bank.....	777	Terracing High Bank...	777
				Pomological Notes.....	781				
				Poultry Yard, The.....	781				



FIG. 215.—A VASE OF CHRYSANTHEMUMS.

The above picture shows a charming use of Chrysanthemums arranged for effect, the balance of the whole group is good and pleasing. The variety is a new early pure white, called Midge, and was grown by C. J. Knott, St. John, N. B., who thinks the variety will come to the front for early use.

National Experiments in Peach Culture.

The following extract from the minutes of the last meeting of the Association of Colleges and Stations gives the outline of the work to be undertaken:

"A paper prepared for the section by R. H. Price, of Texas, was concluded by the following memorial: In view of the importance of this classification to successful peach culture in the United States, I wish to make the following recommendations:

"1. That a committee of three be appointed to be known as a committee on co-operative work in testing the different races of peaches.

"2. This committee shall consist of one horticulturist from one Northern station, one from one Southern station, and one from one Central station.

"3. The work of this committee shall be to find out, as far as possible, the isotherm in which each race is adapted.

"4. The committee may recommend to as many stations as may be thought necessary a list of varieties from the races, to test and report upon.

"5. The committee shall make out a suitable blank to be printed by the United States Department of Agriculture, and also to be distributed by this department to the stations engaging in the work.

"6. Each station will be asked to pay for its own trees.

"7. The results of this work, together with the description of the races will be written up by the committee, and will be published by the United States Department of Agriculture.

"After being read, the memorial was referred to a committee consisting of Profs. Goff, Mason, and Munson. The recommendation of the committee was that the following named gentlemen be made a permanent committee to carry on the co-operative work of testing the several races of peaches in the various sections of the United States. The permanent committee is as follows: Prof. R. H. Price, Texas; Prof. B. J. Wilson, California; Prof. G. H. Powell, Delaware, and Prof. L. R. Taft, Michigan.

Arbor Day.

One of the encouraging features of passing horticultural events is the increased interest which is being shown in Arbor Day. I do not remember a time when the day was so largely observed as it was this year, although the drought made the conditions unfavorable.

One of the public school buildings here has been sadly in need of shade; this fall the school board bought 150 trees and observed Arbor Day in a systematic way. A short but interesting program was arranged, a few songs, speeches and an oration. The school children all marched to the building, each child carrying a flag. It was an interesting sight to watch these children pass along to the Arbor Day exercises, each waving an American flag. The teachers and school board were in the procession and all seemed to take an active interest. Many visitors were present, and altogether a very successful time was had.

It is not alone in towns that interest is being awakened, but in the country as well. I know of several school houses where shade trees have been needed for many years, and this year finds the work being done.

There is one discouraging feature about a good deal of the country schoolhouse planting; there is too little attention given to the selection of the tree to be planted. The children are asked to bring in trees, which is all well enough, but in too many cases it seems that proper instruction has not been given, or if given, has not been heeded. At one school house I noticed a bunch of trees, with roots cut close to the body, lying out fully exposed to sun and wind, and from all indications they had been there since the children brought them in as they came to school. The trees doubtless remained so until late afternoon.

At another school house I noticed the trees were well protected from sun and

wind. I may have more to report about these two schoolhouses later. I believe Arbor Day a good thing. Help it on! J. C. FURNAS, Sheridan, Ind.

Experiment Station Tests of New Strawberries.

There is quite an army of berry growers in the country growing tired of the manner of testing and reporting new strawberries by the experiment stations. By the way the tests have been carried on during the past few years, the originator or introducer of a new berry does not have a fair showing of what might be brought out, were a large number of plants put on trial to make the test.

The rule, as laid down by many of the stations, is to test about a half-dozen plants. Now, after thirty years' experience in berry growing, I maintain that there should be at least 50 plants tested of any new candidate that is seeking recognition. In a half-dozen tests a worthless strawberry may be foisted on the public, or a good one lost.

I would point out another objection to the usual bulletins that are being scattered abroad among the berry growers. It is about the per cent. of quality and productiveness. What do we learn from a bulletin report that runs about as follows: No. 87, quality 5, productiveness 7. Or say, No. 122, quality 7, productiveness 5. Or No. 77, productiveness 6, quality 8. Or No. 17, quality 3, productiveness 6, etc.

The majority of berry growers do not know any more about those new varieties reported as above, than if they had never heard of an experiment station. Now it is my opinion that some well-known old variety should be used in the comparison for measuring the quality and productiveness of all varieties.

In a test of quality, the Downing, or Warfield, might be used. Crescent or Warfield might be used in the test for productiveness. The well-known old Capt. Jack or Warfield might be the ideal for firmness. For comparison in size the Bubach or Marshall should be the standard.

The writer had not the opportunity in his boyhood to get the much-desired education, but he believes that too much classical arrangement of the reports is not what the great majority of fruit growers care to read. B. F. SMITH, Kans.

Tradescantia Discolor as a Bedding Plant.

It is not generally known that this old-time denizen of the greenhouses makes a charming bedding plant; yet such is the fact. A number of plants were this last season used, mixed with Crotons, in a bed in front of the residence of W. H. Macy, Macy Park, Harrison, N. Y. The whole bed was a charming combination of color.

The Crotons were a grand success; the formation of the bed being square, Mr. John Shore, the gardener, planted the Tradescantias in the angles or corners where they sit well and show off to advantage, and make a more luxuriant growth than indoors. The royal purple of the underside of the leaves becomes more brilliant, and as seen against the bright yellow and other Croton colors, makes a richness and color effect that cannot but be admired.

The Manhattan, Kans., Horticultural Society held its October meeting at the home of Professor J. D. Walters. The papers read were "Nuts That Might be Grown in Kansas," and "Notes from the Gardens," the former by Geo. L. Clothier, and the latter by T. C. Wells.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

Forcing of Lettuce in Winter.

The winter forcing of lettuce near large cities is a very profitable investment, the crop being in good demand with good prices for the best stock. The New York Experimental Station at Geneva has been at this work growing the lettuces on the bench in one house. My first sowing for the purpose was on September 5, the varieties being Big Boston, Salamander, Hanson, Sunset, Henderson's New York Cabbage, Golden Queen, Golden Ball, and Grand Rapids, and 70 dozen were sold by the end of December. All the varieties advanced to the highest perfection and were as good in quality as any I have grown in the open air.

Big Boston is rather coarse, but if given plenty of room and allowed to head, it is a fine lettuce for market. Salamander is a fine forcer, but subject to mildew. Hanson forces well and is good for market. Sunset is a good curled lettuce and keeps well. Henderson's New York Cabbage lettuce forces finely; heads better, and is much lighter in color under glass than outdoors. Golden Queen is very early, and a good forcer, but the heads are small. Golden Ball is a handsome early lettuce, heads well, and has a good color. Grand Rapids is one of the best curled lettuce of its class, handsome color, a good forcer, and fine for market. Drumhead is a good forcer, a large upright head, light color, and keeps well. New Iceberg lettuce is very fine, resembles Grand Rapids, but is not so curly; the forcer, keeps well; good market variety. Tennis Ball is a fine forcer, makes good heads quickly, and is a fine market variety. All the above have been marketed from the station and have proved themselves, without exception, to be fine market varieties.

My plan in growing winter lettuce is to sow the seeds thinly in small plats and when fit for transplanting, I prick out singly into pots, two and one-half inch size, and plunge them in the benches to remain until fit to market. The distance from each pot is ten inches every way, and I find that by confining the roots in those small pots the lettuce heads better and sooner than if planted in the ordinary way. The small pots cost \$3 per thousand, and when shipping my lettuce to market, I pack in trays in damp Sphagnum moss, without removing the pots. The lettuce thus keeps fresh for a long time, and I can command a larger price and get the first sale.

The proper temperature to produce first class lettuce is from 50 to 60 degrees, and at all times in favorable weather admit abundance of fresh air. Water should be given freely on all bright days overhead with a moderate sprinkler; and after dark weather, when the sun shines brightly, the lettuce should be sprinkled lightly overhead two or three times daily.

Before planting lettuce finally in the benches, turn the plants upside down in your hand and dust some finely powdered tobacco on the under sides of all the foliage; this will prevent insects getting on them. By proper attention to ventilation, and an occasional dusting of tobacco powder on the leaves as the growth advances, the crop will be kept clean and healthy.

The benches should be six inches deep, with two inches of well-decomposed manure in the bottom; the remainder being filled with good fresh loam prepared in this way: Three shovelfuls of loam to one of leaf mold and one of sand. In this preparation I grow lettuces all winter and my last crop is as good as the first. I use a light dressing of bone meal at each planting, lightly sprinkling over the surface of the soil.

Every two weeks I sow five or six varieties in small plats and as soon as fit for transplanting into small pots, they are planted and plunged in the benches immediately. As one crop is removed another crop takes its place, and no part of the bench is unoccupied.

Six successful crops of lettuce can be raised easily throughout the winter.

WILLIAM THOMPSON.

An Unruly Rose.

The Rose of M. E. Campbell described in the last issue of *AMERICAN GARDENING* was undoubtedly budded upon the stock of some climbing variety. Freezing and cutting back caused new shoots to be sent up from below where the bud was inserted. These shoots should be cut off near the ground. By so doing the sap will be thrown into the budded portion which ought to grow and blossom as before.—W. E. BRITTON, Conn.

—It seems very probable that the Manetti stock on which the plant is worked is growing out and making leads. These should be removed at the point of emergence. The accompanying sketch will explain better than any words: *a* and *c* are the Manetti and *b* the growth from the bud. The suckers from the Manetti stock

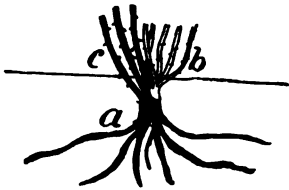


FIG. 216.—HOW BUDDED ROSES SUCKER.

have leaves of seven leaflets and show a reddish tinge. It is fatal to allow them to remain. In planting budded stock care must always be taken to plant deeply.—Ed.

Mushrooms Under Benches.

—Making a bed under the bench in the lettuce house as suggested on page 768 is practicable and, with the space at the disposal of the writer, good results should be obtained. One objectionable feature is the steam pipe, unless that be so placed as not to interfere with the bed, otherwise it must be boxed up or kept from the manure in some way; if not it will dry out the bed too much, and wherever it becomes dry in this manner no crop can be expected. How to make and prepare mushroom beds has been treated on in full in previous issues of *AMERICAN GARDENING*, even so recently as on page 744.—Ed.

Sow Bugs Do Eat Plants.

In your 16th of October number, page 717, in answer to W. F. Preston's inquiry in regard to sow bugs, you state that it has never been sufficiently demonstrated that the sow bug eats the living tissue of plants. Any farmer or gardener in this community who is anyway observing will tell you that the sow bug does eat and injure plants, that it is very bad on celery where boards are used for blanching and a great nuisance where potatoes are piled up on the peat land. We have seen the whole inside of potatoes destroyed by sow bugs and found the cavity full of both old and young bugs; they will even eat the shell of Hubbard squash if that be left on the ground very long after ripe.

To be sure we were right as to the right name for the bug, we took some specimens to our Farmers' Institute and had them identified by Prof. A. J. Cook, president of Clairmont College (Clairmont, San Bernardino Co., Cal.), acknowledged as the leading entomologist of the Pacific Coast and moreover he says that they do eat vegetation.—S. J. MURDOCK, Orange County, Cal.

The first building ever devoted to the training of young colored men in agriculture, horticulture, dairying, and so on, is to be opened as a department of the Tuskegee (Ala.) Normal Institute next month. Its establishment is due to the generosity of Messrs. Morris K. Jessup and J. L. M. Curry. Since 85 per cent. of the Southern negroes depend upon agriculture for a living, this is an experiment in philanthropy of a very practical kind, and its outcome will be awaited with intense interest.

The Vegetable Garden.

Improving the Plan.

—Small villa gardens are often cut up into small plots with more walks than are necessary. If the edging is formed of sod one foot wide, as is frequently the case, it necessitates much labor to keep it in place and trimmed, without which it will always look untidy. Rearrangement in the general plan of the vegetable garden can now be made with advantage; if the ground plan is well arranged, it is much easier to take care of.

All herbaceous plants and small fruits that are likely to remain in the one place for years, should always be at one end together, where they will not interfere with the work of the plow. It does not look well to have a strawberry patch, or an asparagus bed in the middle or sage in one place and the thyme in another. Each class should be planted in one place convenient and handy.

Fruit Trees Not Advisable.

It is not advisable to plant any fruit trees within these limits, they can be managed much better if they are planted outside, they rob the garden too much, and few things will do well in their immediate vicinity. Besides this, tall growing fruit trees will make too much wood for fruiting, if growing in a well-enriched garden. Fruit trees, kept within bounds, trained to a trellis, may be permitted on each side of the main walk, and if properly pruned and cared for will not only look well, but will be an interesting feature of the garden.

In places where it becomes necessary to set fruit trees in the vegetable garden, it is much better to select for the purpose, those growing on dwarf stocks; these can be planted six feet apart and will not grow larger than can be conveniently reached from the ground. These have also the advantage of coming into bearing in two years after planting, for this reason they are more satisfactory for private use. Those contemplating the laying out of a new garden should be careful about their plans being perfect before starting.

How to Lay Out the Garden.

Our ideal method of laying out a garden of one acre would be about as follows. Choose good deep fibrous loam, if not naturally well drained it should be made so artificially. The ground should be as near square as practicable, level, or sloping easily towards the south. Do not plant a privet or any other hedge round it, as it takes too much nourishment and moisture out of the ground; a nice wall is the best protection for a garden, it will make it warmer and earlier in the spring, and could be utilized in training against it such things as tomatoes.

Have as few walks as possible. Make one good walk through the center, wide enough for a horse and cart; if convenient to the approaches, arrange this to run east and west, that when the crops are planted across the patches, the rows will run north and south, which is the correct method to plant, as the sun then shines on both sides of them equally, a matter of some import. A narrow border may be made near the north fence to plant early vegetables by making a cross walk.

Place a hydrant on the edge of the walk near the middle, as water is quite a necessity in the garden during the summer. In large gardens there should be a hydrant at each intersection of walks, iron pipes are much cheaper than hose piping; the latter will last one season, the former a lifetime.

Useful and Ornamental Edgings.

For edging the plot a nice sod is perhaps as neat as anything if kept cut and trimmed regularly through the summer. Gardeners, however, find enough to be busy, without being too particular with garden walks. Those requiring an edging that will require little or no attention during the summer, will find a row of parsley, if sown early in spring along the edge of walk, very satisfactory. Sow thinly and have plants thinned to three inches apart it will do much better and

have fine large leaves; it makes a fine edging, is pretty, appropriate, useful and cheap. We had such an edging once on a walk 200 feet long; one side was sown with the curled parsley, the other side with the fern-leaved, and proved very effective, and was admired by many. Thyme will also make a very pretty edging if replanted yearly; if cut back once or twice during the season, it will look much better. W. M. EDWARDS, Conn.

Storing Cauliflower.

If you have in the field any cauliflower that is commencing to form, pull up and trench in a cold frame and cover the sash with shutters or litter to protect from frost and sun, and you will have nice heads for Christmas. N. BUTTERBACH.

Keeping Cabbage for Winter.

In your issue of October 30, page 747, Mr. W. M. Edwards gives a hint on keeping cabbages through winter by placing them head down.

The best way to keep cabbage during winter is by pulling up same and putting in trenches, head up, covering with soil until the head is invisible. When heavy frost comes, cover with litter of any kind to prevent the soil from freezing, and to enable the cabbage to be easily taken out when needed. In this way cabbage can be kept until late in the spring. N. BUTTERBACH.

Effect of Nitrate of Soda.

Some time ago an article appeared in your valued paper, recommending the use of nitrate of soda as a stimulant in the culture of Chrysanthemums, recommending it after the buds had set, thus forcing the time of flowering two weeks ahead. In an article in your issue of October 23, it is said: Nitrate of soda (page 728) will cause vigorous growth of the foliage part of plants and delay the production of flowers and fruit. This would be contradictory to previous statement. Kindly explain how I am to understand this?

I wanted to use the nitrate of soda to bring my out-of-door Chrysanthemums earlier into flower. E. E. S., N. J.

[We certainly have no recollection of having credited nitrate of soda with inducing early flowering. It is indeed contrary to all our observation and belief. Can our correspondent refer to the issue and page?—Ed].

A New Hotbed Mat.

References have been made recently in these columns to several styles of hotbed mats. In the accompanying illustration, Fig. 217, we call attention to the Palmer mat made of burlap interlined with wool. The ease of handling is a feature of this mat, which we have seen used with great success; it is light, frost



FIG. 217.—PALMER'S HOTBED MAT.

proof, and very easily dried when at all damp, does not harbor mice or vermin, and is made in 3 ft. or 6 ft. width and of any length desired.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

Diseases of Shade and Ornamental Trees.*

By B. T. GALLOWAY AND ALBERT F. WOODS.
(Concluded from page 760.)

MISCELLANEOUS FUNGUS PARASITES OF THE STEMS AND BRANCHES.

The fungi described under the previous heads have for the most part prominent fruit forms. There is another group much less conspicuous, but which sometimes causes considerable injury. This group—the so-called black fungi (Pyrenomyces)—usually appear as dark-colored pustules on the bark of the stems and branches. The injuries in most cases are local, but in many instances a stem or branch may be completely girdled, and of course serious results will then follow. One of the common members of the group is *Nectria cinnabarina*. It occurs on nearly all kinds of deciduous trees, attacking dead and wounded branches and occasionally wounded roots.

The fungus cannot kill the living cambium and cortex, but grows rapidly through the wood, causing it to turn black and die, while the cambium and cortex are still sound. The wood in this condition, however, is unable to conduct water, so that the parts dependent on it dry up and die.

Another species, *Nectria ditissima*, with bright red fruiting warts, also attacks a great variety of deciduous plants. It spreads very slowly, however (not more than one or two inches in a year). The invaded tissue rots, but the surrounding healthy parts increase in growth, so that the part of the branch around the wound may become greatly distorted and swollen, producing what is ordinarily known as a canker spot. *Nectria cucurbitula* causes a similar canker disease of conifers, especially the Spruce.

Various other canker-producing fungi attack trees, but it is not necessary to enter into detailed descriptions of them here.

Another class of fungi, belonging to the group of rusts, frequently cause considerable injury to trees, especially conifers. The Peridermiums are probably the most destructive of these parasites, attacking stems, branches, and leaves, and causing various knots, swellings, and blister-like patches.

Treatment.—From the nature of the fungi just considered, it will be seen that about the only means of checking them is to cut out and destroy the diseased parts as soon as possible. In many cases the injuries to trunks and branches are of such a nature that the diseased parts can be removed without trouble. This should be done, and all wounds thus made should be carefully covered with tar or grafting wax.

FUNGUS DISEASES OF THE LEAVES.

In common with other plants, the leaves of shade and ornamental trees are subject to the attacks of many forms of fungi. Some of these produce local injuries, while others so affect the leaves as to cause them to fall prematurely. In all cases where the leaves are affected it will be seen that the more they are injured the more serious the results to the tree as a whole, for the leaves are the laboratories in which the food is prepared, and any check or injury to them results in a check to the growth of the tree. Probably the most common fungous parasites of the foliage of trees are those producing various kinds of spot diseases. Maples, Chestnuts, Oaks, Basswoods, Sycamores, Poplars, and various other trees are more or less subject to the maladies in question. These spots are produced by certain species of fungi, which attack the tissues, and by their action first weaken and then destroy them. The spots vary in color, size, and shape, and can usually be distinguished from those brought on by sun scald and similar agencies only by microscopic studies.

Of the other diseases of the foliage, the powdery mildews and rusts are probably the most common. The former attack

many trees and shrubs, producing a whitish, spider-web-like growth on the surface. A common example of this group of fungi is found in the mildew which occurs in late summer on the Lilac. Maple leaves are also frequently attacked, and the same is true of the Chestnut, Willow, and other trees. The rusts are limited to a comparatively few groups of trees, among which may be mentioned the Pines, Poplars, and Willows.

Treatment.—There is comparatively little that can be done towards checking these diseases. Spraying in many cases is not practicable on account of the size of the trees, and even if it were, it is questionable whether the injury resulting from the parasites is sufficient, except in some few cases, to pay for the trouble involved. As many of the fungi pass the winter either in or on the old leaves, burning these in the autumn may help materially in keeping the parasites in check. Careful attention to the needs of the trees in the matter of food and water will also go far toward freeing them from the attacks of such enemies as have been described.

Our Book Shelf.

The Water Garden, by WILLIAM TRICKER. Cloth boards, large 8vo., pp. 120; profusely illustrated; price \$2.00. (New York: A. T. De La Mare Ptg & Pub. Co. Ltd.)

To use a hackneyed but expressive phrase, a long-felt want is filled by the appearance of this volume. The growing interest in the culture of aquatics as a leading branch of garden craft is a comparatively modern development, but it is one to be encouraged not only for public parks and city squares, but also on behalf of the suburban resident. It is really surprising what facilities almost any place offers for the establishment of a water garden of some sort, if only half a barrel, and the book before us differs somewhat from the generality of the production of specialists in that, while the largest scope of the subject is masterfully handled the smaller interests are not ignored, and the excellent illustrations of garden views show not only what exists in our parks but go also into private grounds and into the back yards.

Mr. Tricker is qualified to preach if a life devotion to his hobby can qualify any man, and having worked his way from the beginnings to the front rank in this branch of horticulture, the author tells others, from experience, how to get the best results without the preliminary failures. It is a strictly practical book but gotten up in a fine style, with tone plates of select Nymphaeas and eighteen full page water views from gardens in existence for the purpose of illustrating, not so much what might be done, but what is now accomplished.

The chapter on treatment of banks and margins is not by any means the least important in the book, artistic treatment of the surroundings of a pond or lake is far more important than the planting of the water plants themselves, and the list of selected trees, shrubs, ferns, etc., should prove most useful to intending planters. Lists of aquatics and sub-aquatics for various purposes occupy several chapters, and the descriptive catalogue of Nymphaeas with comments upon their requirements and adaptabilities contains hints of great value. The Water Garden is not only a guide but its general appearance is such as to make it a handsome volume for the table.

I receive the AMERICAN GARDENING regularly every week, sit down and read it through at once, then mark the different items I wish to read over again, and after I get through with those I do not want, I mail them to different people I know throughout the country. I consider it an A1 paper in every respect, and it should have a very large circulation.—ANDREW PECK.

Raspberries in the South.

What! Raspberries in the South! some reader exclaims, Why I always supposed that they were not adapted to the South, or that the South was not adapted to them. The foregoing I find is quite a common expression among people from the North, especially New Englanders, when told that raspberries will grow here just as well, if not better, than at the North.

I admit there are some parts of the South, the far South, where the country is level and very sandy, and therefore hotter, in which raspberries do not do so well, but even there they will grow and do moderately well, results depending a good deal of course on the situation and attention given, the plants requiring some protection from the June sun, while the berries are ripening. That is all there is to it; the vines grow luxuriantly everywhere when set out properly and given a little attention.

My honest opinion is that there is no section of the United States better adapted to the raspberry and other small fruits than this mountainous or extensive hill region of the South, commonly called the "Piedmont Belt," unless it may possibly be some of the Pacific Coast states, but that I very much doubt.

Up in this great hill region our summer months are far more pleasant and agreeable than most Northerners suppose. I find there is much misconception throughout the North concerning our Southern climate. It is difficult to make some people believe that their Northern summers, although not nearly so long, are often much hotter than ours. The thermometer here rarely ever goes above 90 degrees, and indeed does not often reach that point, while on the other hand, it rarely ever gets down to 10 degrees above zero. So my readers can readily see that, under such conditions and even with a moderately fair soil, the raspberry ought to do remarkably well, as indeed it does.

I have lived here most of my life, which covers about 20 years' residence, and have had considerable experience, besides study of fruits and berries, especially the raspberry, and I find that with a little attention as to mulching, pruning, etc., they can easily be made to pay from \$500 to \$600 per acre above all expenses, and considering the cheapness of lands in most parts of the country at the present time, I know of no more profitable or better paying business than that of growing small fruits.

The acreage of peaches, grapes, and strawberries is fast being enlarged each year, and now some one needs to take hold of the raspberry in earnest and keep this valuable berry up with the procession.

My method of cultivation is very simple and probably is much the same as that in vogue at the North. I propagate entirely by suckers, as they grow off more readily and will bear a small crop the first season much larger than from cuttings. I take them from the old patch where I have let grow the best ones the preceding summer, and set them out either in November or February, or at most any convenient time during the winter; November being the best time, as the plants become better settled in their places and generally start off a little earlier in the spring. I make my rows about five feet apart and set the canes three or four feet in the row, leaving them from two to three feet high.

Unless fairly clean, the ground to be planted should first be plowed or "turned," as we usually term it, then rolled or harrowed fine, rows marked off and canes set out. Then give an application of stable manure well mixed with straw or leaves, all being well-rotted. Kainit or potash salts of some kind and acid phosphate are also valuable fertilizers for the raspberry. I always apply broadcast after canes are set, and then cover with a mulch. Cotton seed hulls make the best mulch in the world, besides acting as a splendid fertilizer; they are also very cheap, selling now at about 20 cents per 100 pounds.

I don't often give support to the cause

*In Yearbook of the U. S. Department of Agriculture 1898.

the first season; after that I drive posts about every 20 feet in the row and nail two crosspieces about two feet in length to each post, the first being two feet above the ground, and the next about 18 inches higher, and lacking about a foot of coming to the top of the post. In each end of these crosspieces notches are cut, in which wire is run, on both sides, the whole length of the row. This gives excellent support to the canes and leaves plenty of room for cultivation and the gathering of berries. I have an old patch that I grew in checks or hills about five by five feet each way and gave but very little support, and they did remarkably well. This patch is three years old and last summer I gathered 15 gallons of the finest berries I ever saw, of the Cuthbert variety, from a square about 30x30 feet, and sold them at 15 cents per quart, making \$9 from the square. Think how many such squares it would take to make an acre, and you may get some idea of the profits to be derived.

The Cuthbert is my favorite, and seems best adapted to our soil and climate, although all varieties do exceedingly well. I give all varieties the same treatment, except a little difference as to pruning.

Our markets and shipping facilities are about as good as can be found anywhere. I am within 20 miles of Atlanta (the capital), a splendid city and good market. Population about 80,000. Savannah, Charleston, Jacksonville, and some other Southern cities as well as Northern afford excellent markets. But the majority of our farmers and land owners have very little foresight, and are generally behind the times, not being very quick to grasp new ideas or catch on to a good thing, therefore very little has been accomplished as yet in the way of small fruits, although prospects are bright for the near future.

COY E. CHAMBERLAIN, Ga.

New Plant.

CYPRIPEDIUM EDWIN LONSDALE, *New Hybrid*, (*Rothschildianum* ♀ × *barbatum* subsp. ♂)

Foliage thick, smooth, vivid green, with an overlay of deeper green reticulations; habit spreading, as in the seed-bearing parent; peduncle thick, twin flowered, hirsute, purple in color, with the characteristic bract so conspicuous in *Rothschildianum*, but less marked; petals spreading, broad, $\frac{1}{4}$ inch wide by 4 inches long, greenish yellow in color for two-thirds of its length, the remaining third a very pleasing purple, which hue spreads in a pleasing manner through the very strong nerves to the base, two-thirds of the length are beautifully spotted with crimson-purple, while each margin is covered with very long black hairs; dorsal sepal whitish green, overlaid with a very delicate suffusion of rosy crimson, surmounted by 16 or 18 well-defined lines of blackish purple; lateral sepal pale greenish white, slightly rosy, with heavy green bars; lip long, narrow, partaking much of the character of *Rothschildianum*, dull purple, with nervations of darker color; staminode long, greenish purple, entirely overlaid with velvet-like pubescence.

This, taken altogether, is a very pretty hybrid, and certainly worthy a place in a select list. I have named it with the kind permission of Mr. Roebling, (in whose fine collection it is now flowering) in honor of Mr. Edwin Lonsdale, of Philadelphia, who well deserves the compliment, both for his keen love of Orchids and for his high qualities as a successful horticulturist.

HENRY T. CLINKABERRY.

Southern States Farm Magazine.

With the November number the Southern States Magazine of Baltimore, comes out as the Southern States Farm Magazine. The work of the magazine for several years has been to influence agricultural immigration to the South.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send us stamp for our new catalogue.

Terracing a High Bank.

A high bank frequently presents itself and calls for some kind of treatment that shall bring it into harmony with its surroundings. Now a great many people make use of a double terrace in a case like this. To the writer's eye a double terrace is an abomination in the sight of good landscape gardening. Such work looks too much like the base of a monument to be suitable for the lawn. Two terraces may, of course, be used where a broad sweep of sward can slope between them, but, as a rule, they are to be avoided.

At a is shown a high terrace with the usual level top. Instead of making a high terrace to meet the fall of a high bank, it is better to adopt the form shown at b. This gently-sloping top gives a lower and much more attractive sideslope, and is preferable to the former. Fig. c is a plan, however, that may often be used to better advantage than either of the other forms. This gently rounding form for ground that falls

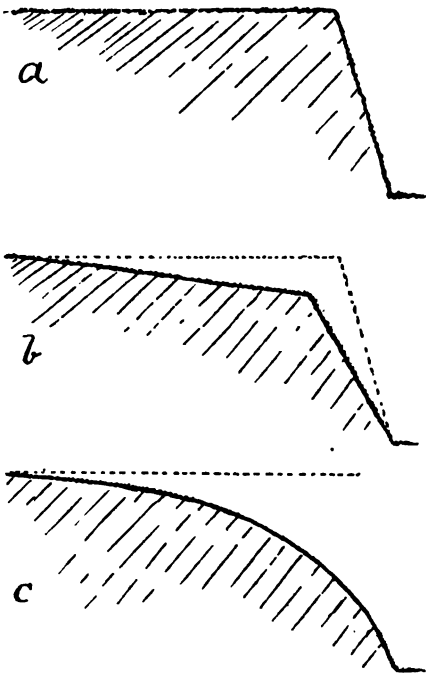


FIG. 218.—STYLES OF TERRACING A BANK.

away suddenly is exceedingly attractive, especially if shrubs are planted upon the curving surface. Many make the mistake of a low set terrace of the angular pattern, when this gentle curving of the turf would be far more attractive. W. D.

Short Answers.

(To A. C.)—Diseased material should be sent in a fresh condition, not all dried up as yours was. Also for naming a plant more than a single leaf is wanted.

(To E. M. K.)—You could get only a small plant of *Araucaria excelsa* for 60c., it would not be a well-furnished one either.

(To J. Smith, N. Y.)—The leaf sent is probably from *Sansevieria zeylanica*. The plant requires more heat than it has had.

(To Morristown, N. J.)—Gregory's book on Fertilizers may give the information needed. Manures are also treated upon largely in Green's Vegetable Gardening.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

The Fru Garden.

Pears in Season.

The varieties of pears on hand at this season are limited when only an ordinary fruit room is to be had. These will consist of Seckel and Sheldon remnants.

The best flavored pear just now is Dana's Hovey, and it is a question to decide whether it is the equal of Seckel or not. But it may safely be said, it is one of the very best flavored pears we have; small, of course, and of no particular beauty, but a taste of a good sample of it only calls forth regrets for its lack of size. The tree is a vigorous grower with thick glossy leaves, needing some training to keep it within bounds in its young days.

Lawrence is a smooth fleshed pear of fine quality coming in just after Hovey; P. Barry is going to be a fine pear for winter, and will take the place of winter Nells which does not ripen up first-rate with me.

Look Over Stored Apples.

Apples housed in open barrels or on shelves will require some attention on wet days, but it is not every man that can be trusted with that work. In fact, it is one of the jobs you feel like undertaking yourself if the time needed was at your disposal.

Fall Pruning of Fruit Trees.

The pruning of the trees can be commenced as soon as the leaves are all off. This should not partake of the wholesale cutting style (to let in the sun), but a general overlooking for any crowding branch and any sappy growths from the center of the trees, planning to let light, not sunshine, into every part of the trees. It should not be necessary to use a saw other than to remove dead branches.

Inducing Fruiting.

"Many spoll trees in the first ten years by good feeding and the annual pruning of the top to counteract the effect of it, whereas if the top had been practically let alone in winter, and the roots cut back in early March, flower buds and a crop or two of fruit would soon reduce the exuberance of youth and good feeding ground and put the trees on a solid paying basis.

JAMES HOLLOWAY, N. Y.

Cause of Imperfect Apples.

On page 763 Mr. E. A. Shaw presents an inquiry regarding the fruit of an apple tree in his garden. There is no reason to suppose that the iron rod would cause any such trouble. Probably the trouble is caused by the presence of an insect or fungus, but just what cannot be determined without examining the fruit. Mr. Shaw should submit specimens of the fruit to the Agricultural Experiment Station of his state or the editor of this paper.—W. E. BRITTON, Conn.

The King of Tompkins Co. apple tree is of the Spitzenberg family, and in many situations are really short-lived trees. The iron rod does not cause the trouble. There is a lack of something in your soil the tree wants, which could only be answered by analysis. There may be the apple borer to blame.—C. D. ZIMMERMAN, N. Y.

Everbearing Peach.

I notice that Berckmans, of Augusta, Ga., catalogues this season a perpetual or continuous bearing peach, the Everbearing, as recently noted in AMERICAN GARDENING. I wish to state that I have known for years of a peach grown in a section of this county that bears two distinct crops; one early and one late. The peaches grow alternately on the twigs, and can be reproduced by buds or grafts. I have seen twigs with fruits the size of a hen's egg, and others the size of a peach pit or stone.—ANDREW C. TODD, Anderson Co., S. C.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 12, 1894.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 3154 Cortlandt. P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 35 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

The Henry Strawberry.

Arrangements have been made whereby a bountiful supply of these plants will be ready for spring delivery to subscribers and agents, and in this connection we beg to call the attention of our readers to our generous offer of these plants in another column. We do not think that a more liberal offer has ever been made than the one now advertised, whereby the agent or worker sending us in a club of ten new names, at \$1 each, becomes entitled to 100 Henry Strawberry plants, while five plants will be sent postpaid to each person in his club. This offer will not apply to a club of less than ten. It may be a very long time before such an offer of such a plant can be made again. The wonderful success which has accompanied our premium offer this fall, in the short time at our disposal to advertise it, leads us to believe that the orders for the Henry Strawberry next spring may exceed all anticipations; however, we have planned for a large supply for delivery and trust to be able to meet all demands upon us. Mr. Jerolaman's series of articles is now being placed in pamphlet form, and copies will be mailed free to all who desire to use same in the canvas for new subscriptions.

All the premium Henry Strawberry plants due to date, have been shipped, except where a request has been made to hold them till spring, and judging by the unsolicited acknowledgments received, they are giving immense satisfaction. In order to reduce weight and hinder excessive transpiration some of the leaves are cut off before shipping, this is especially beneficial during a hot spell, and readers can rest assured all is done for the best.

The Readers

and Ourselves.

AS the number of subscribers grows bigger so are we enabled to materially improve the attractions of AMERICAN GARDENING, and it is therefore of interest to present readers to know that the increase in our subscription list since the fall set in places us in such a position that we are enabled to make some announcements as to improvements in and additions to the present features of the paper.

Our readers will greet with pleasure the following statements and we trust they will also cause a redoubling of efforts to gain still more subscribers, in order to help promote a still further liberal and progressive program in the conducting of a paper which all now recognize as the leader in American horticultural journalism. The larger circle of readers the better can a paper fulfill the wants of the individual, and be it well understood, an augmentation of circulation comes in the case of a periodical like AMERICAN GARDENING, best and quickest from *within*—that is from recommendation by regular readers to those who know not of it.

As a preliminary, therefore, to our announcement, we take the liberty of asking each and every present subscriber, interested in the cause of horticulture, to make it a sworn duty to send in at least one new subscription before the end of this year, and take advantage of the premium offers, so doing he will have a great satisfaction at heart, for what is nobler, or will more readily bring about happiness, peace, and contentment than the possession of a good garden, captivating home surroundings, and the ability to grow plants to a perfection which none can exceed, and this is the information AMERICAN GARDENING seeks to dispense, the knowledge it strives to impart, and who shall say its work has been in vain? Let all know the nature and value of the paper; we will take care of the rest.

Among other attractive new features for the immediate future we announce:

Once each Month a Competition on a subject of general interest, and for which suitable money prizes will be awarded.

Once each Month a Literary Supplement containing full reports of the more important essays and lectures; the special lengthy treatment of some problem; articles of more permanent and scientific interest, etc.

Once each Month a colored presentation plate, suitable for framing. The twelve sheets which will be given away each year forming a collection which our readers will thoroughly appreciate.

A standing offer of a cash prize for a photograph of a well-grown specimen (flower, fruit, vegetable, or plant) with description as to how the result depicted was attained, from start to finish. Cash prizes will also be paid for photographs illustrating general views, such as groups, landscapes, views, garden scenes, etc.; explanatory matter to accompany all photographs.

A column each week devoted to Poultry will be conducted by an acknowledged and well known expert. This should be pleasant news to the many thousands of readers who devote a portion of their time to the poultry yard and moreover

the weekly advent of advice and suggestions should be of much value.

The Apiary will be well taken care of, also by an expert. Beekeeping is one of the most profitable of industries, and a legitimate adjunct of gardening.

From the foregoing outline it will be seen that nearly every weekly issue of AMERICAN GARDENING in the year 1898 will have its own personality or special attraction, and to which it is hoped readers will look forward with pleasurable anticipation. So far then for the general scheme of which the details will be announced later. Watch for them!

But the march of improvement will not cease with what is included in the above enumeration. The style of the paper will be amended, so as to give it a bright and more attractive appearance, and make it an easy matter for anyone to find the information sought.

As in the past there will be the same effort to maintain the reliability of the matter presented, and endeavors will be concentrated in the direction of delivering it as free from technicalities as is consistent with thoroughness; giving short, sharp and incisive expression to the best thoughts, rather than lengthy treatises, which, although good, are perhaps difficult of comprehension to very many. It is to this end that the special monthly supplement is devised.

But one word now remains to be added: We have given our part, now it is for the readers to do theirs. The columns of AMERICAN GARDENING are intended for exchange of thought, idea, and experience, and just as each reader enters into this spirit and becomes in fact one of the circle, so does the general and individual interest increase. To say that we heartily welcome notes, observations, and questions, from all is therefore almost superfluous.

The Question Box.

Do you want to know anything? If so, ask! The Inquiry Department of AMERICAN GARDENING has always been a leading feature of the paper, and we want our readers to make it stronger still. That is easy; simply send in your questions. We print them and invite any reader to answer. But we also do more; we see to it that the questions are brought before capable authorities, and they will also be handled editorially.

This system makes our Question Box an invaluable medium of exchange of thought among horticulturists and as an educational factor its value is immense.

So far as the conducting of a Question Box is concerned everything depends upon the readers. If they do not make the inquiries no one can answer them. The use of our columns for gathering information is absolutely free to all. Try what an inquiry will do for you.

The more the correspondence received for this department of the paper the more will the editor be pleased and he will leave no stone unturned in the endeavor to secure an ample reply to an obscure point.

Our Strawberry Pamphlet.

Owing to an expressed desire by the writer to thoroughly revise his series of articles on "Big Berries for All," it may be early in December before we will be able to issue the booklet. It will be well worth waiting for, however, as we confidently anticipate that it will prove the best treatise on the subject ever written, and practical to the core.

THE QUESTION BOX

He that questioneth much shall learn much—BACON.

Readers are invited to forward particulars of any difficulty or perplexity that they have encountered. If the question be one of general interest it will be inserted in this column, so that other readers who may have information to impart can assist their brethren by recounting their own experiences. Questions of a purely individual interest will be replied to by the Editor under the head of "Short Answers."

Questions submitted in this department will receive the full attention of the staff of AMERICAN GARDENING and when desirable will be answered editorially.

All communications for insertion should be clearly and concisely written on one side of the paper only, and addressed to the Editor of AMERICAN GARDENING, P. O. Box 1897, New York City. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query or answer are sent, each should be on a separate piece of paper.

Answers should always bear the title of the query replied to and the page on which it appeared, and our readers will greatly oblige us by advising, as far as their knowledge and observations permit, the correspondents who seek assistance. Conditions, soils, and means vary so infinitely that several answers to the same question may often be very useful, and those who reply would do well to mention the localities in which their experience is gained.

Important to Querists.—Correspondents must look through the whole of the paper to see replies to their queries. Answers cannot always be given the week after the queries are received, but there is as little delay as possible in dealing with them.

Cash Prizes will be given for the best set of answers each week. Payment to be made monthly.

Fertilizers for Strawberries.

Mr. Jerolaman says: Put on two inches of old fine manure one foot each side of rows of newly set strawberry plants. Many growers cannot get such an amount of fine manure as would be required for an acre or more. Will some grower please inform a reader how much, approximately, of good wood ashes and any good phosphate would replace the manure? Will Mr. Jerolaman tell us the most economical way of putting on the manure after plants are set?—M. W. SMITH.

Fertilizer for Berries.

In what way can I use or combine fine muck, ashes and rotten sawdust, also slacked lime, to the best results, for berries? Good decomposed manure, I would have to haul five miles. Muck at home, sawdust only one and a half miles, and saw mill—outdoor ashes. Soil sandy loam.—J. M. C., Mich.

Keeping Gladiolus Bulblets.

Will some one please tell me how to keep Gladiolus bulblets, packed in sand, damp or dry or otherwise, also the best way to plant and grow them? I have peeled them but not more than one in ten or twenty grew. A gardener I know who had a good stand of them, said he didn't peel them, but did not tell how he treated them.—H. M. D., Mass.

Propagating Holt's Sage.

I have some plants of Holt's Mammoth sage and wish to increase my stock next year. They are now in the ground. Will you please tell me particularly how to manage the cuttings? I have tried several times and failed. Shall I leave the plants in the ground, and what care will they need if taken up?—ANNA CRANDON, Ont.

Early Celery Bolting.

This spring I sowed celery (Paris Golden Self-Blanching) in the hothouse and had fine plants in the last part of April, when I planted them outdoors in rich ground. They did well and by the end of June the celery was ready for use. The worst, however, was most of the plants ran to seed. From the same package I took the seed for late crop and not

one plant has made seed. What is the reason? Are other varieties better for early growing?—A., Mass.

Plum Burbank.

Two years ago I bought some Burbank plum trees from Berckmans of Georgia. I noticed a few days ago that suckers have come up a few feet from the trees. I want to know if I take these up and set them out will they bear like the trees or will they be worthless. The trees bore fine fruit this year which ripened in June; not an insect nor an unsightly plum on the tree. In the same lot of trees was a peach that bears lovely double flowers, but no fruit; it is a fine, shapely tree fully 12 feet high, but as flowers only last a short time and I have little ground to spare, I will dispose of it if it bear no fruit. This tree must have been sent in mistake, for I did not order it.—MARGARET E. CAMPBELL, Louisiana.

How to Flower Echinocactus.

I have an Echinocactus that I brought from southern California four years ago. It has grown well (in the greenhouse), and yet it has not blossomed. Can you tell me of anything I can do to make it blossom? Do they have to be larger and older? The brethren grow to the height of four and even five feet, and perhaps this must be larger. I should like to know.—KATE FOOTE COE, Conn.

Perforated Tile for Greenhouse.

I should be glad to have an address where I could get perforated tiles for greenhouse benches.—G. M. STRATTON.

Wintering Berry Seedlings.

I have a fine lot of strawberry seedlings from Brandywine and Marshall. I raised them in boxes about 16x20 inches, 5 inches in depth. Please tell me the best and safest method of carrying them through the winter.

Will they live through if I put the boxes on the ground side by side and cover with a light covering of corn-stalks? The plants have three to five leaves and some have commenced to make runners.—J. J. SEELYE, N. Y.

Propagating Small Fruits.

How can I best increase blackberry, raspberry, and currant plants?—E. F. L., Va.

Peppermint as a Crop.

Please give me general instructions for culture of peppermint for commercial purposes, viz., soil, distance apart to plant, cultivation, harvesting of crop, etc. What is the average crop per acre? What is the market value of same? Is there any book published that gives information on this question?—JOSEPH WOOD, Pa.

Jasmine Not Growing.

I obtained a *Jasminum gracillimum* in the spring, and planted it in a mixture of loam, old manure and sand. Sometimes it has thrown out shoots from the axils of the leaves and would seem to grow a little, but most of the time it has stood still. It has had full sun; the leaves are a yellowish-green color and were so when it came.

Is there anything I should do with it or is it all right? I expected it to bloom this fall.—A. CRANDON, Ont.

My Pinks Don't Flower.

How many branches ought there to be left on a Pink to do well? My Pinks are full of buds large and full, but they do not open. What is the cause of their not opening?—J. L. B., Mass.

Lavender for Market.

Will some one kindly explain in your paper the most approved method of cultivating Lavender and preparing it for market, and greatly oblige?—R. H. C., Conn.

Chrysanthemums Not True to Color.

Can any reader give me the reason for two varieties of pink Chrysanthemums coming white this season? I have grown

Geo. A. Magee and Vivland-Morel cuttings from last year's plants, and both varieties have come white. They had the same treatment as all other varieties, such as Ada Prase, Helen Bloodgood and Lillian B. Bird, all of which came their true color.—G. R. C., Toronto.

Dwarf Apples.

How are dwarf apple trees grown? Are they root grafted or budded? What kind of stock is used?—L. J. F.

Greenhouse Heating.

I am building a forcing house to the south and against my residence, 20x32 feet and about 7 feet high. I have an upright single flue boiler 2½x6 feet, with a firebox 25x32 inches.

I have cut two holes for 2-inch pipes in the top, and two near the bottom. I intend to place the boiler in cellar of residence and run one 2-inch pipe through cellar wall into forcing house and to the south end (hanging from ridge pole), and then down, being split to two 1½-inch pipes at south end of house, then going around house and back to bottom of boiler. The other pipe to go up into house through radiator and back to bottom of boiler. Shall have a stand-pipe to attic to a 65-gallon tank which will be connected to one of the return pipes just before it goes into the boiler; that tank to be kept about one-half full of water to insure the boiler and all pipes being filled.

(1). Is the above correct and will the water circulate with the supply on the return pipe, or would it be better to go direct into top of boiler. I have an extra opening for 1½-inch pipe on top that I will not use.

(2). How much pipe or how many square feet of heating surface to a given amount of space for forcing house and residence?

R. SINCLAIR, Ohio.

I am looking for advice about my greenhouse. No. 1 is 60 feet long, 19 wide, and 18 from floor to ridge; it is divided into three compartments, each compartment is 20x19. A will be used for Ferns, Crotons, Fuschias, and other shade and moisture-loving plants. B, for Palms and other plants requiring a high temperature of 60 to 75 degrees. The tables will be made water-tight, so I can sub-irrigate (as all plants will be grown in pots). The glass in this house is 20x15. Ventilation on each side of ridge and side tables.

House No. 2 is 60x21 base x10 from floor to ridge, will be used for Geraniums, Roses, Heliotropes, Bouvardias, shrubbery, and miscellaneous plants, requiring from 40 to 75 degrees. This house is roofed with cold frame sash 8x8, panes are 6x8, ventilators at top, on each side every other sash; roof is supported by iron pipes 1½-inch diameter, with 1½-inch purlin; each ventilator to close against a strip of india rubber fastened to the ridgepiece; walls constructed with cement.

House No. 3, 60x9 base x7 from floor to ridge, I shall use for various purposes as propagating plants, flowers, and vegetables, or growing cucumbers or bedding plants, in fact, it will be used as a hothouse or cold frame for general purposes; the roof is constructed from cold frame sash 8x8, panes 6x8; the tables will be boxed in from floor to surface, to be heated under and above, floor of tables will be laid with perforated tiles. Walls are double boarded, ventilation will be regulated by "New Departure."

The houses run north and south, lowest temperature ever known 15 below freezing.

On the north end is potting shed, gardener's room, etc. I should be glad to know what sized pipes I should use in each house (hot water) where they ought to be placed, how many runs, flows and return for each house (also for gardener's room). Should they be wrought or cast iron? Also size of boiler to circulate the water, sufficient for houses, etc., described with an allowance for one or two more greenhouses 60x21x10 at some future time.

Taft's book contains so much information that I am bewildered.

G. M. S., Fla.

There is Not a Home in the Land

But calls for a yearly Calendar.

Every family tries to get one or more; generally more.

There are Calendars and Calendars

Some are good, some bad, most of them indifferent.

There Will Not be a Calendar Issued for 1898

To exceed in artistic elegance, finish, beauty of designs and effective coloring, the one we to-day offer as a premium to every subscription to AMERICAN GARDENING received before December 31, 1897.

EVERY SUBSCRIBER IS ENTITLED TO ONE

AND CAN EASILY EARN TWENTY.

OUR magnificent **Rose and Girl 1898** six sheet **Art Calendar**, two months to a sheet, each sheet $8\frac{1}{2} \times 11\frac{1}{4}$ inches, is superbly lithographed in eleven colors, and printed on hammered paper; the whole tastefully tied with silk bow—undoubtedly a work of art fit for the most elegant home, and as handsome a Calendar as was ever published. Each one of the six designs presents a distinct type of female loveliness and a fresh study in roses, the coloring on each sheet being rendered in harmony with the design. There is not a line of advertising on the Calendars to detract from their value. They will not be sold by us for less than \$1.00 each

Who is Entitled to a Calendar?

EVERY SUBSCRIBER renewing before **December 31, 1897**, enclosing Five Cents additional to pay packing and postage.

EVERY NEW SUBSCRIPTION—To induce people to test the value of AMERICAN GARDENING we will send the Calendar absolutely free to every name received direct not previously on our mailing list. Remit \$1.00 for A. G. 12 months.

EVERY ONE sending us a club of Four 3-month trial subscriptions at twenty-five cents each, will get a Calendar, free as a premium, by return mail.

EVERY NEW name sent in by an agent.

NOTE.—We have ordered manufactured for us a large stock of these superb Calendars in the endeavor to have sufficient supply for all demands, but will not guarantee to fill orders after supply is exhausted. Therefore, order yours now.

Special to Agents A copy of our Art Calendar to show people will clinch the argument and obtain the subscription. Bona fide Agents will be mailed one copy, securely wrapped, on receipt of only Twenty-five cents (one-fourth its value.) Armed with this superb Calendar we misjudge human nature greatly if any ordinary mortal cannot secure a big list of new subscriptions every day. Every new subscriber you send us gets a Calendar by return mail.

We Pay Agents

Every new subscription at \$1.00 entitles the agent to **Five of the Wonderful Henry Strawberry Plants**, to be delivered next Spring. Thus 100 new subscriptions would secure agents 500 plants; a possession worthy of your consideration. Every new subscriber taken by agent will receive one of our Art Calendars free by return mail.

Agents who do not want the Henry Strawberry Plants can retain as their payment **20 cents in cash** on each subscription they take, or will be credited **twenty-five cents** on any book, magazine or publication they wish to obtain through us.

Address all
correspondence

AMERICAN GARDENING, P. O. Box 1697, New York.

REMIT BY P. O. or EXPRESS MONEY ORDER—IT IS SAFEST.

The Window Garden.

Edgings for Window Shelves.

The beauty of the window from the inner aspect can be wonderfully enhanced by the free use of trailers along the edges of the shelves. The value of the old Kenilworth Ivy for this use is well known. Among newer things, the pretty gray-green Lotus, known as Coral Gem, makes a very dainty edging. A table of brilliant Geraniums, bordered with the silvery trailing stuff made a very good impression at an exhibition lately seen. More generally satisfactory, perhaps, though not quite so delicate in its beauty, is the new form of Asparagus called Sprenger. This bids fair to be good wherever used, and as it grows well in partial shade, it will not be difficult to find uses innumerable for it.

Varying Temperatures.

It is often the too great variation between the day and night temperatures that causes the plants to come to a standstill, or to begin to go backward. And we of this variable climate, though we feel the cold, do not realize the real fall in temperatures during cold spells in late summer and in autumn. A few mornings back the temperature in the house, where night fires had not yet been kept, was found to be but 44 degrees. In the dead of winter, when the temperature touches 40 degrees, we begin to get uneasy lest it go so low as to injure the plants; yet here, in November, the contrast between day and night was almost as sharp, being in the living room about 30 degrees.

The New Potting Fibre.

It is queer looking stuff! In appearance it is something like a mixture of pure horse manure, mostly rotted, and leaf mold. Water sinks into it as into a sponge, and is retained to somewhat the same extent. The lightness of the pot betrays at once the fibre-potted plant, without the need of a label. This, alone, would be sufficient reason for its use among women window gardeners. We have a number of things potted in fibre, and are anxious to prove it all that is claimed for it. Certainly, if we have a cleanly, light, easily-obtained potting material which will indeed make plants to grow like magic, all the women who grow plants want to know all about it.

A Window Cobaea.

It was fully midsummer when seeds of the newer form of Cobaea, known as C. macrostemma were planted in one of the window pots, just for the sake of filling an empty space temporarily with a bit of vinery. Long ago the vine reached the top of the window. It has not had any care except that of supplying water at the root. Not one drop of water has reached the foliage, at any time, yet the vine is now budding nicely, and bids fair to give bloom in two weeks from the present writing. It is rather delicate as to color, but the foliage is of good size and the buds look healthy.

Variegations.

More and more does the fancy for variegation in foliage take hold of the buying public. Yet the buyers of such stuff should be warned that this same variegation is a constant urging to the best culture possible because it is always a sign of lessened vigor, if not of actual disease. It has been said that plants, or rather shoots, entirely white cannot be propagated, and in our own experience we have not been able to disprove the affirmation. Florists are able to make many variegated forms show up in fine, thrifty shape, and outdoor stuff sometimes does well, but indoors, where all the conditions are likely to be more or less unfavorable, there is less likelihood of good success.

Variegated Abutilons.

The above does not hinder us from saying that the new silver-edged Abutilon Savitzii is pretty enough to warrant a trial of its resistant characteristics. It can hardly be called on the market until next spring, as stocks have been limited, and prices last spring were so high that few people have tried it. It is more delicate looking than Souv. de Bonn, with

much more of the white. Yet, as one of the most delicate in appearance of the silver-edged Geraniums, Mdme. Sallerol, roots with phenomenal ease and often grows with wonderful vigor, so let us hope this new candidate may do. And this hope may be the stronger from the fact that the Abutilons generally are among our most thriving window plants.

Some Pomological Notes and Corrections.

My good friend, the editor of AMERICAN GARDENING, in his notes on fruits at the American Institute Fair, on page 714, unwittingly made some mistakes which it might be well to correct. He credits a display of guavas and guava jelly, one of the Pineapple quince, one of the Campbell Early grape, and one of the fruit of the klyphus (jube) along with other fruits, to Mr. P. J. Berckmans, of Georgia. Mr. Berckmans did send a very fine display of Kleffer pears, as the editor truly says, and a number of plates of several named kinds of the Kaki or Japanese persimmon, and two kinds of pomegranates. All these were very interesting and creditable. But the guava in all its species and varieties is strictly tropical, and especially the species Psidium guava on the table beside Mr. Berckmans' exhibit. This fruit, and the delicious jelly made from the same kind of fruit, came from Mr. L. H. Gurney, of Merritt, Florida. The pungent, and to most people, the pleasant perfume of the plates of yellow, lemon-shaped guavas attracted more curiosity, if not more interest, than any other fruit on the many tables at the fair. As superintendent of the pomological department of the fair, I tried to have many visitors taste as well as smell it, for it is a most enjoyable and wholesome fruit.

Being very delicate in skin, as much so as the tomato, the fruit could not remain long on the table after two days' travel by express, and being little known, it was necessary to use it while it lasted, and get fresh supplies from Florida, to keep up a display for the four weeks of the fair. This was done, much to the pleasure of those who tasted the fruit, and the jelly also.

The guava is to the people in tropical Florida what the peach is to the Northerners. It somewhat resembles in taste the strawberry, and served with cream and sugar I have never eaten any more delicious fruit. Guava jelly is generally considered the most delicious of all preserves, and sells at a high price.

The Pineapple quinces were sent by Luther Burbank, of Santa Rosa, California, and this is the first time this variety has ever been shown to the public. It is a large and most excellent variety, being considered by Mr. Burbank, so he writes me, the best of all the kinds he has originated. I ate one just as an apple.

The display of Campbell Early grape was from the introducer, Geo. L. Joselyn, of Fredonia, N. Y., and was a most attractive show of that valuable new variety.

The plate of jube fruits was from Dr. C. D. Coleman, of Augusta, Georgia, one of Mr. Berckmans' neighbors. It may not be known to many that the tree producing this fruit is hardy in the Gulf States. It is a deciduous tree, and resembles the Locust family in style and foliage. The fruit is about the size and shape of ripe dates, and has a thin skin, enclosing a pleasant, tartish pulp, in which is a stone like that of a plum. What is known in confectionery as jube paste is made from this pulp, and is relished by many city children.

H. E. VAN DEMAN.

[We regret that the wording and punctuation of our report should not have been plain enough for Mr. Van Deman. There was no intention of attributing all the objects named to one exhibitor.—Ed.]

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

PEACH TREES, \$3 PER 100.

All kinds of Trees and Plants CHEAP. Cat. FREE. RELIANCE NURSERY CO., Box 1410, Geneva, N. Y.

Mention American Gardening when you write.

GROW BISMARCKS IN POTS

Wonderful Midget Bismarcks bear beautiful large Apples in Pots or Garden when two years old. \$1.00 each. CRIMSON RAMBLER. Magnificent Climber for Porch, 50c. each, prepaid. Send for beautiful colored Lithographs giving descriptions. Address, Manhattan Nursery Co., 47 U Day Street, New York.

LETTUCE PLANTS.

Big Boston, Boston Market, Tennis Ball, White Leaf, Grand Rapids, and Reichen's Forcing. 15 cts. per 100; \$1.00 per 1000. If by mail add 10 cts. per 100.

CASH WITH ORDER.
R. VINCENT JR. & SON, White Marsh, Md.

A \$1.00 Raisin Seeder for 50c.



POSTPAID. We are tired of selling dealers and waiting 90 days for our money, so we will sell housekeepers at Jobbers' prices. Send 50 cents, and we will mail you postpaid one of our best. BAY STATE RAISIN SEEDERS. Guaranteed to seed 1 lb. of raisins in 5 minutes. Simple to operate and easy to clean.

EASTON MFG. CO. D. 10, 64 Federal Street, BOSTON.
Mention American Gardening when you write.

SONGS

FOR SOCIAL OCCASIONS.

College Songs.
Revised and enlarged edition of the famous book. Indispensable for social gatherings and all places where merry song and laughter find a place. Price, 50 cts.; cloth, \$1.00, postpaid.

Father Kemp's Old Folks Concert Tunes.
Newly revised and enlarged edition of the famous book which has provided the music for more entertainments than any other book in existence. Price, 50 cts. each.

College Songs for Banjo.
Seventy-eight popular favorites, arranged with banjo accompaniment. 120 pages. Large sheet-music size. Price, paper, \$1.00; cloth, \$1.50, postpaid.

College Songs and Popular Ballads for the Guitar.
Seventy-seven favorite college songs, and other popular compositions, with accompaniment for the guitar. Price, paper, \$1.00; cloth, \$1.50, postpaid.

American Patriotic Songs.
A splendid collection of national lyrics, including the old favorites. Words and music complete. Useful for all patriotic occasions. Price, 50 cts., postpaid.

Minstrel Songs, Old and New.
All the "old time" popular melodies. 215 pages. Sheet-music size. 24 pieces. Piano-forte accompaniment. Price, heavy paper, \$1.00; boards, \$1.25; cloth, gilt, \$2.00 postpaid.

Moore's Irish Melodies.
New edition of the famous lyrics. The best of Ireland's songs. The finest book of its kind extant. Price, heavy paper, \$1.00; cloth, gilt, \$2.00, postpaid.

ANY piece of music published in any part of the world can be procured of us at shortest notice.

OLIVER DITSON COMPANY
453-453 Washington St., Boston.
NEW YORK PHILADELPHIA
C. H. Ditson & Co. J. E. Ditson & Co.

Mention American Gardening when you write.

KNOWN WORTH

You judge a man by his reputation. His reputation is formed by what he does. So in selecting a musical instrument—study its reputation. That represents what it does. Look into the merits of the

"Bay State"

Guitars
Mandolins
Banjos
Zithers
Flutes

Their superiority invites the closest scrutiny. Their reputation is their warranty, for it tells what it does. In choosing a "Bay State" you purchase known worth. Twenty-seven awards. Only winners of American gold medals.

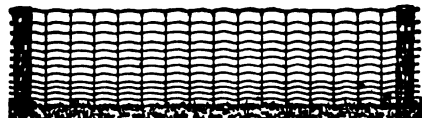
Send for Catalogue and Prices

JOHN C. HAYNES & CO.

453-463 Washington St.
BOSTON.

Mention American Gardening when you write.

Peach Trees for everybody. Wholesale and retail U.S. 451 Huron, Box 21 Steepley, Del.
Mention American Gardening when you write.



There's Only One Leader

in any line. Others follow. We began early, kept at it, and are still marking a pace. It is STAYING that determines "staying qualities."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.

**CYPRESS
SASH BARS**
UP TO 22 FEET IN LENGTH OR LONGER.

**GREENHOUSE
AND OTHER BUILDING MATERIAL.**

Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

=JADOO=

Chrysanthemums grown in JADOO FIBRE and watered with JADOO LIQUID were awarded

FIRST and SECOND PRIZES.

Crotons grown in JADOO FIBRE were awarded First and Second Prizes.

At the Annual Exhibition of Penna. Horticultural Society, Philadelphia, Nov. 9, 1897.

Plant your spring Bulbs in JADOO FIBRE and become Prize Winners.

THE AMERICAN JADOO CO.,

813 Fairmount Ave.,

PHILADELPHIA, PA.

Mention American Gardening when you write.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Newport, R. I.

Mr. Thomas J. Gibson has been elected to the City Council. Mr. Gibson is the senior member of the florist firm of Gibson Bros. Andrew K. McMahon, ex-president of the Horticultural Society and president of the Florists and Gardeners' Club during its short life, has been elevated from the Common Council to the Board of Aldermen; and Frederick Bradley, the present president of the Newport Horticultural Society, has been elected to a place on the School Committee.

Chrysanthemum Society of America.

Seedlings.—The committees judging new seedlings will be in session this and every Saturday up to and including November 27.

Exhibitors should make their entries (a fee of \$2 is charged for each variety exhibited) to the secretary, not later than Tuesday of the week in which the blooms are to be shown.

Blooms may be sent to any of the following addresses, express prepaid:

Boston.—A. H. Fewkes, Horticultural Hall.

New York.—Eugene Dalledouze, care of New York Cut Flower Co., 121 W. 23d Street.

Philadelphia.—Edwin Lonsdale, 1514 Chestnut street.

Cincinnati.—B. Witterstaetter, corner Fourth and Walnut streets.

Chicago.—W. N. Rudd, room 202, 185 Dearborn street.

Secretary's Official Report.

Seedling chrysanthemums submitted to the committees October 30, '97, are as follows:

NEW YORK.

Matterhorn, Exhibited by Peter Henderson & Co., New York. Japanese reflexed, white; scored, exhibition scale, 75 points.

Klondike, Exhibited by Peter Henderson & Co., New York. Japanese reflexed, rich yellow; scored, exhibition scale, 68 points.

Mrs. O. F. Diehm, Exhibited by Peter Henderson & Co., New York. Japanese incurved, white, with lilac-pink suffusion and marking; scored, exhibition scale, 56 points.

Florence Turner, Exhibited by Peter Henderson & Co., New York. Japanese incurved, amber; scored, exhibition scale, 55 points.

Mrs. Wm. Maasie, Exhibited by Peter Henderson & Co., New York. Japanese incurved, rosy pink; scored, commercial scale, 81; exhibition scale, 80 points.

J. R. McDonald, Exhibited by John Marshall, Purchase, N. Y., incurved canary-yellow; scored, commercial scale, 81 points.

Sea Foam, Exhibited by D. Wm. Brainard, Thompsonville, Conn., Japanese reflexed, cream; scored, exhibition scale, 81 points.

Col. D. Appleton, Exhibited by J. R. McDonald, Riverdale, N. Y., Japanese incurved, yellow; scored, commercial scale, 66 points.

No blooms were submitted at Chicago and Cincinnati. Philadelphia sent no report.

ELMER D. SMITH, Secretary.

Boston Flower Show.

The show was an excellent one and worthy of New England and its chief horticultural society, but it can hardly be claimed, as a whole, to have excelled its immediate predecessor of 1896, and in the opinion of some experts, the exhibitions of the past two or three years would make a more than favorable comparison with that of the present week.

The show was held a week earlier than last year, and the fact that two of the principal exhibitors of past years, James Brydon (cut blooms) and T. D. Hatfield

(plants and blooms) were not competitors this year may in part account for the evident standstill which has been reached. On the other hand there were several new exhibitors who made entries of very high quality, among them being A. Herrington, Madison, N. J., gardener to H. McKay Twombly, Esq., and Robert Laurie, Newport, R. I., gardener to Cornelius Vanderbilt, Esq., while Alex. McKay, gardener to David Nevins, Esq., Mr. Charles H. Souther (C. Sandford gardener), and E. M. Wood & Co. competed with their superb products in many more classes than heretofore.

The chief exhibitors of specimen plants were William J. Martin, gardener to N. T. Kidder, Esq.; John Barr, gardener to Mrs. B. P. Cheney, and William Donald, gardener to Jason S. Bailey, Esq., among whom the prizes in the various classes were all distributed. In the classes calling for plants grown to stem and bloom, the honors were divided between Mrs. A. W. Blake, George R. Green, gardener to James L. Little; D. F. Roy, gardener to Hon. E. S. Converse; Kenneth Finlayson, gardener to Dr. C. G. Weld, and C. Sandford, gardener to C. H. Souther, Esq.

The prizes for groups of Chrysanthemums arranged for effect, limited to 100 square feet and edged with ferns or low-growing decorative plants, were competed for by Messrs. A. W. Blake, Dr. C. G. Weld, John L. Gardner (William Thatcher, gardener), J. W. Howard, and E. S. Converse, and awarded in the above order.

The competition on the cut blooms was perhaps as close as ever before, and the quality of exhibits was very high. There were absolutely no inferior blooms in the hall; in fact, for several years flowered other than of the first grade have been seldom seen at these exhibitions. E. M. Wood & Co., Joseph H. White, Esq. (James Wheeler, gardener), C. H. Souther, Esq., David Nevins, Esq. (Alex. McKay, gardener), N. T. Kidder, Esq., Mrs. B. P. Cheney, James L. Little, Esq., Hon. E. S. Converse, J. W. Howard, Esq., Dr. C. G. Weld, Cornelius Vanderbilt, Esq., H. McKay Twombly, Esq., Hon. John Simpkins (John Jaffray, gardener), Mrs. E. J. Clarke (John Ash, gardener), and W. N. Craig, were the principal contributors, and all may well feel proud of their share in getting together such a magnificent collection of superior specimens.

Hugh Graham's new Chrysanthemum Pennsylvania attracted much attention and was awarded a first-class certificate of merit, and the vase of Frank Hardy, which received first prize for best vase of ten blooms, white, exhibited by Mr. Herrington, was especially admired.

Other features of the show were fine collections of Carnations from Peter Fisher and William Nicholson. Mr. Fisher received first-class certificate of merit for Carnation Mrs. Thos. W. Lawson, which he exhibited last year as No. 999. A. Roper received honorable mention for new Carnation, Mayor Quincy, and Joseph Hilbert, Nyack, N. Y., the same award for sport of Swainsona. J. J. Van Alen, Newport, R. I. (Arthur Griffin, gardener) received a silver medal for hybrid Begonia semperflorens. James Comley and Mrs. E. M. Gill made good displays of cut flowers. W. P. Winsor showed fine Cyrtipedium insignis; F. E. Palmer, a fine plant of Nephrolepis exaltata; J. S. Bailey, some beautiful Orchids including Miltonia Morellana atro-rubens on which he was awarded first-class certificate of merit.

Port Chester, N. Y.

The West Chester Co. Gardeners' Association held its first regular exhibition here on November 5-6 in the Opera House. This being the first exhibition of its kind ever held in this town and the Society itself being less than a year old there was considerable speculation as to the possible outcome. Local spirit ran enthusiastic, however, and the Society had the banner show of the season, both for quantity and quality. Competition was close, from eight to fourteen contestants appearing in some classes. Fully 2,000 blooms were in competition. One of the largest contributors to and sup-

orders of the show was Hobart J. Park, and the thanks of horticulturists are due him for his valuable aid.

At Blooms.

The best 12 varieties distinct, shown with long stems in single glasses brought together 12 competitors with a fine display of quality. W. Slack, gardener to E. E. Hoyt, Stamford, Conn., securing the prize, with W. Scott, gardener to G. F. Eastman, Tarrytown, a good second, George Winslade, superintendent of the Osborne estate, coming third. The varieties in the winning 12 were: Modesto, G. M. Magee, H. Riegan, Minerva, Florence Laneham, Silver Cloud, Florence Pullman, Biglow, Jennie Falconer, Niveus, Golden Gate, and Mrs. J. Pullman.

The prize for six yellow (nine competing) went to William Anderson, gardener to F. E. Constable, Mamaroneck, with Golden Wedding, Robert Williamson, gardener to Mrs. A. A. Anderson, Greenwich, being second with a fine vase of Modesto.

For the best six white no less than 11 lots competed, the variety Mrs. Robinson securing first and second, the exhibitors being Mr. Winslade and Geo. Draycott, gardener to Wm. H. Parsons.

For the best six pink Mr. Anderson secured first with a remarkably fine lot of Mrs. Perrin; Wm. Harvey, gardener to Hobart J. Park, being second with Erminilda.

For six reds the awards went to Messrs. Winslade and Anderson.

Six "any color" brought out a strong lot. W. Smith, gardener to the Mrs. Mallory estate, was the successful contestant with some fine Modesto, Geo. Draycott being second with well-grown Major Bonaffon. There were four competitors in the class calling for 24 distinct varieties shown singly with long stems. Here again Mr. Slack was first with an even lot well set up. W. Harvey was second, and John Shore, gardener to W. H. Macy, third.

For 12 blooms on boards, seven competing made a fine showing. Mr. Anderson's winning lot being grand, well-finished, in good color and form. His varieties were Mayflower, W. M. Wallace, Jennie Falconer, Iora, Niveus, Mrs. E. G. Hill, Mrs. Robinson, Mrs. Perrin, J. Shrimpton, Modesto, Nemesis, and Mrs. Peabody. Thomas Harvey, gardener to Commodore Smith, Stamford, was second.

Six hirsute varieties were best from A. Grierson, gardener to Hicks-Arnold. A special prize of \$25 was offered for the best 12 yellow, and in a good competition Wm. Harvey, gardener to Hobart J. Park, with 12 well-grown Eugene Dailedouze was first.

In the open class for the best display, Hobart J. Park was first and Paul Burgevine, Portchester, second.

Pot Plants.

For the best three trained plants Mr. Winslade was first with Mutual Friend, W. H. Lincoln, and Mrs. Robinson. W. Smith was second with a fine plant of Erminilda nearly nine feet in diameter. Winners in other plant classes were Messrs. Winslade, Cowan, Harvey, and Anderson.

For a group of Chrysanthemum plants covering 150 square feet, Wm. Harvey was first, also for a group covering 100 square feet; for a group of decorative plants and bloom arranged for effect, John Shore was first with a tastily and well-executed arrangement, Gustave Amrhy being second. The last-named secured first for best Palm, showing Zamia horrida [which, however, is not a Palm at all.—Ed.] also best new and rare plant. W. Anderson had fine Ferns. John Shore six highly-colored Crotons, and R. Jenkins, gardener to Mrs. Sackett, Rye, three tubs for Cosmos. The six pots of pompon Chrysanthemums exhibited by Geo. Winslade were the gems of the show. The varieties were: Bob, Snowflake, Early Blush, Rosanthe, Maid of Kent, and Bouquet.

Violets and Roses.

These were well represented, the leading prize takers being Charles Wiese, gardener to Mr. Walter Law; J. Logan, gar-

dener to Whitelaw Reid; Martin Glendon, gardener to Charles Mallory, and John Marshall, gardener to Trainor L. Park.

The exhibit of hothouse grapes was superb and as an object lesson of what can be done with late varieties, was of the greatest value. The Gros Colmar from Wm. Anderson were grand, the berries were of great size, fine finish and color, and better still of surprisingly fine flavor. Geo. Winslade and W. Slack were also successful exhibitors in these classes. Martin Glendon staged a fine collection of vegetables; John Shore, fine celery; R. Jenkins, excellent cauliflowers.

Robert Williamson secured the prize for the largest and best bloom in the show with Mrs. H. Weeks, a grand bloom of immense size and character with excellent stem and foliage slightly hirsute, and from the appearance of this one bloom, a dangerous rival to the popular Mrs. H. Robinson.

Morristown, N. J. Flower Show.

The second annual exhibition of the Morris County (N. J.) Gardeners' and Florists' Society which was held here on November 8 and 4, was a decided improvement over the display of last year, which means that the quality was of a high order. The hall used this year gave more room and better light to the exhibits and assisted much to the good impression of a first-rate show.

The premier awards in the chrysanthemum classes were secured by Mr. Tilden (gardener M. McNulty), who had nicely finished specimens, very shapely. In the close competition for six white, he had excellent Queen, which stood up well, a feature that was lacking in most of the other entries in this class. In yellow this exhibitor had Bonaffon, and in the class for six varieties, twelve blooms, he led easily. Mr. G. Bird was the next in merit in this section. In the class for six blooms, any other color, Mr. G. E. Kissel (gardener H. L. Hand) won easily with superb specimens of Good Gracious. We do not recall having ever seen better blooms of this variety.

The display of roses was large and competition generally ran very close. E. Brant took a well-merited award for 24 American Beauty, in which he was the only exhibitor. There were five entries for 12 blooms of Beauty, and Mr. Tilden took the premier honors, with Elwood Brant and H. C. Holmes, respectively second and third, there being but little difference in merit.

There were seven entries of Bridesmaid and eight of Bride, for both of which Mr. Brant led in a hard fight, Mr. J. Ryan and Mr. Tilden also making good displays. Mr. Brant also staged in the class for six varieties, having some very fine Meteor.

In violets the display of the Whippany Violet Farm (D. H. Burnet, manager) was the best, and an extra arrangement of violets with smilax in an epergne, by the same, was most attractive; it was awarded a certificate of merit. Messrs. Duckham and Holmes were second and third for doubles, with Mr. Holmes the only exhibitor of singles and whites.

Groups of plants were a feature and

(Continued on next page.)

\$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO.,

Toledo, O.

Sold by Druggists, 75c.

W. & D's.

CELEBRATED SURE CROP.

MUSHROOM SPAWN.

8 LBS. FOR \$1.00.

Lilium Harrish, Roman Hyacinths, Freesias, Paper White Narcissus, Callas, Etc., Etc.

Special PRICES on application.

WEEBER & DON,

Seed Merchants and Growers.

114 Chambers St., N. Y. CITY.

Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and Dealers in Cut Flowers

50 West 30th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Commission. Best market prices guaranteed.

Mention American Gardening when you write.

4 FINE CHINESE PRIMROSE PLANTS.

1 PKT. CHOICE MIXED ASTER SEED.

All postpaid, 25 CENTS, 1 or 2 cent stamps taken.

FRED'K. A. TAYLOR, Canastota, N. Y.

Mention American Gardening when you write.

Business Cards.

O. D. Zimmermann, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

FOR SALE.

RASPBERRY and Strawberry plants. Chas. C. Nash, Three Rivers, Michigan.

MONARCH INCUBATOR for sale, or will exchange for B. F. Rocks, H. Spencer, Ross, ville, L. I.

SMALL, vigorous celery plants; thousand dollar Florida celery and tobacco lands for rent. Shanibarger, Orlando, Fla.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

CALIFORNIA PRIVET for Hedges. Fine, large plants, two years old, three dollars per hundred, cash with order. Reference: National Bank, Asbury Park. Atlantic Coast Nursery, James H. Cornell, Proprietor, 606 Fourth Ave., Asbury Park, N. J.

WANTED.

[Rates, etc., same as in "For Sale" column.]

WANTED to buy novelties in flower seeds and specially choice strains of florists' flower seeds, etc. to introduce in Australia. Give references when writing. Fred. C. Smith, Seedman, Angaston, So. Australia.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION as assistant gardener on gentleman's place; roses, carnations etc. under glass. Address Assistant Gardener, care of American Gardening, P. O. Box 1697, New York.

SITUATION wanted by young man, single, born Hollander, 15 years' experience abroad, 3 years' in this country; good hand in design work; best of reference. Address H. Brinkgreve, Brielle, N. J.

GARDENER, florist, single, 12 years' experience in all branches, best references from the leading nurseries in Europe and America, wishes position as private gardener, or as foreman in commercial place. N. J., care American Gardening.

WANTED, position as head Gardener, manager of private place; practically versed in all branches of horticulture and landscape work; accustomed to the management of help; 24 years experience; references. W. P. Herbet, care of American Gardening.

ESSEX 10c
Flower Food
makes House Plants thrive and bloom.
Use once in ten days the first month and once a month thereafter. The 10c. package will feed twelve plants one year. Full directions in every package.
ASK YOUR DEALER FOR IT.
Save the plants by using Essex Flower Food—then save the wrappers of the 10 cent package. For twelve of these wrappers we will mail a beautiful study of Jacqueminot Roses, by the celebrated artist Paul de Longpre. This picture has no advertising. If your dealer does not have the 10 cent package send eight 2c stamps to Russia Cement Co., Gloucester, Mass., and get full size package by return mail.
Mention American Gardening when you write.

Established 44 Years.
ARCHDEACON & CO.
Commission Dealers
100 Murray St., NEW YORK.
Fruits, Poultry, Game, Eggs,
&c., &c.
ALL KINDS OF PRODUCE TAKEN ON COMMISSION
NOT HOUSE FRUITS A SPECIALTY.
Mention American Gardening when you write.

A BARGAIN
We have made arrangements to furnish **THE OHIO FARMER** of Cleveland, O., and **AMERICAN GARDENING**, both papers, one year, making a total of 104 great papers, for only \$1.60. **ONLY \$1.60**

THE OHIO FARMER is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the **LEADER** of the Agricultural Press of America. A 20-page, 80-column paper **EVERY WEEK** in the year; employs **THE VERY BEST WRITERS** that money can produce; a strong, fearless defender of the agricultural interest of this country, and **CLEAN** in both reading and advertising columns. **IT HELPS MAKE THE FARM PAY.** **SAMPLE COPIES FREE.**
Present subscribers can order this combination at once and have their present term of subscription to **AMERICAN GARDENING** extended for one year. New subscribers to **THE OHIO FARMER** will receive the rest of this year free. Address all orders,
AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

HENS AND EGGS

Undoubtedly there are many readers of **AMERICAN GARDENING** who keep hens who do not take a poultry paper; possibly some take the wrong one. Gardening, fruit culture and poultry keeping dovetail together perfectly, each filling a season comparatively dull in the others.

Realizing the above facts, we have arranged with the publishers of **POULTRY MONTHLY**, to offer that journal in club with **AMERICAN GARDENING**, for the coming subscription season, both journals postpaid, one year, for the **SMALL SUM OF \$1.25.**

POULTRY MONTHLY Is now in its nineteenth year; it has always been recognized as the leading publication in its particular field. Sound and reliable in its teachings, and not the mouthpiece of cranks, cliques, or rings. Its correspondents are practical and successful men, in the harness to-day. The publishers of **AMERICAN GARDENING** recommend **Poultry Monthly** as being one of the very best poultry papers issued, and advise all interested to accept this Great Combination Offer.

A WONDERFUL OFFER!

American Gardening (Weekly), \$1.00 } Both \$1.25
Poultry Monthly, " " 1.00 } One Year, postpaid.

Present subscribers who are in arrears must pay up in full to become eligible to this offer.
Address **AMERICAN GARDENING, P. O. Box 1697, New York City.**

Oak-tanned leather Harness

Send your address with 2-cent stamp for Illustrated Catalogue, all kinds of Single and Double Custom-Made Harness, and direct to the customer at wholesale prices. **WE CAN SAVE YOU MONEY.**
KING HARNESS CO., No. 3 Church St., Oswego, N. Y.

Mention American Gardening when you write.



Mention American Gardening when you write.

DO YOU NEED WATCHING?

Or, to put it another way,
Do You Need a Watch?
We sell them, sell them at such an exceedingly low price that you can't afford to go watchless. Got 'em all sizes and styles. But we'll just mention two:

An **Eldon or Waltham Watch**, best movement made, hunting case, accurate time-keeper, handsomely engraved, **Bucher Case**, heavily gold-plated—last for all time. Ladies' or gentleman's size.

We'll send it to your address with privilege of examination. If it's not entirely as represented, send it back—costs you nothing. If you like it, pay the agent express charges and \$6.50. —That's fair. Or this—

A **Hunting Case Watch**—beautifully engraved case, first-class movement, any size, heavily plated (14k)—looks just like a \$40.00 gold watch—keeps as good time as any of them. Sent to your express agent with privilege of examination—same conditions as all our watches sent out—and if you like it, pay him \$8.45 and express charges.

If you take our word for it, and send money with order, a handsome chain goes with either, and express charges are paid by us, for the prices named above.

Royal Manufacturing Co.
334 Dearborn St., CHICAGO

Mention American Gardening when you write.

the chief honors in the competition went to Mr. Keiser, of Morris Plains Asylum. His arrangement of foliage plants was very tasteful, and Otaheite oranges were used with much skill to lighten the whole. The arrangement of chrysanthemums and foliage plants from the same exhibitor was also a worthy piece of work and contained some very fine blooms. Mr. Elliott, who was second for group of foliage plants, had a too crowded arrangement.

The non-competitive display of Mr. Duckham, gardener to D. Willis James, Esq., was grand; the chrysanthemums were each high-grade exhibition blooms, and the foliage plants used with consummate skill, were not only in fine condition, but embraced rarities, *Cocos Bonetti* acting as a fine center piece. Mr. Herrington, Florham Farms, Madison, did not compete, but added to the display by a collection of anthuriums, chrysanthemums of much merit, including the single Daisy, and other objects.

There was a small showing of orchids in which Mr. Duckham was placed first, with *Lager & Hurrell*, Summit, N. J. second. Mr. Duckham had the greater number of plants, chiefly *Cattleya labiata*. In the other lot a belated *Cattleya Medallii* was seen in good form, also *Lilia praeastans* and *Oncidium varicosum*.

Some excellent vegetables were shown and in good quantity, the tasteful arrangement of the collections being very pleasing. Mr. James was first here with Mr. McMullen (gdr. for Mrs. Stone), second. Celery was good from Mr. Munroe and apples from Mr. Kiesel.

In conclusion we must compliment the committee on its management; the staging was done to time, the judges got to work at once, and the awards were placarded on the exhibits just as soon as the decision was made—no delay, no hitch—and when the public entered everything was ready for the inspection. What one society can do another can also—with the right men and the A. T. De La Mare exhibition stationery.

Poughkeepsie, N. Y. Flower Show.

The Dutchess County (N. Y.) Horticultural Society held its annual chrysanthemum show in the Armory, November 3, 4, 5. Taken as a whole, this season's show was fully equal, and in some points superior, to previous ones. Chrysanthemum blooms were more abundant than last year; the general average of the flowers was excellent, many of them being of great size. This was especially noticeable with the varieties Mrs. Henry Robinson Vivland-Morel, Mutual Friend, and Mrs. Peabody.

One great incentive to such a good showing of fine blooms was the number of special awards offered, and it was in such classes that the best kinds were staged.

One of the keenest contests of the day was for the Henderson prize calling for 12 white. I. L. Powell exhibited Mrs. Robinson, and A. Herrington, Frank Hardy. The latter were fine and showed up well on their great stems and heavy foliage. On the other hand, Mr. Powell's Mrs. Robinson were heavier and more uniform.

Cut blooms on boards is always a feature here, and this season they were more generally used. The Butterfield prize for 24 blooms brought out six exhibitors, and it was in this class that the best flowers were found. Mr. Blair may be rightfully complimented upon his winning 24.

Violets, naturally, are one of the leading features at Poughkeepsie, and this year exhibitors were encouraged by some very liberal special prizes in addition to the Society's cup and awards. But owing to the earliness of the season and the Violet crop being late the display was smaller than heretofore, and there was a slight falling off in quality.

Thomas Emerson, gardener to the estate of W. B. Dinsmore, Esq., made a circular group of Orchids, producing a handsome effect. The centerpiece was a grand plant of *Cattleya Bowringiana*, bearing seven spikes. There were also 12 plants of *C. labiata*, all special types and very fine. *C. maxima Backhouseana*,

with eleven flowers, was also a conspicuous plant.

In the class calling for a group of Chrysanthemum plants, 100 square feet, U. G. Agar, gardener to Fred Vanderbilt, Esq., was the only exhibitor, and it is questionable whether a better group of single-stem plants has ever been seen.

W. C. Russell, gardener to C. F. Dietrich, Esq., Millbrook, secured first prize for best bush plant, with Ivory, and the Allen prize with a monster plant of Puritan. Jas. Maharg, assistant to the above, secured the premier award in his class with a magnificent plant of W. H. Lincoln. Mr. Russell also put up six grand plants grown to single stem; his varieties were Mrs. Robinson, Mrs. G. Peabody, Vivand-Morel, Mutual Friend, and Philadelphia.

In cut blooms for best 12 white there were three competitors. A. Herrington was first with Mayflower; W. C. Russell, second with Mrs. Robinson.

For twelve yellow, A. Herrington was first with extra fine Miss Georgienne Bramhall.

In class for twelve pink there were also three competitors. W. C. Russell was first with Vivand-Morel of superb color, Mr. Herrington being second with blooms of greater size and stem, but lacking the color and freshness of the former.

For twelve crimson the first prize went to U. G. Agar, with G. W. Childs.

For twenty-five blooms to a vase arranged for effect with other foliage, open to private gardeners, there were four in competition. Richard Grigg was first with a fine blending of Japan maples and mixed yellow varieties. In the same class, open to all, the prize went to R. Grigg, gardener to Charles De Rham, Esq., Cold Spring, N. Y., with the same kind of foliage and white flowers.

The Sherman prize for twelve blooms on boards brought out six competitors and developed the keenest and best competition of the show. Mr. Blair captured the award with heavy, well-finished, high-colored blooms, his two weakest being Robert Bottomly and Mrs. G. Magee. His other kinds were Mrs. G. Pullman, Vivand-Morel, Miss C. H. Bates, Mrs. Robinson, Mrs. James W. Withers, Miss Florence Pullman, Minerva, Philadelphia, Lady Playfair, and Major Bonaffon. Mr. Blair also secured the Butterfield prize for twenty-four blooms with a grand lot, in this set was a bloom of Mrs. Peabody ten inches in diameter.

The Mitchell prize for twelve pink went to Mr. Russell.

For six yellow, first went to Hamilton Scott, Millbrook; second, to A. Herrington. Bonaffon was the variety exhibited.

For six white, first to A. Herrington with Frank Hardy; second to W. Turner.

For best 100 violets, first, Stanton Rockefeller, Rhinebeck; second, F. R. Newbold; third, J. W. Feeter, Highland, N. Y.

The Society's silver cup for the best 250 blooms went to C. F. Bahret, Poughkeepsie.

For the Plenty prize, \$25, for the best 100 blooms, there were eight entries, Stanton Rockefeller being the successful competitor. For best 100 singles Paul Gindra was first. Sloan Bros. staged blooms for exhibition only, which were very fine. G. Saltford, Rhinebeck, exhibited the pink Violet, Mrs. J. J. Astor.

In Carnation classes the first prize for 25 white, went to W. Turner, with heavy blooms of Flora Hill; second to G. Crawshaw, Newburgh; for 25 pink, first to Owen G. Owen, Monroe, with Triumph; second to G. Crawshaw. For 25 scarlet, Mr. Owen was again first with a grand lot of Jubilee. This exhibitor was also first for the best 12 white and 12 scarlet. Herman Asher was first for 12 pink. W. Turner secured the first for a collection of Roses, and Thos. Harrison captured the Mills prize for the best 12 Beauty.

The Mitchell Heater Co., Poughkeepsie, had at the rear of the hall sections of their greenhouse construction.

Our publishers will supply any book wanted. Send your orders.

The Poultry Yard.

The Brown Leghorn.

Pre-eminent among the breeds for laying qualities stands the Brown Leghorn, according to the great majority of fair-minded and disinterested witnesses. For beauty of plumage, for plumpness of carcass, for quick maturity, there is scarcely another in the whole list to equal it; perhaps there is not one that would dare to challenge it on all these points combined. The one thing it lacks is size, and it is scarcely fair to call this a lack, since the breed does not need it in order to fill—and fill well, its true place in the poultry-raising world.

It is because the thoroughbred is able to transmit its good qualities as the mongrel is not that it forms such a valuable portion of our poultry as a whole. And it is because feather and shape are the clearest and most prominent sign which we can have that any particular bird has received and is likely to be able to transmit the breed characteristics, that they are so important. For this reason it behooves every breeder to study them, whether he desire to deal in fancy poultry or not. This, of course, applies to all breeds, in common with the Leghorn.

Shape is considered so important a matter with the Leghorn, that the standard of perfection allows it 27 of the 100 points which go to make up a perfect specimen of the breed. Color of feathers, which some critics rave so fiercely against, receives no more points than shape. There is no weight requirement, and this fact has kept the breed small in size, though many of the judges exercise their own discretion, and give the prizes to the larger specimens, other things being equal.

Disqualifications are little understood, perhaps, by any but the breeders of fancy stock. They are defects showing the specimen to be so at variance with breed requirements as to be considered unfit to appear in a class devoted to the breed in competitive exhibit. These inexcusable defects in the Brown Leghorn are: feathers, or even down on the shanks or feet, twisted or falling combs (in the males), or twisted or crooked tails or backs, legs not a good yellow in color, white in the face, or in the plumage (with very slight exceptions). In rose-combed birds, the lack of a spike at the back of the comb disqualifies the bird.

The best way to get a good idea of the shape of a standard Leghorn is to study a good bird over and over again until the eye carries her picture and can decide instantly whether another bird has the same conformation. A good cut is better in some respects, as it gives the ideal form; but, inasmuch as one sees only a flat surface and no motion, a picture can give only a partial idea after all. It is almost impossible for a picture to give the pert carriage of a good Leghorn, the delightful knowingness of the way she cocks her head, the smooth chunkiness of her body, etc. But good cuts will show the pure whiteface and lobes, the required shape of wattles, bill, comb, the curve in back, and the proper fold of the wing.

The color varies much between the male and female. There must be a black stripe, running to a clean point, in the neck, or hackle feathers of both, but in the cock the ground color of hackle is red, or orange-red, while in the hens it is golden. The breast of the cock is black, that of the female salmon-brown. In the female there are a dozen different color divisions, and it seems almost a marvel that any birds can be produced which shall approach near to perfection in all. It is not possible to breed exhibition birds without having the standard for reference, and in connection with this, one needs sometimes to know just how certain judges interpret the standard.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

A Rare Plant *Oycas Circinalis*

Stem 36 ins. tall, 9 ins. in diameter, 55 leaves over 6 ft. long. A grand specimen; price on application. Send for wholesale list of palms. W. J. Heaser, Prop. Palm Gardens, Plattsmouth, Neb. Mention American Gardening when you write.

INOUBATORS Self-regulating Catalogue free G. S. SINGER, Cardington, O. Mention American Gardening when you write

\$5 Hand Bone, Shell, and Corn Mills for Poultrymen. Daisy Bone Cutter, Power Mills. Circular and testimonials free. WILSON BROS., Easton, Pa.

Mention American Gardening when you write.

HATCH Chickens BY STEAM With the MODEL EXCELSIOR Incubator. Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class Hatcher made. GEO. H. STAHL, 114 to 122 S. 6th St. Quincy, Ill.

Mention American Gardening when you write.

LIFE PRODUCERS THE SUCCESSFUL INCUBATOR. **LIFE PRESERVERS** THE SUCCESSFUL BROODERS. All about them in our 128 page Catalogue. Sent for 6c. worth a 2. DES MOINES INCUBATOR CO., Box 52 DES MOINES, IA. Mention American Gardening when you write.

A GOLD DOLLAR is about the actual worth of our new book on Incubation and Poultry. Contains a full and complete description of the Reliable Incubator & the Brooder of same name, together with full and complete instructions for building poultry houses and much of interest and great value to the poultryman. Sent on receipt of 10c. **RELIABLE INCUBATOR & BROODER CO., BUNTSVILLE, ILL.** Mention American Gardening when you write.

A Poultry Encyclopedia.

THE POULTRY KEEPER, edited by P. H. Jacobs, one of the best informed men of the age on poultry subjects, and who is aptly termed a walking poultry dictionary, has published four large pamphlets, covering every subject connected with the feathered tribe, which it entitles ILLUSTRATORS Nos. 1, 2, 3 and 4. The series constitute a veritable "POULTRY ENCYCLOPEDIA," covering the ground so completely that by the aid of the "Four Illustrators," and the regular monthly visits of the "POULTRY KEEPER," the reader can glean all the information necessary to become a successful poultry raiser.

You could not get any similar series in the whole world, even for \$50 each, for they do not exist. Were they given in regular book form with elaborate binding and colored cuts you would think them easily worth \$5 each, but what is wanted is not elegant printing, so much as valuable information that you can make use of. They have cost much in labor and cash, but we offer the set for almost nothing. A partial list of the subjects treated is as follows:

ILLUSTRATOR No. 1.—Poultry Houses, Incubators, Brooders, Coops, etc. 25 cents.

ILLUSTRATOR No. 2.—Artificial Incubation, Raising Chicks, Testing Eggs, etc. 25 cents.

ILLUSTRATOR No. 3.—Poultry Diseases, Lice, Gapes, Moulting, Egg Eating, etc. 25 cents.

ILLUSTRATOR No. 4.—Judging Fowls, Description of Breeds, Mating, etc. 25 cents.

\$1.50 Buys All This: \$1.50

For \$1.50 we will send American Gardening, (weekly) one year, The Poultry Keeper (monthly) one year, and the Four Illustrators, as above.

ORDER NOW.

AMERICAN GARDENING, P. O. Box New York.

Henry Strawberry Plant Premiums

Will be shipped to all who desire them this season until ground freezes.

Owing to the wonderful run on this unequaled Strawberry we are preparing 100,000 Henry plants for Spring delivery, and in this connection we desire our readers to remember

Two Facts

1—The Henry Strawberry can be obtained solely through a subscription to AMERICAN GARDENING; as the publishers will not sell plants under any consideration;

2—Neither will Mr. Jerolaman.

Who is Entitled to Plants

New and Renewal Subscribers.—Five plants of the Henry will be mailed, postpaid, as a premium to every Renewal or New Subscriber sending us \$1.00 for a year's subscription. When remitting be sure to state if you want this premium.

To Agents and Workers.—For every \$1.00 received from agents and others for New Subscriptions, we mail, postpaid, Ten Henry plants, Five to the New Subscriber and Five to the Agent.

Special to Club Raisers!

Clubs of Ten.—To every agent sending us in a club of Ten New Names and \$10.00, we will forward in payment therefor One Hundred (100) Henry Strawberry Plants, by express, as well as send Five plants, postpaid, to each person in the club.

Mr. Jerolaman's series of articles has been put in pamphlet form; and agents will be supplied with copies on application. Best campaign matter out.

Address Your Letters,

AMERICAN GARDENING,

P. O. Box 1697, NEW YORK.

WHOLESALE MARKET REPORT.

New York.

In the cut flower market the demand has in no way caught up with the supply, and the result is a glut, with prices in the buyer's favor.

Chrysanthemums are excellent in quality, but realize little money. Good blooms only command 8c. to 12c. each, and the highest notch for specials is but 25c. In lower grades the price varies from \$1 to \$8 per 100, and among these are often excellent flowers.

Roses remain about the same—\$8 per 100 for No. 1 grade of general kinds is considered quite a fancy figure. Prices below that vary from 50c. to \$2 per 100, the highest for special Beauty being only 25c., but the majority fails to approach anything like that figure.

Extra Carnations are considered well sold if they reach \$1 per 100; more realize only 75c. Lilies bring \$1.50 per dozen; white Orchids 40c. each. Valley varies from \$1 to \$4 per 100. Fruits and vegetables show an improvement and the market gets cleared at some price or other.

American-grown hothouse grapes are not in demand at any price; occasional sales are made at 40c. per pound. European grapes are doing better than this and realize 75c. to \$1 per pound.

Cucumbers are selling briskly at 80c. to \$1 per dozen.

Mushrooms are over plentiful and the best only make 40c. per pound.

Tomatoes move freely at 20c. per pound, but will not make any higher figure.

Domestic grapes are moving much better than they were a year ago, and although prices as yet are not high. Delaware, Keuka, per small basket, 10@15c.; other state, per small basket, 7@12c.; Niagara, western N. Y., per small basket, 7@12c.; Catawba, western N. Y., per small basket, 7@8c.; Concord, western N. Y., per large basket, 10@12c.; western N. Y., per small basket, 7@8c.; inferior stock, small baskets, 4@6c.; white kinds, in trays, per 100 pounds, \$1@1.35; Catawba, in trays, per 100 pounds, \$1@1.10; Delaware, in trays, per 100 pounds, \$1@1.75; black kinds, in trays, per 100 pounds, \$1@1.35; very inferior, per 100 pounds, 50@75c.

Oranges—Florida, fair to choice, per box, \$3@4; grape fruit, bright, per box, \$5@7.

Nuts—Northern chestnuts continue scarce and firm; sales in range of \$5.50 @7 as to size and condition, southern quoted \$3.50@4.50. Hickory nuts firm at \$1.25@1.37, possibly fancy lots might reach \$1.50. Bull nuts quiet at 75c. per bushel.

Apples are doing well; pears and quinces are in slow demand.

Present quotations on apples are: Jonathan, western, good to fancy, \$3.50 @5; Albermarle Pippin, Va., poor to fair, \$1.50@2.50; good to fancy, \$4@5.50; Wine Sap, Va., poor to fair, \$1.50 @2.50; good to fancy, \$3.50@4; Johnson's Winter, Va., poor to fair, \$1.50@2.50; good to fancy, \$3.50@4; Snow, state, poor to fair, \$2@2.50; good to fancy, \$3.50@4; King, state, poor to fair, \$1.50@2; good to fancy, \$2.50 @3.50; Ben Davis, western, good to fancy, \$2.50@3.25; Ben Davis, Va., poor to fair, \$1.50@2; good to fancy, \$2.50@3; Greening, state, poor to fair, \$1.50@2; good to fancy, \$2.50@3.25; Baldwin, state, poor to fair, \$1.25@2; good to fancy, \$2.25@2.75; N. Spy, state, poor to fair, \$1.50@2; good to fancy \$2.50@3.50; mixed lots, poor to fair, \$1@1.75; open heads, poor to fair, \$1@1.50.

Pears realize as follows: Seckel, per barrel, \$3@6; per bushel box, \$1.25@2.50; per keg, \$1.50@2.75; Beurré Bosc, per barrel, \$2@3.50; Keiffer, Jersey, per barrel, \$1.75@2.75; up-river, per barrel, \$1.50@2.25; Lawrence, per barrel, \$1.25@2; Beurré d'Anjou, per barrel, \$1.25@2; Vicar, per barrel, \$1@1.50.

Quinces—Apple, good to fancy, per

barrel, \$2.50@3.50; poor to fair, \$1@2. Potatoes from all appearances will realize a good price later; the prospects are that there are but few now to come in from the country.

Cauliflowers—Good to prime, per barrel, \$1@1.25; poor to fair, per barrel, \$@75c.

Celery—Choice to fancy, large, per dozen, 25@30c.; fair to prime, per dozen, 12@20c.; small and poor, per dozen, 8@10c.

Cabbages—Red, per barrel, 90c.; Jersey and Long Island, per 100, \$3@4; state, per 100, \$2.50@3.50.

Cucumbers—Florida, per crate, \$1.50@2.50.

Egg plants—Florida, per one-half barrel box, \$2.50@3.

Green peas—Virginia, per one-half barrel basket, \$1@2.

Onions—Orange Co., red, prime, per bag, \$1.75@2.25; Orange Co., yellow, per bag, \$1.50@1.75; Orange Co., white, per bag, \$1.50@3; Orange Co., inferior, per bag, 75c.@\$1.25; state and western, yellow, per barrel, \$1@1.75; eastern, white, per barrel, \$2@5; eastern, red, per barrel, \$2.25@2.50; eastern, yellow, per barrel, \$2.

String beans—Va., green, one-half barrel basket, 15@40c.; Va., wax, per one-half barrel basket, 15@40c.; Charleston wax, prime, bushel basket, 50c.@\$1.25; Charleston, green, per bushel basket, 40@65c.; Charleston and North Carolina, prime, per bushel basket, 15@30c.

Squash—Hubbard, per barrel, \$1@1.25; Marrow, per barrel, 75c.@\$1.

Turnips—Russian Canada, car lots, per barrel, 50@75c.

Boston.

Since last week there is very little change to be reported in the market on vegetables.

Michigan hard-shelled Hubbard squash is \$17@20 a ton; Minnesota stock mixed soft and hard-shelled, bringing \$12 @17 a ton. Near-by farmers are still supplying certain customers each morning with choice Marrow at about \$1 a barrel, giving them Bay State or Turbans at \$1.25 a barrel.

Choice onions are steady at \$2 per barrel; Spanish onions \$1.50 per crate of 50 pounds.

Light demand for shell beans; 50c.@ \$1.25 a bushel; string beans in fair demand, 50c.@\$1 a basket; white French turnips, 75c.@\$1 a barrel; yellow, 75c@80c., white flats, 75c.@\$1.

Mint 40c. a bushel; parsley 50c., radishes 28c. a dozen, spinach 25c. a bushel, parsnips 75c., carrots 75c., beets 50c.

Florida oranges 150-176 count bring \$4@5, according to count. Grape fruit \$6@8 according to count and quality.

Cauliflower steady, fancy 10@15c. a head. No better demand can be reported on cabbage, as the market is overstocked; it is selling at \$3c. a head.

The feeling on hothouse cucumbers is a little firmer, although the price is same as last week, \$6@8 a hundred; fancy assorted little more.

Hothouse lettuce in very good demand at 25@40c.

Mushroom demand very dull; price took a drop from 75c. to 30@50c. a pound, market fairly well supplied.

Market on hothouse tomatoes firmer, selling 20@25c. a pound.

Hothouse grapes 25@50c. a pound.

Potato market easier if anything; Green Mountain bringing 75c. a bushel; Hebrons 75@80c.; sweet potatoes are off from the boom of last week, selling \$1.75@2 a barrel.

Seckel pears are about out of the market; good stock \$3@4; Duchess \$1.50@1.75; if very fancy \$2; Beurré Bosc, \$2.50@4; Beurré Clairgeau, \$2@2.50; very choice stock \$3.

Cranberries no firmer than last week, selling crates \$1.75; barrels, \$4@5.

Home-grown quince \$1.50 a bushel; some choice stock little more.

Boston Market celery selling \$1.25@

.50 a dozen. German celery or celery roots selling at 75c. a dozen. Brussels sprouts 10@15c. a quart.
Apple market very firm; fancy red eating apples \$2.75@3.50; Greenings and Baldwin's \$2.50@2.75. Some very fancy Irvanstein apples sold at \$5.50 a barrel.
Large basket Concord 12c., Niagaras 2c., Salems and Catawbas 13@14c.; same varieties in small baskets 8@10c.
Chestnuts \$6.50@7 a bushel; shell harks \$1.50 a bushel.

Your journal is a wonder in price considering the size and general get-up and value of its reading matter.—F. C. S., Calumba, Angaston, So. Aus.

Nitrate of Soda

is the best and cheapest form in which you can buy nitrogen (or ammonia). It is also the most soluble and available form in which nitrogen can be applied as food for plants. You can mix it yourself with other materials in just the correct proportion for the particular crop to which you wish to apply it. You cannot raise good crops without nitrogen in some form. Why not use the best—Nitrate?

Free A 40-page book, "Food for Plants." Tells all about mixing and using fertilizers. Please ask for it.

S. M. HARRIS, MORETON FARM (P. O.) N. Y.
Mention American Gardening when you write.

SOME BARGAINS IN CLUBS FOR Men, Women and the Young.

- Ohio Farmer**, a giant among the agricultural weeklies, and American Gardening. The two, one year, For \$1.60.
- Farm, Field and Fireside**, a 32 to 40 page weekly Farm and Family Journal, the best of its class, and American Gardening. The two, one year, For \$1.50.
- Country Gentleman**. This weekly amply covers the field its title indicates. Every country gentleman should subscribe to it. And American Gardening. The two, one year, For \$2.75.
- Farm Journal**, the "little giant" of monthly journalism in matters agricultural, and American Gardening. The two, one year, For \$1.25.
- Farm Poultry** (semi-monthly), and American Gardening. The two, one year, For \$1.50.
- Poultry Monthly** and American Gardening. The two, one year, For \$1.25.
- Above is your choice of two most excellent poultry magazines. And nearly every one of our readers keeps poultry. Why not subscribe to both? The two poultry papers and American Gardening, one year, For \$2.25.
- Meehan's Monthly**, a horticultural stand-by, and American Gardening. The two, one year, For \$2.85.
- Harper's Magazine**, as good as ever; none better among the literary monthlies, and American Gardening. The two, one year, For \$4.25.
- Ladies' Home Journal**, an unrivaled monthly for women, the standard in its class, and American Gardening. The two, one year, For \$1.90.
- Youth's Companion**, of Boston. At the head of all journals for both boys and girls, and read by the elders, too. New Subscribers Only and American Gardening. The two, one year, For \$2.85.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.		General—Con.	
	A. B.		A. B.
American Agriculturist.....	\$1 00 \$1 85	Donahoe's Magazine.....	\$3 00 \$3 60
Broeders' Gazette.....	2 00 2 40	Eclectic Magazine.....	5 00 5 25
Country Gentleman.....	2 00 2 75	Electrical Review.....	3 00 3 20
Farmers' Advocate (Canada).....	1 00 1 75	Engineering Magazine.....	3 00 4 00
Farmers' Magazine.....	1 00 1 75	Forest and Stream (new only).....	4 00 4 20
Farmers' Review.....	1 00 1 90	Forum, The.....	3 00 3 60
Farm, Field and Fireside.....	1 00 1 50	Frank Harrison's Magazine.....	50 1 40
Farm and Fireside.....	50 1 40	Frank Leslie's Popular Monthly.....	3 00 3 50
Farm and Home.....	50 1 40	Godey's Magazine.....	1 00 1 90
Farm Journal.....	50 1 25	Golden Days.....	3 00 3 35
Farm News.....	50 1 20	Good Housekeeping.....	2 00 2 70
Gleanings in Bee Culture.....	1 00 1 85	Harper's Bazaar.....	4 00 4 25
Home and Farm.....	50 1 45	Harper's Magazine.....	4 00 4 25
Indiana Farmer.....	1 00 1 85	Harper's Weekly.....	4 00 4 25
Mass. Ploughman, new.....	2 00 2 60	Harper's Round Table.....	2 00 2 50
Renewals.....	2 00 2 90	Home Queen.....	50 1 35
Michigan Farmer.....	1 00 1 60	Illustrated American.....	4 00 4 30
National Stockman and Farmer.....	1 00 1 85	Independent.....	3 00 3 60
Nebraska Farmer.....	1 25 1 85	Jenness Miller's Illus. Mag.....	1 00 1 75
New England Farmer.....	2 00 2 50	Judge.....	5 00 5 20
Ohio Farmer.....	1 00 1 60	Judge's Library.....	1 00 1 85
Orange Judd Farmer.....	1 00 1 85	Ladies' Home Journal, The.....	1 00 1 90
Pacific Rural Press.....	2 40 3 00	Ladies' Home Companion.....	50 1 45
Practical Dairyman.....	50 1 85	Ladies' World.....	35 1 30
Practical Farmer.....	1 00 1 85	Leslie's Illustrated.....	4 00 4 40
Prairie Farmer.....	1 00 1 85	Life.....	5 00 5 40
Rural New Yorker.....	1 00 1 80	Lippincott's.....	3 00 3 25
Southern Cultivator.....	1 00 1 85	Macmillan's.....	3 00 3 60
Southern Farm.....	1 00 1 85	McClure's Magazine.....	1 00 1 90
Southern Florist and Gardener.....	1 00 1 75	Munsey's Magazine.....	1 00 1 90
Strawberry Culturist.....	50 1 85	Nation, The.....	3 00 3 80
Strawberry Specialist, new.....	50 1 00	New England Magazine.....	3 00 3 50
Renewals.....	50 1 25	New York Ledger.....	2 00 2 50
Texas Farmer.....	1 00 1 75	" " Tribune (Weekly).....	1 00 1 90
Texas Farm and Ranch.....	1 00 1 85	" " World (Tri-Weekly).....	1 00 1 75
Horticultural, etc.		North American Review, The.....	5 00 5 50
Canadian Horticulturist.....	1 00 1 90	Notes and Queries.....	5 00 5 50
Garden and Forest.....	4 00 4 25	Observer, new only.....	3 00 3 25
Gardening (Chicago).....	2 00 2 50	Renewal.....	3 00 4 00
Meehan's Monthly.....	2 00 2 85	Outing.....	3 00 3 35
Vicks.....	50 1 85	Park and Cemetery.....	1 00 1 85
Poultry.		Peterson's Magazine.....	1 00 1 85
American Poultry Advocate.....	25 1 15	Philadelphia Press (Weekly).....	1 00 1 85
Fancier's Review.....	50 1 85	Phrenological Journal.....	1 50 2 25
Farm Poultry.....	1 00 1 50	Popular Science Monthly.....	5 00 5 65
Ohio Poultry Journal.....	65 1 50	Popular Science News.....	1 60 2 50
Poultry Herald.....	50 1 40	Puck.....	5 00 5 10
Poultry Keeper.....	50 1 35	Puck's Library.....	1 20 1 95
Poultry Monthly.....	1 00 1 25	Puritan.....	1 00 1 90
Reliable Poultry Journal.....	50 1 40	Review of Reviews.....	2 50 3 25
General.		Scientific American.....	3 00 3 60
Advance (Cong'l) new.....	2 00 2 60	" " Supplement.....	5 00 5 25
Renewals.....	2 00 2 90	" " with ".....	7 00 7 25
American Field, new.....	4 00 4 25	" " Builders' edition.....	2 50 3 10
Renewals.....	4 00 4 50	" " Inc. B'l'ds' edit.....	5 00 5 75
American Kitchen Magazine.....	1 00 1 75	" " All 3 editions.....	9 00 9 25
American Machinist.....	3 00 3 20	Scribner's.....	3 00 3 60
Aquarium.....	1 00 1 75	St. Nicholas.....	3 00 3 60
Arena.....	3 00 3 60	Sunday School Times.....	1 50 2 10
Art Amateur.....	4 00 4 35	Texas Sittings.....	4 00 4 25
Art Interchange (with plates).....	4 00 4 35	The Etude, new only.....	1 50 2 15
Atlantic Monthly.....	4 00 4 30	Renewals.....	1 50 2 35
Ave Maria.....	3 00 3 70	The Outlook.....	3 00 3 85
Babyhood.....	1 00 1 90	Toledo Blade.....	1 00 1 85
Baptist Missionary Magazine.....	1 00 1 90	Turf, Field and Farm, new.....	4 00 4 25
Carpentry and Building.....	1 00 1 85	Renewal.....	4 00 4 60
Century.....	4 00 4 60	Womankind.....	50 1 20
Chicago Herald (Weekly).....	1 50 2 35	Young Ladies' Journal.....	4 00 4 60
Chicago Inter-Ocean.....	1 00 1 80	Youth's Companion, new only.....	1 75 2 35
Chicago Weekly Times.....	50 1 40	Renewals.....	1 75 2 75
Christian Herald.....	1 50 2 15	Foreign.	
Christian Register.....	3 00 3 85	Farm and Home.....	2 25 3 25
Churchman.....	3 50 4 10	Field.....	10 50 11 00
Colman's Rural World.....	1 00 1 85	Garden.....	4 50 5 25
Cosmopolitan.....	1 00 1 90	Garden Work.....	2 50 3 25
Delineator (Butterick's).....	1 00 1 90	Gardener's Chronicle.....	4 50 5 25
Demorest's Monthly Magazine.....	2 00 2 60	Gardener's Magazine.....	4 50 5 25
Detroit Free Press (Weekly).....	1 00 1 90	Gardening, Illustrated.....	2 25 3 00
Domestic Monthly.....	1 50 2 15	Gardening World.....	2 50 3 25
Address all Orders to		Journal of Botany.....	4 75 5 25
AMERICAN GARDENING, P. O. Box 1097, New York.		Journal of Horticulture.....	4 00 4 35
		Kew Gardens Bulletin.....	1 50 2 25
		Revue Horticole.....	5 50 6 10

Success

Engenders

Success!

Take our Advice:

Advertise

in the only

Successful

Weekly

Horticultural

Newspaper

Published

American Gardening

Subscribe

to a

Newspaper

which will make you

Successful

in your

Life's

Pursuit

American Gardening

1840 OLD COLONY NURSERIES. 1897

Hardy Shrubs, Trees, Vines, Evergreens and Perennials.

A large and fine stock of well-rooted plants, grown in a sandy loam. Good plants, best sizes for planting; very cheap. Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.

Mention American Gardening when you write.

We are ready to fill your order for

PEACH TREES

Guaranteed free from Yellowed, Bacteria, etc. Jose Scale. State Inspectors certificate with each order. All standard varieties including Elberta, Emma, and Triumph. Also Peach Plum, Apple, and other Trees and small Fruit plants. Catalogue on application.

CHAS. WRIGHT, Sanford, Del.

Mention American Gardening when you write.

We PAY FREIGHT 80% and Pack free. PAPER line all boxes. REPLACE free. Give BUYER'S choice low WHOLESALE prices orders large or small; 10 trees at 100 rate, 300 at 1000 rate. Guarantee SAFE ARRIVAL, trees TRUE to name, FREE from SAN JOSE scale, and of BEST quality. Guarantee SATISFACTION.—WRITE for lists, photos and FULL particulars of foregoing Stark 12 CHALLENGE Points. STARK BROS., Louisiana, Mo., Stark, Mo., Redport, N. J., Summerville, N. C.

Mention American Gardening when you write.

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All our pots from 7 in. and upwards have our Patent Bottom, which is a great advantage, as it ensures perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

GLASS FOR GREENHOUSES, GRAP-ERIES, CONSERVATORIES, HOTHOUSES AND HOTBEDS. GLASS

VANHORNE, CRIFFEN & CO.,
Importers of French Glass. 40 to 48 VESTRY STREET, COR. GREENWICH ST. NEW YORK.

Mention American Gardening when you write.

LORD & BURNHAM CO.,

Horticultural Architects and Builders Steam and Hot Water Heating Engineers.

(Established 1856.)

Estimates furnished on application for Greenhouses, Conservatories, and all kinds of structures erected complete with our patent iron construction; or for material only.



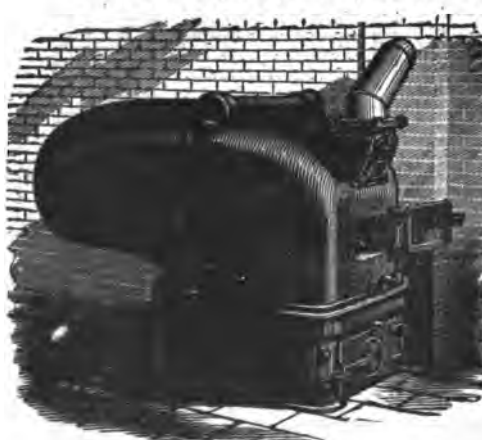
Largest Builders of Greenhouse Structures. Plans and construction embrace latest improvements. Six highest awards at the World's Fair. Send four cents postage to New York office for latest catalogue.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

GREENHOUSE HEATING AND VENTILATING, Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

**FIVE PATTERNS OF BOILERS
NINETEEN SIZES**

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

Iron Frame Benches with the "Perfect Drainage Bench Tile" or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.
Mention American Gardening when you write.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. NO. 152.
COMBINED SERIES VOL. LI.

NEW YORK, NOVEMBER 20, 1897

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Apple trees, young.....	793	Chicken Manure.....	791	Jasmine not Growing...	792	Pinks not Flowering.....	793	American.....	793
Apples, dwarf, grow- ing.....	793	Coming Events.....	794	Land Plaster and Am- monia.....	791	Plum Burbank.....	793	Vegetable Garden.....	791
Bees Keeper, the.....	796	Discussion Club.....	794	Liquid Manure, Use of..	791	Poultry Yard, The.....	796	Window Garden, The..	790
Berry Plants, Winter- ing.....	792	Flower Shows, Reports of.....	797-801	Manure, Economizing..	791	Private Gardeners.....	797		
Berries, Fertilizers for..	792	Fruit Garden.....	793	Manuring Fruit Trees..	793	Question Box, The.....	795	Illustrations.	
Blackberry Plants from Root Cuttings.....	791	Fruit Notes at Ameri- can Institute.....	790	Market Reports.....	802	Soda Nitrate and Chry- santhemums.....	790	Bees for Fertilizing Tomatoes.....	793
Celery, Early, Bolting..	792	Greenhouse Heating... 793		Narcissal, Pot Culture of..	790	Small Fruits, Propaga- ting.....	792	Blackberries, Root Cut- tings of.....	791
				Peach, the, Protecting..	794	Tomatoes, English and		Flower Show, a Typical	789
				Peppermint as a Crop..	792				



FIG. 219.—A SEASONABLE REPRESENTATION.

In the midst of the rush of Chrysanthemum exhibitions it is not inappropriate to present a view of that recently held at Morristown, N. J. It is fairly representative of many others and the fact of its not being large makes it more suitable for our purpose.

On the first table to the left are specimens of Major Bonnafon and Philadelphia. The left end vase on the next table are the fine Good Gracious with Evangeline to the front and right. A collection of Orchids is seen on the other end and another on the next table. The central group on the side is that of Mr. D. Willis James. Vases of American Beauty Roses are prominent on the near tables.

Some Fruit Comments From the American Institute.

The apples in a very fine exhibit from Allen Co., Kansas, Horticultural Society were not as large or as well colored as some others shown, but were without blemish, and with a clear skin that looked like wax.

Mrs. W. R. Stuart, Ocean Springs, Miss., sent in several varieties of pecans, some of very large size and thin-shelled, with large sweet meats which separated easily from the shell; some were exceptionally fine. Mr. P. J. Berckmans, of Georgia, had a very fine exhibit of fruit, more especially Kieffer pears, persimmons, and pomegranates. The Kieffer pears attracted a great deal of attention and were from two to three times as large as those grown in the North.

A large pineapple plant in fruit was sent from Orlando, Fla., and attracted much attention.

Some very fine apples were shown from western North Carolina and were a revelation to many, as it was thought that good apples could not be grown so far south; they were grown at from 3,000 to 4,000 feet elevation. Most of the varieties were not known in the North to any great extent.

Bradford Co. Horticultural Society of Virginia, also Mrs. J. J. Miller, Washington, Va., and Geo. C. Morrell, Coleman's Falls, Va., sent in exhibits of very fine apples, some varieties being better grown than in the North. Newtown, Winesap, Smith's Cider evidently do much better there than in New York state.

There were a few apples sent in from Maryland and New Jersey, but they did not rank well in size or color.

Mr. Killen, of Fulton, Delaware, showed some very fine chestnuts. Killen was very large and of good quality. Early Harvest, a Japan chestnut, exhibited by the above, was of good size, and very sweet, and was said to ripen extra early. Mr. Parry, of Parry's Nurseries, N. J., had a very fine exhibit of nuts; his Superb and Parry were very large.

Mr. Corby, of New Jersey, was on hand with his grapes, and as usual took the premiums. I do not think that a finer lot of grapes can be exhibited by one man in the Eastern United States.

Ellwanger & Barry had a very fine exhibit of pears. Most of these varieties were very large in size, their Anjous especially so; they were awarded first premium. There were also three fine collections of apples from Schoharie Co., also from W. S. Treator, Red Hook, Dutchess Co.; White & Rice, Yorktown, and three or four others. The Eastern New York Horticultural also made a very fine exhibit.

On collections of 50 varieties of apples, White & Rice, Yorktown, Westchester Co., were first, W. S. Treator, Red Hook, Dutchess Co., second. Mr. Treator's exhibit was the most neatly labeled of any individual exhibit at the show.

On collections of 25 and 10, Mr. Boggs, of Waynesville, North Carolina, was easily first; White & Rice second.

On the collection of 10 varieties, one could see no difference between the two collections; it was given to Mr. Boggs because it was said that White & Rice had two plates of apples poor in flavor, although well grown. Many of Mr. Boggs' apples are not much grown outside of the South; of apples grown in the North and South, Newtown Pippin, Winesap, Smith's Cider, and one or two other varieties seem to do better there, while Spy, Fall Pippin, Greening, King, Hubbardston's Nonsuch, were much better grown in the North.

For the largest and best exhibit by any horticultural society, there were three entries—one from Kansas, one from Bradford Co., Va., and the Eastern New York Horticultural Society.

The New York State Society was far ahead of the others in number of varieties—about 150 of apples, 35 of pears, 36 of grapes, 15 of peaches. Some of the varieties were not very well grown, but from the well-sprayed orchards the fruit

sent was in size and color equal to, and in some cases better than, any sent from other states, just as smooth, and as far as flavor is concerned could not be surpassed. Kansas and Virginia both had about 60 varieties of apples and were given special premiums.

Some varieties of apples which are not yet very common are being largely planted. York Imperial stands at the head of this list; its peculiar shape, smooth, waxy skin; bright color, good flavor, earliness of bearing, popularity in this and the English markets (in the last but little under Newtown Pippin in price). It looks as if it would be one of our standard apples.

Gano is, as Mr. Van Deman says, "an improved Ben Davis." It is of almost the same shape, little better in quality, of a very bright red color, as red as Jonathan, which will make it a popular stand apple.

Missouri Pippin, as grown in the West, and Smith's Cider and Winesap as grown in the West and South, are very pretty apples, but do succeed well in New York State. Probably the two finest plates of apples on exhibition were a plate of Wolf River, from Mrs. Chas. Krom, of Schoharie Co., and a plate of Fall Pippin from Edw. Van Alstyne, Kinderhook. Many visitors said they were the finest fruits they had ever seen. The latter variety is now a popular apple in New York market. Many hours could have been profitably spent by any horticulturist looking over the different collections, and talking with individual growers.

B. D. VAN BUREN.

Nitrate of Soda and Chrysanthemums.

After the bud is set is the safest and best time to use nitrate of soda. If used during the growing season it is too apt to excite the plants into making a soft sappy growth, running up quickly and not building up the wood or stem properly. Our experience has shown us that used after the bud is taken its effects are very marked. Particularly is this the case with crown buds. Applied about every other week at the rate of 12 to 16 ounces in a 86-gallon barrel of manure water (other fertilizers of course being used in the meantime) it helps the bud to break through its hard, husky covering and hastens its development by 10 or 12 days. The foliage on our Bonnafon this year was a little pale and we used more nitrate than usual, with the result that Bonnafon was in good shape for cutting by October 18 while last year we could not cut a flower before the 30th. Nitrate should always be dissolved in water before applying. It is much the safest way. If sprinkled in the soil and watered in it oftentimes causes the bottom leaves to fall off.

C. TOTTY.

Our 1898 Art Calendar.

This beautiful gem of art, it would seem, is destined to find great favor among our subscribers, and the orders for it are now coming in rapidly. We still have a good supply in hand, but in order that all of our friends who want it may feel secure they will receive theirs we would advise early applications to be sent us. For particulars as to how it may be obtained, see advertisement on page 780.

Our Strawberry Pamphlet.

Owing to an expressed desire by the writer to thoroughly revise his series of articles on "Big Berries for All," it may be early in December before we will be able to issue the booklet. It will be well worth waiting for, however, as we confidently anticipate that it will prove the best treatise on the subject ever written, and practical to the core.

The Window Garden.

Pot Culture of Narciss.

Among all the bulbous families, it may be doubted whether there is another so generally useful for pot culture as that of the Narcissus. This being the case, it seems strange, indeed, that the only member of the family to be really well-known, popularly, should be the Chinese Sacred Lily, which is far from being the most beautiful. Neither can it be fairly said that it is easier to grow than several others, while there are a number that are cheaper. This sort has three points in its favor as a popular forcing bulb; it forces in a very brief period, it bears many blooms to the bulb, and it has a popular name, with a pretty, if mythical, story attached. But it is not the best.

The Narciss belong to the Amaryllis (Hippeastrum) family, in which (and in the Liliaceae) are found a very large proportion of our forcing bulbs. Few besides the botanist do distinguish the one family from the other, in many instances, so similar in appearance are the blooms. The distinguishing point, most easily taken note of is the position of the ovary, or seed-pod. In the Lily family it is above the petals, or main portion of the blossom. In the Amaryllis it is below the blossom.

Among these last, and thus allied to the Narcissus, are found the Snowdrop, the Snowflake, and the bulbs popularly known as Fairy Lilies, as Tuberoses, and as Jacobean Lilies. Narciss are themselves divided for convenience, into the Trumpet section, the bunch-flowered, the doubles, and the rush-leaved, the latter being known as Jonquils.

Several forms of the Narcissus grow well in water. These comprise the Sacred Lily, the Paper-White Narcissus, the sort catalogued by some as Giant French, and the Campernelle Jonquil. Other of the bunch-flowered sorts may be tried.

In pots, however, a good selection of varieties may give us bloom from Thanksgiving time until almost the season for outdoor bloom. Nor need one acquire many sorts in order to have this succession, for some bulbs of the earlier sorts may be held back long enough to make a very good season.

Early potting—about as soon as the bulbs can be obtained—cannot be too strongly urged. When the bulbs are well-ripened and ready to grow, they are more than likely to be injured by storage beyond the proper season. If potted and brought on in a cool temperature, they will only grow better by a long, slow period of root formation. Almost any fairly sandy soil will do, and after the roots are well grown, most of the kinds will bear rather free watering.

Narcissus poeticus, and its improved, earlier form, ornatus, have not always been found satisfactory. But the difficulty doubtless lies most largely in the fact that they have been forced too hard. A temperature of 45 degrees is high enough to begin with, and it is safer to push along very steadily, at not too great a rise above this point. Many of the varieties can be brought along nicely in about the same amount of heat. There is always some complaint of blasted buds. This need not usually occur, if a cool temperature be maintained, and strong sun-heat in south windows be avoided. Perhaps east windows are best, all things considered. Paper White and the Sacred Lily will come on all right in the temperature of the average living room, in time for Thanksgiving if potted very early, the last needing but three to five weeks if in water, perhaps a little more in earth.

Some other kinds to select are the Tenby Daffodil, Ard Righ, Golden Spur, N. Princeps, N. pallidus praecox, Stella, Double Roman, Von Sion, and White Pearl. A beautiful modern sort is known as Barril conspicuus. It has a sulphur perianth, with a short, spreading cup, illumined with scarlet. It should certainly be tried by every one who loves the Narcissus.

MYRA V. NORTH.

Propagating Blackberry Plants from Root Cuttings.

For the purpose of root propagation it is desirable to have the roots which have made their growth the previous year, older roots may be used, but not so large a per cent. will grow.

In nurseries where a business is made of growing root-cutting plants the roots are taken up when the fall work is closed during the latter part of November or at any open spell in December before freezing-up time.

I have had good success in taking up roots in January, where the surface of the ground was protected by snow back of a piece of woods which protected the block from the west winds. The roots seemed to callus over perfectly before spring. After being cut into proper lengths they were buried in a pile covered with sand and long manure, as is described later.

A two-horse team and plow are started around the block and only one furrow at a time turned over, while men with five or six-tined handle forks fork out all roots that are of proper size to cut. Then another furrow is turned over and managed in the same manner. After four or five furrows are thus cleared, one or two boys take up in bushel baskets the roots thrown out, and from three to five heaping basketfuls are placed in piles which are spread out and sand mixed in to prevent heating until the roots are hauled to the proper place for cutting up. After the pile is finished, it is covered with five or six inches of soil to keep out frost until it is desired for use, when the roots are taken out and hauled to the cellar for cutting up.

Cutting Common Varieties.

If common varieties like Snyder or Taylor's Prolific are to be used, set the guard on a common lever handle cutting box, (the roots being straightened out in the box) so that they will be cut in pieces of about one and one-half to two inches in length. If only a small quantity of roots are to be handled they can be straightened out and held by one hand and with a sharp axe in the other, cut into the lengths desired; the length being governed according to the size of the roots.

Cutting Scarce Varieties.

If the variety is very scarce and it is wished to cut every root to the best advantage, I would advise cutting each one separately with a sharp budding knife or jack-knife. The lengths to be governed by thickness of the roots as shown in the accompanying illustration (fig. 220). Many more roots will grow when cut this way than by either of the former methods, as the downward stroke of the cutting box or axe bruises the ends of many pieces.

Storing to Callus.

The pieces of root after being thus prepared are placed in shallow boxes (soap boxes which can be purchased at the grocery store are as convenient as any), in alternate layers of roots and sharp sand, taking care that the sand is not too moist, nor so dry as to cause the roots to dry out. The greatest danger is in getting the sand too moist, causing the ends of the roots to decay instead of forming a callus. The cellar in which the boxes are stored, being of course free from frost. About the middle of the winter, it is a good plan to examine the roots in the boxes to see that they are in good condition.

Burying the boxes in trenches below the frost line has been a success; they came out in good shape. But care must be used that the trench is not made where the bottom of it will be too moist, and it is well as a precaution to place some pieces of wood or board in bottom of the trench on which to place the boxes. After the trench is filled the top is rounded to carry off water when it rains.

Another plan I have tried with success when the roots were cut and gathered in an open spell in January is as follows: Cut a few roots and spread them out

evenly over the surface of the ground the size wished for the bottom of the pile; then add a layer of sand, throwing it on with a sort of sweeping motion from the shovel, that it might be among all the roots and deep enough to cover them from sight only. Then another layer of roots is treated in the same manner, and so on till the heap is finished. It is then covered as follows: About 10 inches of soil, then a covering of one foot of long manure (horse manure much the best), and a good covering of old straw over all. In this way roots will callus very rapidly, no boxes are needed and there is no hauling from the field.

Soil.

If I could have my choice of soil, I would select a rich sandy loam with a subsoil of part clay inclined to be sandy; but I have seen good first-class blackberry plants grown from root-cuttings on leachy subsoil overlaid with sandy loam of a rather light texture. In some seasons rich clay loam will grow long and large roots but not enough fibrous

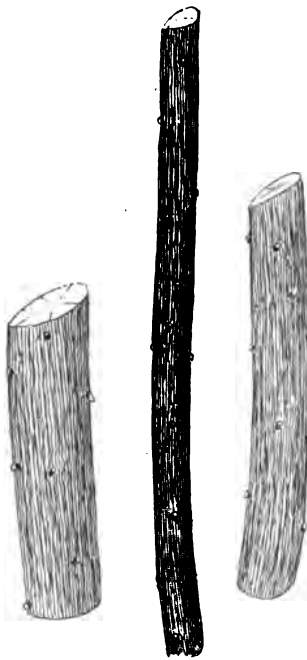


FIG. 220.—ROOT CUTTINGS OF BLACKBERRIES WHERE IT IS DESIRED TO MAKE THE BEST OF EACH PIECE OF ROOT.

Exact size of choice varieties cut with sharp knife.

ones, but the clay soil grows a very desirable root from which to propagate for cuttings.

Upland which has natural drainage and on which some cultivated crop has been raised the previous season, I would prefer. One of the most tedious parts of the work in growing blackberry plants from root cuttings is having to get down on the knees all day in the heat of the sun and pull weeds by hand from among the briars; the hoe can be used to advantage only on the sides of the row.

C. C. NASH.

Propagating Holt's Sage.

I presume this sage is like the common variety, with regard to its propagation. We get our stock by dividing old plants in spring time. One turned out to be a fine pink-flowered variety, and showy enough for the border. I took soft wood cuttings of this, and all rooted quickly. They were kept in a cold frame until spring, and when planted out, made large stools by the autumn. Your Canadian correspondent, page 779, can do likewise.—T. D. H.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

The Vegetable Garden.

Economizing the Manure.

This is one of those important factors in successful gardening that as a general thing receives no attention; the manure is swept up in the stable every morning, thrown into a wheelbarrow, then dumped outside in an untidy pile, and left to the elements to have its potash washed out by the rain, and the ammonia to escape with it, or to the atmosphere. When we put a fork into the heap and find it "fire tang," we know there is little plant food left, and that the pile is of practically little value other than for the humus. Left in such a manner over winter, it has depreciated in value at least 50 per cent. before it is applied to the land, and, to make up for that which is wantonly wasted, fertilizers are bought "to help the things along."

Uses of Liquid Manure.

To make sure the waste is carried on scrupulously correctly, the urine of the horses and cattle is carefully drained away into the sewer, to grow sea weeds or bullrushes! One would imagine such matter contained some pestilence, or contamination, and was unfit to have around. Still, all realize the value of liquid manure for all crops. There is nothing equal to it for cabbage, cauliflower, celery, etc., if applied during the growing season. At other times it can be given to the asparagus beds, rhubarb, etc.

The value of the stable drainage being recognized, it should be preserved. It need not cost much to build a cistern under ground, by digging a good hole in a convenient place. Make some cement, one part Portland cement to two parts good sharp sand, plaster with this carefully all round and at bottom, with a few courses of brick near the surface to make it strong to stand upon, cover with a few planks, place a cheap pump upon this, and all is complete. If the drainings from the stables and barnyards, and all sink water from the house or wash-tubs are run into this, and by the use of a water barrel carried into the garden, there will be some effect.

Roofing the Manure Heap.—Land Plaster.

There should, by all means, be a cheap roof erected over the manure heap, to keep off all rain or snow. If every owner of a horse, cow, or chickens, really knew the value of land plaster for fixing the ammonia in the manure, they would see to it that a barrel of it was always handy, and that it would be sprinkled in the stables every morning after the manure is cleaned out. This will largely prevent fire tang and preserve all plant food that is in the manure.

Plaster should always be used sprinkled round all horses that are kept in the same building as finecarriages to absorb the ammonia, as this gas is detrimental to the paint, and its absorption keeps the building sweet.

Chicken and Stable Manures.

Chicken manure treated as above and kept in barrels in a dry place until required for use, is nearly as valuable as the best fertilizer that can be purchased.

The manure from horses and cattle should be kept under a dry roof, otherwise the rain would dissolve it, but if kept dry better results will follow its use, than from manure that is not taken care of.

W. M. EDWARDS, Conn.

Perforated Tile for Greenhouse.

If your correspondent, G. M. Stratton, will refer to page 788 of last issue of AMERICAN GARDENING he will find that we advertise Perfect Drainage Bench Tile.—HITCHINGS & Co.

—The porous tiles for greenhouse benches referred to by your correspondent can be procured from me.—HENRY W. GIBBONS, 186 Liberty street, New York.

Peppermint as a Crop.

To grow peppermint successfully, the inquirer on page 779 should see that he has a good heavy wet loam; that is the first requisite, then comes clean culture; after which are natural conditions, which must be favorable to the production of the crop, or the active principle for which the crop is grown will be deficient. There are many localities where the plant will grow freely, but in very few does it yield paying quantities of oil.

Peppermint must be planted in the spring as soon as it is possible to work the ground, as the roots start very early. Plant in rows three feet apart, setting the plants one foot apart in the row. When the plants to be set are taken up they must be kept wet until planted, and be set in moist earth. Keep the ground entirely free from weeds, as they spoil the flavor of the desired oil. Constant cultivation must be kept up until the first of August, when the plants begin to throw out runners, and the blossoms appear, and the crop is ready to distill.

Those who thoroughly understand the business have made it profitable. But within the last few years there has been an over-production, and the industry has not been a paying one. We should advise anyone interested to visit Wayne Co., N. Y., where it is the principal crop.—Ed. A. G.

Propagating Small Fruits.

When not many are required, E. F. L. is informed that blackberries and raspberries are propagated by planting suckers from the old stools. If wanted in quantity, dig out the roots of blackberries and cut into two-inch lengths and store them in sand where they will be free from frost. Plant one inch deep in spring and cover with a fine mulch of some kind. Propagate blackcap raspberries by layering the tips; currants by cuttings 8 to 10 inches long; taken in fall and stored like blackberry roots, or planted direct in lines outside. Mulch to prevent heaving by frost.—J. HOLLOWAY.

The blackberry may be increased either by root cuttings or by pegging the points of the shoots down, covering with soil.

Currants may be increased either by cuttings, layers, or suckers. Cuttings is the plan most generally practised, selecting strong, well-ripened wood of the present year's growth, cutting them into lengths 12 or 16 inches long, setting them out in well-drained soil 6 inches apart in the row and 12 inches between the rows.

Raspberries may be increased readily by taking root suckers which spring up some distance from the old stool and are easily transplanted.—T. H.

Chrysanthemums Not True to Color.

Vivian-Morel and Mrs. George Magee (of which inquiry is made on page 779) color according to which bud is taken. Crowns and early buds produce large heavy, light-colored flowers, and later or terminal buds vice-versa. Apart from the bud the first-named variety frequently varies and sports in color.—Ed., A. G.

Fertilizer for Berries.

Replying to J. M. C., Mich., page 779, to every six cartloads of mulch and rotten sawdust, apply one of lime, one barrel bonedust; if the ashes are leached, throw them into the heap as well. Mix the whole thoroughly in a tidy heap, and leave to decompose over winter. Before spreading on the ground, it should be carefully turned over to incorporate the whole. Cover the berry patch with this composition one to two inches thick, then fork or cultivate lightly into the soil without disturbing the roots. If correspondent will burn all the sawdust and make as much wood ashes as he can, keep dry, and apply in spring 1,000 to 2,000 pounds to the acre, and 500 to 1,000 pounds according to fertility of bone dust per acre, worked into the soil, he will get some berries. Wood ashes and bone dust are the best fertilizers for

fruit. The above composition of muck, lime, etc., should prove excellent for berries.—W. M. EDWARDS, Conn.

Early Celery Bolting.

A., Mass., (page 779) is informed that there is nothing unusual about early started celery running to seed in the greenhouse, especially if kept warm. The seed will germinate nicely say in a temperature of 50 degrees, and after the seed is up the plants should be grown on in a cool airy house. The plants must be kept stocky; if drawn up spindly and weak, they are of little use. At the same time I would not advocate starting celery very early in the greenhouse, the end of February or first of March suits our purpose. Two years ago I started a little celery early in February, variety White Plume; the result was nearly every plant bolted in August, while the later planted was all right. Golden Self Blanching or White Plume answers the purpose for early celery.—Wm. TURNER.

The reason your celery bolted was owing to maturing so early in the season at which time conditions were favorable to still encourage growth, the natural tendency of which would be to go to seed or bolt. This is often the case with early celery. After the celery is fit for use, the object should be to retard growth as much as possible by banking it up well. The variety Paris Golden Self-Blanching is good for early use, as also is White Plume.—T. H.

On page 779 A. Mass., writes that the Golden Self-Blanching that was sown early and planted out last of April, did well, and by end of June was ready for use, but had mostly run to seed, while seeds sown from same package for a later crop did not run to seed. Celery sown so early frequently bolts in this manner. I have found that seedlings grown in heat of 60 to 75 degrees, transplanted into flats and planted-out-of-doors, when the temperature frequently drops to 45, or even 40 degrees, nights, is very liable to bolt. But that if it is grown in a heat of 50 to 65 degrees, when ready transplanted into flats, gradually hardened off in a cold frame, and when the weather is settled planted out-of-doors, and not permitted to become very dry at the roots at any time, very little of it will bolt, not more than 5 per cent.

Celery is a true biennial, and before it goes to seed it must receive some check during growth; this may be done as suggested above; it is a hardy plant of course, when left in its natural state, but when started early in heat, it becomes a hothouse plant, and as the query suggests, receives a check by growing it this way and setting it out in Massachusetts in April, before the ground is as warm as was the place where it was previously growing.—W. M. EDWARDS.

Keeping Gladiolus Bulbets.

Your correspondent, H. M. D., has perhaps allowed his bulbets to become too dry. I have found they keep best in moist earth, just sufficient to keep the air from them; then put them in a dark cellar where the temperature does not fall below 32 degrees, and but very little above. It is much better to have the temperature 25 degrees than 50 degrees, as slight freezing does not injure them. It is better by far to peel before planting, we should not think of planting choice varieties with their shells on.—A.

Pack them in dry sand; do not peel them. As soon as the ground is warmed and can be worked, plant in a well prepared bed about six inches apart, watering them in dry weather; when they have grown about six inches high, give a light mulch of rotten manure.—T. H.

When lifting Gladiolus in the fall, spread out in a dry airy shed to thoroughly ripen up the corms, leaving the old growth on the corm, until it just needs a touch to separate them; then the corm can be stored away in any dry cool place. It is not necessary to keep in sand. A temperature of 40 or 45 degrees will winter them safely, providing they

are perfectly dry. I should allow nature to do the peeling, with such treatment as above, and plant in the spring in good rich soil, setting the corms three inches in the soil, and nine inches in the rows. There should be no trouble in getting all the corms to start off in good shape in the spring. To have a supply of flowers a planting can be made in April, May, and June.—Wm. TURNER.

I have had some experience in wintering and growing Gladiolus bulbets and very cheerfully give to H. M. D. what information on the matter I can. On taking up the bulbs in the fall I carefully separate from them all the bulbets that seem to me worth preserving and spread them where no frost can reach them and they can become thoroughly dry. I then tie them up in a paper bag, without any sand or other such material, and hang them from one of the beams in the cellar. They have always kept with me satisfactorily when thus treated. In the spring I sow them as I do sweet peas, but in a furrow only about an inch deep, and they come up freely.—W. H. W., Mass.

H. M. D. (page 779) is advised to keep his bulbs which are in sand, dry and at a temperature of from 50 to 60 degrees. Plant same as peas and grow on in the same way.—Ed. A. G.

Jasmine Not Growing.

Evidently the Jasmine of the inquirer on page 779 got checked at the roots when first potted and possibly the soil got soured by overwatering. See if the soil is fully run through by roots; if not, reduce the ball of earth carefully, and pot up in a smaller pot.—Ed., A. G.

Evidently your Jasmine is not in good health; you would stand a better chance of getting assistance if you would be more explicit in regard to the conditions under which you are growing the plant.

Jasminum gracillimum to grow successfully requires greenhouse treatment with a temperature of 65 degrees to 70 degrees, using a compost of good turfy loam, manure, and coarse sand. When it has got firm hold of the soil, give liquid manure once a week. It is a winter flowering species.—T. H.

Jasminum gracillimum requires handling with care. If the soil be heavy, if potted in an over-sized pot, or kept wet, it would become in the condition described by your correspondent on page 779. House plants generally do not get air enough, and often are given strong doses of artificial fertilizer when sick, and this only makes them worse. No doubt the soil has become sour.

I should recommend re-potting in a smaller pot, with lighter soil, using a few pieces of charcoal along with the drainage.—T. D. H.

Wintering Strawberry Plants.

The boxed plants of J. J. S. (page 779) will go through the winter all right if plunged in the ground where water will not lay in winter. At the approach of hard freezing weather, say in the beginning of December, cover with one inch of salt hay or leaves, laying a few pieces of brush on the top to prevent it blowing away before snow comes. They could be wintered in cold frames, but would require more attention, as they would be apt to damp off, and much would more likely work among them when under cover.—J. HOLLOWAY.

Growing Dwarf Apples.

(Replying to L. J. F., page 779), the tree should be bought when one year old and cut back to about 18 inches from the ground. They should then produce five to seven shoots. Train in summer to the desired form and stop in early autumn. The following summer the shoots from these except the leader should be stopped when they have made five or six leaves and any secondary ones, at two or three leaves, working out by the leaders the form wanted. If a

pyramidal form, be sure to get a broad base rather than height. This style is not much practised in this country. It has moreover a serious drawback. The trees are short-lived.

The trees are generally budded, which is said to produce a stronger tree in a given time than root grafts. The stock used is the Paradise stock. All dwarf apple trees, if planted too deep, will make roots above the stock and become virtually half standard.—J. HOLLOWAY.

Why Pinks Don't Flower.

Why the pinks of J. L. B. (page 779) don't flower is a hard matter to tell, with so little information. In wet soil or poor light, the buds would not open. I imagine the plants were taken from the open ground full of buds, kept in the shade too long, and over-watered.—T. D. F.

There are different causes for Pinks or Carnations not opening their flowers. The question on page 779 could be easily answered, if one just knew the treatment the plants have been used to. However, supposing those Carnations are planted into a good house where there can be a night temperature say from 50 to 55 degrees, with a rise of 5 or 10 degrees during the day, with plenty of fresh air at every chance, avoiding sudden changes, the flowers ought to open. To have good flowers disabudding should be done, just leaving one bud to each stem. The plants are capable of carrying a heavy crop.—WM. TURNER.

Greenhouse Heating.

Replying to the inquiry of R. Sinclair on page 779: (1.) Good results can be obtained with the pipes arranged as described, but it would be better to carry a 2½-inch pipe from the boiler to the farther end of the greenhouse and then use a 2-inch pipe to connect with each of the side coils. The 2-inch openings into the boiler should be enlarged if it can be readily done, but it will answer to reduce the pipes at the boiler and enter through 2-inch openings. The expansion pipe can be connected with any part of the system, provided there is no shut-off valve between it and the boiler. When a down-hill flow is used I like to connect with the highest part of the system and thus do away with an air cock.

(2.) For the greenhouse use one linear foot of 1½-inch pipe for every two square feet of glass for 50 degrees, and for 1½ feet of glass for 60 degrees. For a dwelling house the amount varies with the amount of window surface and of exposed wall surface, but generally a square foot of radiation will suffice for 30 to 40 cubic feet of space.—L. R. TAFT.

As no data is furnished by G. M. S. (page 779), I can estimate in a general way only the amount of exposed surface in the side walls. The only way a range of temperature such as that given (40 to 75 degrees) can be secured is by providing the radiation required for the maximum temperature in severe weather and then depending upon valves or manipulation of fire and drafts to secure the minimum temperature.

To provide a temperature of 75 degrees in house No. 1 two 2-inch flows and six 1½-inch returns will be required. Valves should be provided by which at least one-half of the pipes can be cut off as desired.

For house No. 2 I should use the same number of pipes as in No. 1. In house No. 3 use one 2-inch flow overhead and three 1½-inch returns under the propagating bench.

I should prefer to put in a heater of ample size to warm the houses described, and then when others are added put in another. This will not only be more economical for the present, but after the others are added one heater would be of a sufficient capacity to heat all of the houses in mild weather and the other heater can be held in reserve for severe weather or for use in case of an accident to the large one.

I would now put in a heater rated for 1,000 square feet of radiation, which will

need about five square feet of grate and 100 of heating surface. The other heater will need to be of a capacity for 880 feet of radiating surface, with about four feet of grate and 80 of fire surface. Of course the relative areas of grate and fire surface will depend largely upon the construction of the heater.—L. R. TAFT.

English and American Tomatoes.

To the Editor of American Gardening.

Just a word on a house of tomatoes. They talk of old-country sorts, but can the Lorillard be beaten? If so, they must be monsters. I have here a house of the Lorillard I started August 26 and to-day will say the fruit cannot be beaten, for one measures 7½ inches across and it is the finest crop you ever saw in your born days; every bloom has set.

My idea for setting them is great. I have a skep of bees placed as shown in fig. 221 at the end of the house, so the bees are out of the way. No one need be afraid of getting stung, for no one ever knew of bees stinging except when interfered with or struck at. They do a host of work for me both in my tomato house and graperies when the vines are in bloom. I move the skep in then. One would hardly realize the help these bees are to me and I never was stung.

Now not only the bees I admire, but also my tomatoes. I planted them in pure loam with one-third cow manure

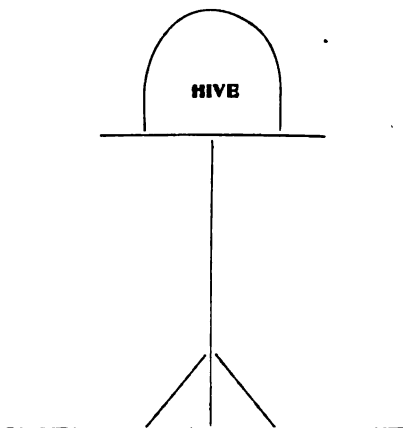


FIG. 221.—ARRANGEMENT TO FERTILIZE GREENHOUSE TOMATOES.

mixed together, with a layer of fresh horse manure spread over the bench for drainage. Planting my tomatoes 18 inches apart I run them single stem, and when they have grown to their limit I start another lot to follow. I have to-day on average, about 45 to 60 tomatoes on each plant and stems are like spade handles. I don't believe in cutting off a leaf and never syringe overhead nor allow them to get too dry nor too wet. I don't use too much manure after planting, for they then grow too much and rob the fruit. It would do one good to see these tomatoes. I won't say any more on this. But they talk of old-country sorts. I would like to see the one to beat Lorillard. J. FRASER, N. Y.

"I've got something nobody else has got," said the wealthy New Yorker, who has been experimenting with raising fancy fowls over in New Jersey. "What is it?" "I bought a \$175 incubator, put \$25 worth of eggs in it, and hatched out a blue-bottle fly. I've got the only \$200 blue-bottle fly in this or any other country."—Texas Sitings.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere

The Fruit Garden.

Manuring Fruit Trees.

This is necessary work at some time, and as to whether it is needed now can be decided by noting the amount of growth made during the past season.

Manuring should always be looked at from a business standpoint and applications given accordingly, remembering it is not the largest amount of wood, but the greatest number of flower buds or fruit spurs that is wanted; this combined with a moderate yearly wood growth—enough to plainly show that the size of the tree or trees increases yearly.

Apple and Pear Trees.

The above remarks apply to apple trees in full bearing and young pear trees. The latter, with few exceptions, are inclined to go too much skyward, with considerable production of smooth, straight rods, if not restricted in their young days. On the other hand, I have seen plenty of miserable starved pear trees that never even had young days or anything else apparently.

But the trees such as I have in mind are those owned by persons who are willing to give a reasonable price for what they want, and also pay in advance for it. If you are willing to do this, now is a good time to make a deposit of manure about the trees that have not come up to the aforesaid requirements.

Push on Young Apple Trees.

I believe in pushing young apple trees the first ten years of their life, discriminating of course with regard to situation and the difference in varieties, for no business man will serve Baldwin, Greening, King, like Newtown, Lady Sweet and Spitzenburgh, even when growing side by side.

But I do like to see the side branches reaching out and down, for we see so many of the long-shanked skyward grown trees, that it makes one think they are yet looking for a decent feed.

Don't Cover too Early.

In northern sections covering will soon be necessary with all tender kinds. The temptation is to cover too early, at what is often only the first cold snap; overlooking the point that most of the damage is done in early spring by the sharp changing from freezing to thawing. The best covering material is soil, where it can possibly be used.

Planting Should Cease.

Planting should now be drawing to a close, and the young planters should fight off the strong temptation to leave the fine young shoots on the newly-planted trees, etc.

Cutting Back Newly Set Trees.

There must be no hesitation, but at once cut back the shoots so that the roots will out-balance the tops. Do not now cut so close to the bud, as could be done if planting in the spring, and see that all leading buds point outward and downward.

J. HOLLOWAY, L. I.

Plum Burbank.

The suckers mentioned on page 779 are no use; they are offsets from the stock on which the plum is either grafted or budded. Root them out, and throw them away.

The double-flowering peach will not bear fruit. But do not dispose of it. It will probably help cheer you up and make things look brighter when little else is in bloom.—T. H.

Grub up the suckers around the plum tree and consign them to the rubbish pile; they are useless. If allowed to remain around the tree, they will do considerable damage; the strength will be going to the suckers instead of the tree proper.

The double-flowering peach is useless if fruit is the object, but as a flowering shrub in spring, it makes a beautiful picture.—WM. TURNER.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1894.

PUBLISHED BY

A. T. DE LA MARKE PUBLISHING CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 3154 Cortlandt. P. O. Box 1697.

REGISTERED CABLE ADDRESS
Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MACILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 35 cents per agate line; in "For Sale" column, 5 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Protection **W**INTER killing of the fruit buds of the peach of the Peach. is usually due to the unfavorable effects of freezing, after they have been stimulated into growth by warm weather during winter or early spring. It seldom happens in peach districts that the temperature drops sufficiently low to injure dormant peach buds. Peach fruit buds may safely endure a temperature of 10 or 20 degrees below zero, provided they mature well in autumn, are entirely dormant, and the cold comes on gradually. Zero weather may kill fruit buds that have swollen during previous warm days, or that were not properly ripened in autumn. The early swelling and growth of the buds is due to the warmth they receive from the sun on bright days, is practically independent of root action, and may take place on warm, sunny days in winter, while the roots are frozen and dormant.

Shading or whitening peach trees to prevent their absorbing heat on sunny days, opposes growth of the buds, and is, consequently, a protective measure. Whitening the twigs and buds by spraying them with lime whitewash is, on account of its cheapness and beneficial effects, the most promising method of winter protection tried at the Missouri Experiment Station whence a bulletin on this subject has been issued.

These whitened buds remained practi-

cally dormant until April, while unprotected buds swelled perceptibly during warm days late in February, and early in March. Eighty per cent. of the whitened buds passed through the winter safely, while only 20 per cent. of the unwhitened buds escaped winter killing. Whitened buds blossomed three to six days later than unwhitened ones. Thermometers covered with material the color of the peach twigs registered, during bright, sunny weather, from 10 to over 20 degrees higher than thermometers covered with white material of similar texture, thus indicating that whitened peach twigs might be expected to absorb much less heat than those that were not whitened.

The whitewash used was four parts of water, one part of skimmed milk and enough freshly slacked lime to make as thick a wash as could conveniently be pumped through a Bordeaux spray nozzle without clogging. This wash was sprayed on the trees by means of a bucketspray pump. The first application was made the last of December and three subsequent sprayings were necessary to keep the trees thoroughly coated until spring. The cost for material and labor it was calculated is about 10 cents per tree, when done on a small scale.

Shading the trees with canvas hay covers was about as beneficial as whitening, but was more expensive.

"Baling," by drawing the branches together in a vertical bundle and covering them with coarse grass and corn stalks, protects the buds, but old trees with stiff branches cannot well be treated in this manner without injury to the branches.

"Layering," or bending down the trees in autumn and covering them with earth, has proven beneficial. Shading the trees with board sheds, enables peach buds to survive the winter uninjured, when 80 per cent. of unprotected buds are killed. Trees protected in this way blossom later, remain in bloom longer, set more fruit in proportion to the number of apparently perfect flowers, and hold their fruit better than any other trees. This, while the most effective means of winter protection tried at the station above referred to, is probably too expensive for use in commercial orchards.

A Discussion Club.

There is nothing like asking a question if you want to gain information. In other words, don't follow the tactics of the illustrious Micawber in the search for knowledge. Instead of waiting for the desired information to turn up, do you yourself go out and seek it. How? By sending in your questions to AMERICAN GARDENING.

The Question Box of this paper is the readers' own department. It is indeed a discussion club over the weekly sessions of which the Editor presides. Members of the circle put their desires in writing and send them to the Editor; he prints them and invites other readers to offer replies. But he also does more; he sees to it that the questions are brought before capable authorities, and they will also be handled by the staff of the paper when desirable.

This system makes our Question Box an invaluable medium of exchange of thought among horticulturists and as an educational factor its value is immense.

So far as the conducting of a Question Box is concerned everything depends upon the readers. If they do not make the inquiries no one can answer them.

The more the correspondence received for this department of the paper the more will the Editor be pleased and he will leave no stone unturned in the endeavor to secure an ample reply to an obscure point.

In order to stimulate interest in replying, a weekly prize is offered for the best set of answers received. Who wins next week?

Coming Events Cast Their Shadows.

In our last issue we announced the preliminary details of the better things to come in early issues of AMERICAN GARDENING and already we are receiving congratulations on what was then published. That is very satisfactory, but we, in our turn, congratulate our circle of readers that they make such things possible.

Special attention of all readers is directed to the offers of cash prizes for photographs and articles, and weekly for the best set of replies to the Question Box detailed elsewhere.

Then think of the special monthly features by which will be combined the activity and interest of a live weekly paper with the solidity and quality of the magazine, yet each distinct and separate.

The regular Literary supplement is an innovation in horticultural journalism, and the weekly treatment of those familiar garden adjuncts, poultry and bees, will be welcome to many. Correspondence and inquiry are invited here as in other branches of the paper's work.

Among other attractive new features for the immediate future we announce:

Monthly Competition.

Once each Month a Competition on a subject of general interest, and for which suitable money prizes will be awarded.

Literary Supplement.

Once each Month a Literary Supplement containing full reports of the more important essays and lectures; the special lengthy treatment of some problem; articles of more permanent and scientific interest, etc.

Presentation Plates.

Once each Month a colored presentation plate, suitable for framing. The twelve sheets which will be given away each year forming a collection which our readers will thoroughly appreciate.

Cash Prizes for Photographs.

A standing offer of a cash prize for a photograph of a well-grown specimen (flower, fruit, vegetable, or plant) with description as to how the result depicted was attained, from start to finish. Cash prizes will also be paid for photographs illustrating general views, such as groups, landscapes, views, garden scenes, etc.; explanatory matter to accompany all photographs.

Poultry and Bees.

A column each week devoted to Poultry will be conducted by an acknowledged and well known expert. This should be pleasant news to the many thousands of readers who devote a portion of their time to the poultry yard and moreover the weekly advent of advice and suggestions should be of much value.

The Apiary will be well taken care of, also by an expert. Beekeeping is one of the most profitable of industries, and a legitimate adjunct of gardening.

With these and other contemplated improvements, AMERICAN GARDENING will be the ideal paper for the country home and suburban residence.

THE QUESTION BOX

He that questioneth much all learn much.—BACON

Readers are invited to forward particulars of any difficulty or perplexity that they have encountered. If the question be one of general interest it will be inserted in this column, so that other readers who may have information to impart can assist their brethren by recounting their own experiences. Questions of a purely individual interest will be replied to by the Editor under the head of "Short Answers."

Questions submitted in this department will receive the full attention of the staff of AMERICAN GARDENING and when desirable will be answered editorially.

All communications for insertion should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of AMERICAN GARDENING, P. O. Box 1897, New York City. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query or answer are sent, each should be on a separate piece of paper.

Answers should always bear the title of the query replied to and the page on which it appeared, and our readers will greatly oblige us by advising, as far as their knowledge and observations permit, the correspondents who seek assistance. Conditions, soils, and means vary so infinitely that several answers to the same question may often be very useful, and those who reply would do well to mention the localities in which their experience is gained.

Important to Querists.—Correspondents must look through the whole of the paper to see replies to their queries. Answers cannot always be given the week after the queries are received, but there is as little delay as possible in dealing with them.

Cash Prizes will be given for the best set of answers each week. Payment to be made monthly.

Raising English Walnuts.

In the case of English walnuts raised from seed, would not the larger number require to be grafted? I have several hundred young growing trees, procured from nurserymen, mostly preparaturnian; they were doubtless all grown from seed. How do they do in California? Are there male and female among walnuts, as the case with persimmons and grapes? Can not they be distinguished by the leaves? What is the best book you know on this subject?—G. A.

Book on Medicinal Plants.

"Can anyone mention a book (not too large) on the medicinal herbs and roots of this country?—G. A.

Cutting Tobacco.

Will some one kindly give directions for cutting tobacco, i. e., 1, time to cut, 2, process of curing.—W. C. L., Ont.

The Stinking Toadstool.

How can I best exterminate what is commonly called the stinking toadstool? Several have come up under our porch and near it. The porch is brick and the earth under it gravelly and sandy. The smell is intolerably offensive. What produces them?—G. L., N. J.

Habit of Roses.

Are the following Roses tall-growing, or low and spreading? Please state after each its characteristic of growth in this respect: Mrs. John Laing, General Washington, Dinsmore, Mdme. Charles Wood.—S., Pa.

Greenhouse Heating.

I wish to build a small propagating house $4\frac{1}{2} \times 25$ feet. One side and one end to the weather. I wish to heat it by putting coil in stove, situated in workshop. Is my plan feasible? Coil would probably be one-inch pipe. What size runs would be best? How much pipe would be necessary? Can I increase from one-inch coil pipe to a larger size?—WM. HANSON.

Management of Pomegranate.

I bought a pomegranate last autumn from a reliable florist; the moving and re-potting caused it to lose its leaves.

We put it in a greenhouse and all grew again, but the plant has never bloomed. This summer it has stood out-of-doors, is planted in a wooden box. No frost has touched it, no plant in the garden has been frosted. About a fortnight ago it began to lose its leaves; they turning yellow first, now they are nearly all gone. We brought it inside a week ago. It is a large bush about four years old. What shall I do?—G. L.

Rosa Rugosa as a Hedge.

How far apart should Rosa rugosa be planted in order to make a mass and wind-break such as was shown in your cut of a Newport garden in issue of August 14.—GEORGE H. BROWN.

Rose Madam Marie Bianchi.

Where can this be obtained and are the buds of popular shape? I have never seen this variety offered in the catalogues.—E. C., Ga.

Criticisms of Tomatoes Wanted.

I should like to have some readers tell me something of the merits and demerits of the tomatoes Eclipse and Nicholson Hybrid.—E. C., Ga.

Planting Raspberries in Fall or Spring.

Is fall-planting of raspberries safer than spring-planting?—H. C. C. M., Conn.

How to Use Cow Manure.

I should like to know how to treat fresh cow manure or dropping, not mixed with any bedding or litter, so as to make it speedily suitable for plants and bulbs. I have seen it stated not to use cow manure for strawberry growing. Why so?—SAMUEL KEAGY.

Night Soil.

What book, if any, gives full details as to the preparation of night soil as a manure, and further how to best use it?—WM. E. WHEELLOCK.

Leaves for Manure.

I should further be pleased to know if fallen leaves can be so treated as to make them turn to leaf-mould, or rot thoroughly, sooner than they do when simply piled and trodden down.—WM. E. WHEELLOCK.

Pomegranate Does Not Fruit.

I have a Pomegranate, purple seeded! It is six years old and has bloomed well for four years, but sets no fruit. It is a fine thrifty tree 10 feet tall, and by mistake was set near a double flowered scarlet Pomegranate. Would that cause it to drop the fruit with the flower. Here the flowering Pomegranates do not seed.—MARGARET E. CAMPBELL.

Rose, Bennett's Seedling Rambler.

In a recent issue of your paper we see a description of Bennett's seedling Rambler Rose. I would much like to get one to run on a tree in my garden. Can any one inform me where I can get one and what is the best time to plant it?—SUBSCRIBER, L. I.

List of Flowering Shrubs Wanted.

I would like to get through AMERICAN GARDENING, a list of flowering shrubs for a private place. They are wanted to flower from April to October, and to be something I can cut from to use in house.—H. J. M., N. Y.

List of Vines Wanted.

Please give a list of creeping vines to cover piazza posts 15 feet high; creepers to be tied to wire 10 inches wide. They must be hardy to stand out all winter.—H. J. M., N. Y.

Short Answers.

(To G. A.)—A cold grapery is a house for the cultivation of grape vines without heat.

(To G. H. B.)—As your Violet plants are so close to each other, you will have to remove many of the runners, but do not cut off more than necessary to let in light and air about each plant.

Universal Satisfaction.

We cannot print all the letters of thanks received from subscribers who now have the Henry strawberry plants—they would take up too much room. But we can take a few specimens, and here they are:

Strawberry plants were received last night and are far beyond my expectations; they are splendid; as good as pot-layered plants. The packing was first class; they arrived in very fine condition. I for one am thoroughly satisfied, and thank you very kindly for your trouble.—JAMES DUTHIE, L. I.

Confirming your postal of November 1, I wish to say that the plants arrived in good condition and were well packed. I am delighted with them; they are all that we could desire, and we appreciate your kindness in taking such special care with them. Our next club order will probably be for spring plants.—WM. SYER, Ont.

I was glad to receive a superlatively done up package of Henry plants. Upon undoing I was surprised at beholding the finest plants and in the best shape for setting and living of any plants I ever received by mail or express, not excepting the potted, and I have received plants from all the leading strawberry shippers.

I have the highest interest in your berry and shall take every pains to make it the top of the heap for this county, if not Michigan, as I believe it capable of being.

I take a great interest in your series of articles, to read, learn, and practice, as I am not only a hard strawberry worker, but reader, thinker, observer, and a small writer.

I have set out the plants. I spent two hours in fixing ground. I have them in a frame I had. The ground was rich. Space used 8×9 feet. First, rich and fine manure dirt, wheelbarrow full, tin pail full of sifted ashes, and one of lime mixed with wheelbarrow full of fine muck. All mixed and made fine with spading the ground with spading-fork. Raked and tramped firm. Last night trimmed large leaves off, wet roots, laid out in wet moss in basket. Made puddle of rich dirt, muck and sand, with warm water, dipped roots in, made hole in ground, poured cup of water in, held plant in, sifting fine moist dirt in, pressed slightly till water settled, shaded with boards. I set two runners to increase stock. Expect to send a number of subscriptions to get more plants to propagate from and get ready to have a patch out next fall that will surprise the county.—J. M. C., Mich.

My Henry strawberry plants came while I was in Ocean Grove, N. J., and were here a full week before I could put them out; the leaves were dry and brittle. New leaves are starting, so think they will grow. Please send me Mr. Jerolaman's articles in pamphlet form.—T. B., N. Y.

[No doubt about growing; they are strong plants and well packed.—ED.]

The Henry plants came by express in splendid shape, not a leaf wilted, for which please accept my thanks.—GA.

I have had eleven men for the past two days setting out plants of Henry and Mary in a new bed for my own use in order to show all growers what may be done in strawberry culture by setting plants out the last of October. Will wager \$1000 with any one that it will by June next outyield any bed of its size (in the United States) that was set out this spring.—Letter from H. Jerolaman, October 26, '97.

I have taken your paper for the past two years, and for practical information for the professional or amateur gardener, I am convinced it is the paper.—JOSEPH WOOD, gardener to J. M. Wallis, Esq., General Superintendent Penna. R. R.

The above are spontaneous communications and show that the premiums given are really all we claim for them.

The Bee Keeper.

Some Elements of Successful Wintering.

This is a problem that has been apparently solved over and over again, but new factors appear and old ones under new conditions bob up, so that there ever remains much uncertainty about it.

A great deal has been learned, though by costly experience, and now we are in such a position that we may feel reasonably sure of safely bringing over the winter a very large percentage of our bees if properly put into winter quarters. There are a few rules we must carefully observe if we would make a success.

Strong Colonies.

First, we must have a good strong colony of bees, a fair proportion of them being young, as the old bees who helped to store the fall crop of honey are worn out and dwindle away during the earlier part of the winter, and if there is not a good supply of bees hatched during September and October, the colony will be too weak by January or February to withstand the cold and will succumb, or if it get over the winter, it will be so depleted that it requires most of the season to build up and will be worth little or nothing for storing honey.

A Prolific Young Queen.

The bees should of course have a good prolific queen not too old, say not more than two years. If the queen is old and worn out she often dies during the winter, and a queenless colony in the early spring is not desirable, as queens are not readily procured and not easily introduced. A good prolific queen is an absolute necessity early in the spring if we would make a profit out of the colony that season.

Good Food Supply.

The next important item is the food supply. You may have the bees and queen, but if the colony lacks food or the quality of the food is bad you cannot expect to successfully carry it through the winter. A strong colony of bees should not have less than 30 pounds of good food, and in the cold Northern states, 40 pounds is none too much. Remember the queen should start laying in the forepart of February and when breeding starts, much honey is required both to keep up the proper temperature and to feed the young brood. If the food is scarce breeding is delayed and often the colony is late in building up and the honey harvest will be well advanced before the colony is ready to store. Thus a saving of 25c. in the fall may mean a loss of one or two dollars next spring.

If the colony does not have sufficient stores it should be fed early in the season so the bees can cap over the stores. It is almost too late now, but better late than never. I have fed colonies in November during warm spells giving the syrup warm and if necessary have placed a warm brick or two on the feeder, and the bees generally did well, though I don't advise this unless there is no other remedy.

Well-ripened sealed honey is no doubt about the ideal food of the bee, but syrup made from granulated sugar answers the same purpose, and is much cheaper for the apiarist. I always use sugar syrup for feeding for winter stores.

Making Syrup.

I prepare it as follows: I use a cylindrical tin vessel holding 100 or more pounds, with an outlet at the bottom. I have my tinman make to fit in the vessel a circular bottom of galvanized wire netting, one-eighth of an inch mesh fastened to a galvanized iron hoop braced with a few cross wires. This false bottom I drop down and the hoop rests on the can bottom and leaves a one-inch space between.

On this I spread a cotton cloth and put a good quantity of sugar on it. I now pour cold water on the sugar which slowly percolates through and takes up all it can hold, and when it drains out of the can into another vessel it is ready to feed. The above described can I use also to hold and drain the capping while extracting. It is the ideal for that purpose.

A Warm Dry Hive.

The next requisite for successful wintering is a good hive, one that will keep the bees warm and dry, not necessarily a large lumbering double-walled chaff packed hive, though chaff hives have their advantages, but the disadvantages often overbalance the advantages. I prefer the single-wall hive, and in this latitude they give general satisfaction. In the cold North, cellar wintering is generally practised.

To resume now:

1. Strong colonies of vigorous bees.
2. A prolific young queen.
3. A plentiful supply of good food.
4. A good hive to protect them from the elements.

Hints for the Novice.

There are some minor items I might mention for the benefit of the novice:

Don't disturb or manipulate the bees during the cold season.

Keep the entrance at the bottom of the hive open and unobstructed for ventilation.

Bees consume oxygen and throw off carbon dioxide as all air breathing beings do, and proper ventilation is necessary.

Remember the hive with its warmth makes an excellent harbor for mice, and they like honey too, so you want to construct your entrances to exclude the mice.

Have no upward ventilation, as that will carry off the heat generated by the bees, and is injurious.

If the entrance is kept clear and unobstructed $\frac{3}{4}$ by 5 or 6 inches they will get all the fresh air they need, and the air will change slowly in the hive, so as not to chill the bees. When the bees are in a cluster during cold weather the dead bees drop to the bottom of the hive, remove them.

L. W. LIGHTY, Pa.

The Poultry Yard.

Wants Lice.

A man has at last appeared who wants poultry lice! He does not seem to have lost his senses, but rather to be in the way to exercise them more fully, since he wants the lice for experiment. Farm Poultry has employed him to conduct some experiments looking toward accurate information about poultry lice. Some poultry keepers don't want any more accurate information concerning the lice; they know they are on hand, that is enough! The knowledge desired is how to get rid of the lice, and this is, of course, the end in view with the proposed experiments.

Liquid Lice Destroyer.

One can scarcely remember the names of all the brands of this necessity that have lately been placed upon the market. Dr. Woods has made public a formula costing 25c. a gallon, to put together. It consists of one pound naphtha camphor dissolved in one gallon of kerosene. This is to be painted on the floors of roost or house open on one side for admission of air. Or, it can be painted on the inside bottom of a box, in which the bird is to be confined by covering her with a basket also painted inside. The fowl is to remain thus enclosed half an hour or more. Some have complained of resulting injury to the birds, but it is strongly insisted that none results if directions are followed. The bird must not be deprived of all air.

Cut Clover for the Flocks.

When on range, there is perhaps not another food that fowls and chicks will eat with so much apparent relish as clover. It would seem that here is the strongest possible pointer towards their needs and likings; when we are getting ready for winter. Strange to say, the art of man has not yet found a way to make the cured clover fully palatable to the birds. The greenest, sweetest of cured clover lacks by much, the charm of the fresh, green, easily-cropped herbage. Yet, as clover, together with wheat, forms an almost rightly balanced egg ration, we must coax the laying stock to

eat it rather freely. This is best done by mixing with it the soft feed which they like best. We consider cabbage about equally good; the hens consider it better than dried clover.

A Novelty Clover Meal.

There has lately been put upon the market a new poultry supply, in the shape of ground clover, and called Pioneer Clover Meal. It is to be sold at the same prices as cut, dried clover, and the points of superiority claimed are ease of handling, and economy through the fact that there is no waste. It seems worth a trial at least, as there are always some points of complaint about cut clover, indispensable as it has been considered.

Soft, or Hard Feed.

Strong differences of opinion exist among poultrymen at large, as to the comparative value of soft feed, and grains for regular feeding. The majority doubtless feed a ground mess at least once a day throughout the winter, and some continue it throughout the year. It seems to be nearly a necessity, if only as a medium for mixing cut clover and ground meat, if the latter be dry. Some use all soft feed; these are few. A few others plant themselves firmly against soft feed of every sort, believing it to be a detriment to the flocks. And it is no stranger, perhaps, in connection with this than with many another difference, that each thinks he is borne out in his ideas by his experience. A late contribution from an expert seems to throw some light on the difficulty. He affirms that soft feeds, on the whole, tend to free egg production, while tending also in the long run, to induce disease. It is eggs at the expense of the hens. A point not to be forgotten is that soft feed costs less than hard grain.

Showing Dressed Poultry.

Samuel Cushman contributes a prod to use upon the utility men who deny their debt to the fancy, by charging that they have never yet supported the shows to the extent of exhibiting dressed poultry enough to make this department a success. This is his exhortation: "Practical raisers and utility men, if you are anything but beneficiaries of the fanners' shows and the breeders' work, if you do not always receive and never give, if you have enterprise or public spirit, show it by supporting the practical department of the Boston poultry show." This might apply equally to any show offering a chance in practical lines. Boston has made extra efforts in this direction.

M. V. N.

The Strawberry-Raspberry.

In a late floral advertising monthly I notice an illustration of this new berry. Last winter I bought two plants and they were small plants too. They grew and grew like the famous "turpie." There were a few flowers not as large as Roses unless the old Picayune Rose. I could never find any fruit, now September 12. I know the mass of plants is knee deep and about seven feet across. The question is what to do with them? I have little room to spare experimenting, still I do not like to give up a thing before giving it a fair trial. I had the Japanese Wineberry six years and at last had to dig it up and throw it away; it never fruited, would not grow in bush shape, just long vines that would climb over the supports and touch the ground making mere worthless plants.—MARGARET E. CAMPBELL, Louisiana.

—What the so-called "Strawberry-Raspberry" is good for we have not been able to discover, it sucks dreadfully and close attention alone will eradicate it now. The Japan Wineberry gives much satisfaction in some places—the climate seems to influence it.—Ed.

The Reliable Incubator & Brooder Co. of Quincy, Ill., has received official notice that it has captured the highest award on incubators and brooders at the Brussels, Belgium, International Exposition. This is the bronze medal and diploma.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

New York.

The New York Gardeners' Society gave a floral exhibition for charitable purposes in the Waldorf-Astoria Hotel Friday, Saturday, and Sunday last. Never was an exhibition staged in more palatial surroundings and the many groups of decorative plants together with fine specimens showed up well and produced an enchanting and fine pictorial effect. In the center of the room stood a plant of *Kentia Forsteriana*, 18 feet in height, exhibited by R. Brett, gardener to J. B. Colgate, Yonkers, N. Y. This same exhibitor also had other Palms, huge Crotons, Ferns and Cycas, scattered about. Crotons were also exhibited in fine condition and color by Charles Webber, gardener to Mrs. J. H. Hood-Wright, Fort Washington, N. Y. This same exhibitor also arranged a fine circular group on the main floor. Charles Knight, gardener to E. R. Ladew, Glen Cove, and W. Duckham, gardener to D. Willis James, Madison, N. J., were also large contributors.

For the best-arranged group covering space of 100 square feet, Charles Knight, gardener to E. R. Ladew, led with a remarkable arrangement, winning purely by reason of the superb and artistic grouping, entirely devoid of all conventionality. It was a masterpiece, and in surprising contrast to the same exhibitor's work in class 2, calling for a collection of plants covering 75 square feet. Indeed had it not been for the namecards one could not have credited to the same individual two such extremes of good and bad work.

R. Brett, gardener to J. B. Colgate, staged the second prize group in the former class with some very fine plants, including one of the grandest *Kentias* it is possible to find; also a grand Croton and many other choice plants. Charles Weber, gardener to Mrs. J. Hood-Wright, was awarded a certificate of merit for a good group in the same class.

In the class calling for "the best collection" of stove and greenhouse plants, to cover 75 square feet of space, there were three competitors—W. Duckham, gardener to D. Willis James; R. Brett, and Charles Knight. Mr. Duckham's display was very remarkable for richness, value, rarity, and variety; the grouping was very artistic too. To mention a few of the features there were: *Calamus cinnamomeus* (rare), *Maranta Sanderiana*, well grown, and the only specimen in the country. The leaf is broadly ovate, $13\frac{1}{2} \times 8\frac{1}{2}$ inches, very striking; the reverse is a dark purple; the superior surface very deep green, shiny, with paler mid-rib, each half of the leaf bearing numerous clear, transverse white lines (running parallel with the venation) leaving the clear green ground one inch wide near the mid-rib and one inch on the margin. Continuing the selection we must name *Zamia gracilis*, *Licuala elegans*, (Croton Reedl) (very fine), *Rex Begonia New Beauty*; *Dracena Sanderiana* with 10 growths, *Dracena The Curtiss* (magnificent), *D. Goldiana*, *Calamus assus*, showing a young frond of light brown; *Chamerops humilis*, well furnished; *Demonorops* sp., *Ludovia atrovirens*, and *Myriolepis schottiana*. The crown of the group was made by a specimen *Cocos Bonetti*, the only plant in America. Other plants were used for filling; there were in all 61 distinctive features. The award of the judges in this class was simply astounding; the above rich "collection" was placed second, the premier award going to a far poorer collection embracing only 31 distinctive features; the plants in it were more ordinary, of the usual greenhouse type, and not all in show condition, though larger. There were *Maranta zebrina*, two large Crotons, two *Ixoras*, *Nepenthes picturata*, well pitched (50 in all),

and *N. Mastersi*; a good piece was a splendid plant of *Acanthopanax crinita* in the center. Plainly the judges made their decision on the size of the plants; and they either did not realize the value and rarity of the components of Mr. Duckham's exhibit, or misinterpreted the demand of the schedule in calling for the best collection.

Orchids formed the richest part of the whole exhibition and it is doubtful whether such a unique and valuable collection was ever before displayed at any American flower show.

For C. G. Roebeling, Esq., of Trenton, his grower, Henry Clinkaberry, made a display that more than covered both with glory and afforded the public a rare chance to see some of the gems. In the two winning lots whereby a silver cup and silver medal were gained, there were *Cypripedium Spicerianum*, 10 flowers; *C. insignis Coulsoni*, one flower; *C. Charlesworthi*, six flowers, a fine type; *C. Henry Graves, Jr.*, one flower; *C. Arthurianum pulchellum*, eight flowers; *C. Thayerianum*, four flowers; *C. regale purpureum*, five flowers; and some 22 others. Most noticeable, however, was the rare, pale green *C. insignis Sanderia*, with one expanded bloom and two buds borne on a marvelously healthy and vigorous plant.

There were also *Vanda Sanderiana*, *V. suavis*, and the beautiful, rare *Ardises Lawrencei*.

Max Nathan, Hastings, N. Y., (gardener, R. Ashley), made a good display of *Anthuriums*, *Vanda cœrulea* and *Phalenopsis*. For the best specimen plant, A. Herrington was first with *Cattleya labiata* in a 24-inch pan and bearing 90 blooms. This same exhibitor also secured a first for group of Orchids in the commercial class with a group of *Cattleya labiata* and *Cypripedium insignis*.

Lager & Hurrell made an interesting display of *Cattleyas* and *Oncidiums*, while W. A. Manda had a charming mantel decoration, mainly *Oncidiums*. He also showed fancy *Caladiums*.

The average of the cut blooms of *Chrysanthemums* was poor, although the quantity was great. Space will allow only mention of the most striking contributions; Vivand-Morel and Niveus from Peter Duff; Golden Wedding from W. C. Russell; Cullingfordii from G. B. Winslade. In the collections this last named made a complete show, representing all sections. Other prize takers were Peter Duff, W. Scott, W. C. Russell, S. A. Leuba, and T. Harvey.

The principal prize winners for Roses and Carnations were: W. Turner, A. A. Taaffe, A. G. Wengert, Owen G. Owen, and W. Cowan. J. M. Hunter was first for *Gardenias*, F. R. Pierkovsky for single Violets, W. Duckham for doubles. W. Boyle showed *Rosa vireoflora*, *R. polyantha Midget*, and blooms of *Helleborus niger*.

There was a good showing of grapes, W. Scott being first for two bunches of black with *Barbarossa*, and Robert Jones, gardener to S. Peters, Islip, second with *Gros Colmar*. W. Scott was again first for four bunches. G. B. Winslade for two bunches of white. Ellwanger & Barry, Rochester, made a large contribution of choice pears.

Other exhibitors were W. Anderson, gardener to F. E. Constable; Peter Duff, gardener to J. Crosby Brown; W. C. Russell, gardener to C. F. Dieterich, Millbrook, N. Y.; James Dowlen, gardener to Gen. H. L. Terrell; A. L. Marshall, gardener to J. B. Dutcher, Pawling; Robert Whyte, gardener to Mr. Graeffe; Robert Angus, gardener to Major R. E. Hopkins, and among trade exhibitors F. R. Plerson Co., Siebrecht & Son, John Scott, Charles Trauth, John Lewis Childs, C. W. Ward, Queens, L. I., and A. Herrington.

Hartford, Conn.

The *Chrysanthemum Exhibition* of the Connecticut Horticultural Society was held in the Putnam Phalanx Hall on November 9, 10 and 11.

One of the most noticeable features of the show was the large number of bush plants, some of them six feet in height and carrying as many as 50 large sized

W. and D's. "Sure Crop"

MUSHROOM SPAWN

8 LBS. FOR \$1.00.

Hyacinths, Tulips, Narcissus, Lily of the Valley, Spiranæa.

SPECIAL PRICES TO CLEAR.

WEEBER AND DON,

Seed Merchants and Growers,
114 Chambers Street, NEW YORK.

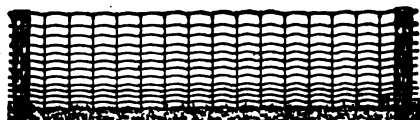
Mention American Gardening when you write

MacDONALD & McMANUS, Wholesale Florists and
Dealers in Cut Flowers

56 West 30th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Commission. Best market prices guaranteed.

Mention American Gardening when you write



A Long Look Ahead.

To-day's apparent economy may prove to have been gross extravagance. He who buys fence that is CHEAPEST IN THE "LONG RUN," practices real economy.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write

A MUSICAL EDUCATION

Without a Teacher

Price, 75c., Complete.

THE instruction books known as Winner's Eureka Methods are intended for pupils living at a distance from a teacher, or for those who cannot conveniently employ one. They do for the pupil exactly what a teacher would do, and in an equal length of time. Those people owe the enjoyment of playing a musical instrument to the excellent course of instruction found in these books. Beginning with the first rudiments of the subject, the pupil is led, step by step, by means of simple and direct explanations, illustrations and progressive exercises, to a complete mastery of the instrument desired. Besides the instruction pages, each volume contains nearly a hundred carefully chosen pieces for the instrument of which it treats. This alone would cost from \$2 to \$3, if purchased separately.

A COMPLETE INSTRUCTION BOOK

FOR ANY OF THE FOLLOWING INSTRUMENTS

ORGAN, PIANO, CLARINET, VIOLIN, FLUTE, BANJO, GUITAR, VIOLA, 'CELLO, MANDOLIN, ZITHER, CORNET, PICCOLO, ACCORDEON, FLAGEOLET, DOUBLE BASS.

EACH BOOK 75c. COMPLETE, Postpaid.

When ordering, mention the instrument for which the book is wanted.

OLIVER DITSON COMPANY

453-463 Washington St., Boston
New York Philadelphia
C. H. DITSON & CO. J. E. DITSON & CO.

Mention American Gardening when you write

KNOWN WORTH

You judge a man by his reputation. His reputation is formed by what he does. So in selecting a musical instrument—study its reputation. That represents what it does. Look into the merits of the

"Bay State"

Guitars
Mandolins
Banjos
Zithers
Pianos

Their superiority invites the closest scrutiny. Their reputation is their warranty; for it tells what it does. In choosing a "Bay State" you purchase known worth. Twenty-seven awards. Only winners of American gold medals.

Send for Catalogue and Prices

JOHN C. HAYNES & CO.

453-463 Washington St.
BOSTON.

Mention American Gardening when you write.

GIVEN FREE

A \$7.00

**BOOK of
EUGENE
FIELD'S
POEMS**

To each person interested in subscribing to the Eugene Field Monument Souvenir Fund. Subscriptions as low as \$1.00 will entitle the donor to this handsome volume (cloth bound, size 8 x 11) as a souvenir certificate of subscription to the fund toward building a monument to the beloved poet of childhood. Set for the noble contributions of the world's greatest artists. This book could not have been manufactured for less than \$7.00. Address EUGENE FIELD MONUMENT SOUVENIR FUND, 414 Fort Dearborn Building, Chicago, Ill. Mention this journal, as advertisement is inserted as per contribution.

Raise Hens

People living just outside cities and large towns can (owing to their nearness to markets) make large profits in the poultry business. No other occupation pays better or is easier to conduct. It can be successfully carried on by women or boys and girls, provided they have a knowledge of the right methods of management, feeding, etc. This may easily be gained by faithful study of that best and most practical poultry paper,

Farm-Poultry

It teaches how to make money raising poultry and eggs for market. It is edited by practical poultry raisers, who tell their readers how to prevent and cure all poultry diseases; bring pullets to early laying maturity; make hens lay when prices are highest; build the best houses and yards; keep poultry free from vermin; hatch strong chickens in incubators; caponize and dress poultry for market. Published semi-monthly.

Price, \$1.00 a year; 50 cents for six months. Sample copy and a 25c. book, "A Living from Poultry," sent for 12c. in stamps.

I. S. JOHNSON & CO.,
Custom House St., BOSTON, MASS.

Mention American Gardening when you write.

blooms. Another point worthy of notice was the unique success of Thomas Dryden, an amateur grower, who succeeded in gaining six first prizes and two seconds, all for plants in 10, 12, or 14 inch pots.

In the class calling for 15 distinct named plants, that exhibitor was first with Mrs. A. J. Drexel, Niveus, Miss G. Pitcher, Col. W. B. Smith, Mrs. Henry Robinson, Eda Prass, Queen, C. B. Whitnall, Vivland-Morel, W. Lincoln, Mrs. R. Craig, Mrs. G. Morgan, J. Collings, Mrs. W. P. Raymer, and Etoile de Lyon. James Smith, gardener to Miss E. Case, was second with 15 plants almost equal to Mr. Dryden's.

For four white distinct plants and four pink this order was reversed, but Mr. Dryden led again for four plants yellow and also for specimen Chinese and Japanese. Mr. Dryden's Niveus (Japanese) was six feet in height and carried about 36 good-sized blooms, while his Miss Georgiana Pitcher had 52 blooms, although some were a little past.

For specimen Pompon, J. Smith was first and Gustave Minge, gardener to M. G. Buckley, second.

In the class for three standards T. Dryden was the only exhibitor, but his plants were well worth the notice they received. They were Mrs. A. J. Drexel, Etoile de Lyon and Col. W. B. Smith. Etoile de Lyon was easily voted the prettiest plant on exhibition.

For 10 specimen blooms on single stems in six-inch pots, Stephen Delbar staged a magnificent collection. His varieties were Sybil Kaye, Mayflower, Etoile de Lyon, Golden Wedding, Miss M. Wanmaker, Mrs. Jerome Jones, W. Lincoln, Mrs. Henry Robinson, Mrs. C. B. Freeman, and Mrs. Perrin. J. Smith was second, also taking first for six similar plants. A. N. Pierson, Cromwell, Conn., S. Delbar, John Coombs, and George S. Osborn were prize winners. W. B. May, gardener to J. J. Goodwin, exhibited 20 naturally-grown sprays and also seedling blooms.

For vases of 12 yellow, 12 pink, and 12 red, A. N. Pierson was first with Miss G. Pitcher, Maud Dean, and Cullingfordil, respectively, and for a vase of white Geo. S. Osborn was first with the Queen.

Newport, R. I.

At the regular meeting of the Newport Horticultural Society held on November 10, there was a large attendance to listen to a paper on "The Chrysanthemum," by Mr. Arthur Griffen, gardener for J. J. Van Alen, Esq. The writer gave full instructions for the propagation and after culture of this popular flower, according to the present methods. He recommended pot culture as the most suitable for amateurs, the sizes being 8 or 10, the number of flowers to the plant to be left to the fancy of the individual grower. He advised the use of Clay's fertilizer.

At the business session seventeen new members were received, and two proposed for the sustaining membership, to be voted for at the next meeting. There was quite a large display of Chrysanthemums, and other flowers around the hall. The principal awards were to Mr.

\$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO.,
Toledo, O.

Sold by Druggists, 75c.

Arthur Griffen for new and improved forms of Begonia semperflorens in several colors, silver medal. To Alex. MacLellan for yellow seedling Chrysanthemum Mrs. John R. Drexel, bronze medal. To Mr. Robert Laurie for two vases of Chrysanthemum blooms, perfect specimens, certificates of merit. To Mr. Andrew S. Melkie for vase of Calanthes, in variety, certificate of merit.

At the next meeting on November 24, the Question Box is expected to furnish material for discussion.

Nasturtium, Heliotrope and such like are still blooming in the open air here. What a fine thing the annual Wall Flower is! It blooms freely in the summer with a second crop in the fall, and is equally as fragrant as the old-fashioned biennial. Cosmos has been extra fine, but was very late in blooming, caused no doubt, by the wet season.—A. MacL.

Millbrook, N. Y., Show.

Through the energy of two growers who are liberally aided and encouraged by their employers, Mr. Samuel Thorn and Mr. C. F. Dieterich, Millbrook has established for itself a name among Chrysanthemum growers. Among those competing on November 9 and 10, and who captured most of the prizes were W. C. Russell, gardener to C. F. Dieterich; I. L. Powell, gardener to Samuel Thorn; Gustave Thommen, gardener to Mr. J. D. Wing; Charles Rapp, gardener to Mr. Oakley Thorn; James Blair, gardener to Mr. D. O. Mills, Staatsburg; Thos. Harrison, gardener to Hon. Levi P. Morton, Rhinecliff; Wood Bros. Fishkill, and Thos. Devoy & Son, Poughkeepsie.

In the classes for cut blooms the principal struggle was between the two first-named gardeners. No keener competition ever existed than this, for when one of these contestants defeats the other it is only by the smallest margin, and then the one defeated would be equal to winning outright in almost any other exhibition.

Bush plants are always a feature of this exhibition, and were in a few cases better than usual. W. C. Russell's specimen plant of W. H. Lincoln put up for the best yellow, was perfect in contour, the lower tier being brought down low to entirely cover the pot; it was a perfect picture. The flowers, 210 in number, were of uniform size and finish and nearly up to exhibition standard. I. L. Powell was second. For the best pink, Mr. Russell was first with a grand plant of Vivland-Morel, and in the class calling for the best three, led with three grand plants—W. H. Lincoln, Puritan and Ivory. Mr. Powell being a no mean second with the same varieties.

For the best standard Mr. Powell was first with W. H. Lincoln.

For the best plant in the show Mr. Russell was first with W. H. Lincoln, about seven feet through.

The competition for 12 blooms distinct, with long stems, brought out four competitors. Mr. Russell secured the award with Mayflower, Major Bonaffon, Mutual Friend, Golden Wedding, Mrs. Jerome Jones, Inter-Ocean, H. W. Rieman, Minerva, Erminilda, Niveus, Mrs. Peabody, and Vivland-Morel.

In yellow, first W. C. Russell, with Golden Wedding. In white, I. L. Powell was first with five heavy blooms of Niveus and one bloom of Mrs. H. Weeks. For six pink, Vivland-Morel, with enormous blooms, from Mr. Russell, were victorious. For six crimson Mr. Russell scored with W. Seward. In six any color W. C. Russell was first with Mrs. Jerome Jones. For the best single bloom Mr. Russell won with a Mrs. Peabody, 27½ inches in circumference. In 25 blooms to a vase, one variety, Mr. Russell was strong with a marvelous vase of Golden Wedding; but Mr. Powell's vase of Minerva was so thoroughly good that the judges divided the honors.

For a vase of Chrysanthemums arranged with other foliage for effect, Gustave Thommen was first with a charming arrangement of Berberis Thunbergii, Ampelopsis, and Niveus blooms. In the collection of cut blooms not less than three varieties, six blooms of each, in

six vases, was the great struggle between the two giants, Mr. Russell winning by perhaps two points only; his varieties were Vivand-Morel, Golden Wedding, Major Bonaffon, Minerva, Mayflower, and Mrs. Jerome Jones. Mr. Powell had four of the same kind, the two other kinds being Mutual Friend and Elverson.

The classes for cut roses were better filled than usual. Charles Rapp, Gustave Thommen, I. L. Powell, W. C. Russell, Thos. Harrison and J. Blair were the chief winners.

A certificate of merit was awarded to A. Herrington, Madison, N. J., for chrysanthemum Frank Hardy, also to John N. May, Summit, N. J., for chrysanthemums Evangeline and Mayflower.

Northampton, Mass. Show.

The third annual Chrysanthemum Exhibition was held in the City Hall on Thursday, Friday, and Saturday, November 4, 5, and 6, and was a decided success. With two exceptions, the exhibits were all made by the local gardeners and florists, and the hall was filled to overflowing. E. J. Canning, of the Smith College Botanic Garden, had the largest, and best exhibit. It consisted of a large group arranged for effect, containing about 40 plants and 10 specimen plants. The specimens were grown in 10-inch pots and several measured four and a half feet in diameter, and were as symmetrical as it was possible to make them. The varieties included: Mrs. Henry Robinson, W. H. Lincoln, Golden Gate, Louis Boehmer, Mrs. E. W. Clark, Major Bonaffon, Geo. W. Childs, John Shrimpton, Mrs. Perrin, and E. G. Hill. This was not in competition.

The next largest exhibit was made by D. McGregor, gardener for E. H. R. Lyman, Fort Hill, Northampton, who displayed a well-finished lot of bush and single-stemmed plants which secured most of the first premiums. He also made a fine display of cut Chrysanthemums and Carnations.

G. W. Thorniley, gardener at the Northampton Lunatic Asylum, exhibited a group of mixed plants, principally Chrysanthemums. He also had several vases of cut blooms on exhibition which were of good size.

H. Field, a Northampton florist, displayed a group of plants arranged for effect, for which he received first premium.

G. Campbell, gardener for Miss Baker, Pomeroy Terrace, exhibited a group of Chrysanthemums grown without a greenhouse; and it was a very creditable display.

J. Smith, gardener for L. Dimmock, Esq., Leeds, showed a group of very well-grown bush and single-stemmed Chrysanthemums.

Philadelphia Flower Show.

The fourteenth annual Chrysanthemum Exhibition of the Pennsylvania Horticultural Society opened in Horticultural Hall on Tuesday, Nov. 2. One of the chief features was the fine display of decorative plants.

As in past years the pot plants of Chrysanthemums were not numerous, and not up to the standard of eight years ago, although the exhibits of the Penn Rock Co. and of Gordon Smirl were very good. The cut flowers made a very fine display, there being many exhibits of exceptional value as to quality and size.

On entering the hall the first thing to catch the eye was the grand display of decorative plants of Henry A. Dreer. On the right was a group of Cibotium Schiedii; next to this a group of *Latania aurea*; on the left was the aquatic exhibit made by this firm.

The chief attraction in the cut flowers of Chrysanthemums were the vases of the new Pennsylvania, exhibited by Hugh Graham. This variety was awarded a silver medal, also a certificate of merit.

In the exhibits of cut blooms of chrysanthemums, one worthy of special notice was the grand collection Percival Roberts, Jr. (John Cullen, gardener). Though not in competition, it was

awarded a special premium of a silver cup.

Among the seedling chrysanthemums, one of light delicate pink, shown by Henry B. Surman, gardener to E. W. Clark, Esq., was awarded a first premium. Another new variety, a yellow sport from Mrs. Jerome Jones, exhibited by Ferdinand Heck, gardener to Geo. F. Baer, Esq., Reading, was awarded a certificate of merit.

One of the new exhibitors this year was Thos. Logan, gardener to Mr. Wm. L. Elkins, Jr., who exhibited a new *Dracena* named Elkinsii, which was awarded a certificate of merit. He also staged a fine collection of decorative plants.

The new American seedling *Cypripedium* Edwin Lonsdale, which was raised by Henry T. Chinkaberry, gardener to C. G. Roebeling, Esq., Trenton, N. J., and described in AMERICAN GARDENING, Nov. 18, 1897, was the center of attraction, and was awarded a silver medal.

Peach Trees for everybody. Wholesale and retail R. S. Joubert, Box 11, Steubenville, Del. Mention American Gardening when you write.

We PAY CASH each WEEK the year round, if you sell Stark Trees. Outfit free. STARK NURSERY, LOUISIANA, Mo., Stark, Mo., Richard, Mo., Bewick, N. Y. Mention American Gardening when you write.

PEACH TREES, \$3 PER 100.

All kinds of Trees and Plants CHEAP. Cat. FREE. KELLANCE NURSERY CO., Box 140, Geneva, N. Y. Mention American Gardening when you write.

**MAKE
YOUR
FLOWERS
GROW**

Peerless Flower Food will do it. Urges nature to do her utmost. Gives new life to drooping plants, makes everybody lucky with flowers. Clean and odorless. Price 25 cents per pound pkg. By mail 40 cents.

Sharpless & Carpenter,
124 S. Delaware Ave., Philada.

Mention American Gardening when you write.

LETTUCE PLANTS.

Big Boston, Boston Market, Tennis Ball, White Leaf, Grand Rapids, and Reichen's Forcing. 15 cts. per 100; \$1.00 per 1000. If by mail add 10 cts. per 100.

CASH WITH ORDER.

N. VINCENT JR. & SON, White Marsh, Md.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California

Mention American Gardening when you write.

POULTRY RAISERS AND ALL \$6.00 for \$2.50.

Christian Herald, printed in colors, largest and best relig. weekly in the world,	\$1.50
American Agriculturist, best 28 page illustrated farm and market weekly,	1.00
American Agriculturist Year Book and Almanac, over 600 pages, worth,	1.00
New York Weekly Tribune, best 20 page newspaper in the United States,	1.00
Poultry Keeper, twenty pages, printed in colors. It leads, others follow,	.50
P. K. Illustrator No. 1, 100 illustrations, poultry houses, incubators, brooders, etc.,	.25
P. K. Illustrator No. 2, 75 illustrations, artificial incubation, care of chicks, etc.,	.25
P. K. Illustrator No. 3, Poultry Diseases, Gapes, Roup, Cholera, Moulting, etc.,	.25
P. K. Illustrator No. 4, Judging Fowls, description of breeds, Mating, Points, etc.,	.25

For only \$2.50 we send these 4 great papers 1 year and the 5 books, grand total \$6.00

Sample P. K. with other offers FREE.

POULTRY KEEPER CO. Box 39, Parkesburg, Pa.

Mention American Gardening when you write.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION as assistant gardener on gentleman's place; roses, carnations etc. under glass. Address Assistant Gardener, care of American Gardening, P. O. Box 1697, New York.

WANTED, position as head Gardener, manager of private place; practically versed in all branches of horticulture and landscape work; accustomed to the management of help; 24 years' experience; references. W. P. Herbst, care of American Gardening.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

RASPBERRY and Strawberry plants. Chas. C. Nash, Three Rivers, Michigan.

MONARCH INCUBATOR for sale, or will exchange for B. P. Rocks. H. Spencer, Rossville, S. I., N. Y.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Bead Glass & Paint Co., 456 W. Broadway, New York.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Asaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

CALIFORNIA PRIVET for Hedges. Fine, large plants, two years old, three dollars per hundred, cash with order. Reference 1st National Bank, Asbury Park. Atlantic Coast Nursery, James H. Cornell, Proprietor, 606 Fourth Ave., Asbury Park, N. J.

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished.

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

AGENTS WANTED, by the CELESTINEVA Nurseries, established 1844. Good Pay. Success ensured to Workers. Address

W. & T. SMITH, GENEVA, N. Y. Mention American Gardening when you write.

INCUBATORS Self-regulating. Catalogue free. G. S. SINGER, Cardington, O. Mention American Gardening when you write.

HATCH Chickens BY STEAM—
With the MODEL

EXCELSIOR Incubator

Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made.

GEO. H. STAHL,
114 to 122 S. 5th St. Quincy, Ill.

Mention American Gardening when you write.

Success

Engenders

Success!

Take our Advice:

Advertise

in the only

Successful

Weekly

Horticultural

Newspaper

Published

American Gardening

Subscribe

to a

Newspaper

which will make you

Successful

in your

Life's

Pursuit

American Gardening

840 OLD COLONY NURSERIES. 1897

Hardy Shrubs, Trees, Vines, Evergreens and Perennials.

A large and fine stock of well-rooted plants, grown in a sandy loam. Good plants, best sizes for planting; very cheap. Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs, &c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

=JADOO=

Chrysanthemums grown in JADOO FIBRE and watered with JADOO LIQUID were awarded

FIRST and SECOND PRIZES.

Crotons grown in JADOO FIBRE were awarded First and Second Prizes.

At the Annual Exhibition of Penna. Horticultural Society, Philadelphia, Nov. 9, 1897.

Plant your spring Bulbs in JADOO FIBRE and become Prize Winners.

THE AMERICAN JADOO CO.,

813 Fairmount Ave.,

PHILADELPHIA, PA.

Mention American Gardening when you write.

DO YOU NEED WATCHING?



Or, to put it another way,

Do You Need a Watch?

We sell them, sell them at such an exceedingly low price that you can't afford to go without them. Got 'em all sizes and styles.

But we'll just mention two:

An **Eight or Waltham Watch**, best movement made, hunting case, accurate time-keeper, handsomely engraved, **Doeber Case**, heavily gold-plated—last for all time. Ladies' or gentleman's size.

We'll send it to your address with privilege of examination. If it's not entirely as represented, send it back—costs you nothing. If you like it, pay the agent express charges and \$6.50. That's fair. Or this—

A **Hunting Case Watch**—beautifully engraved case, first-class movement, any size, heavily plated (14k)—looks just like a \$40.00 gold watch—keeps as good time as any of them. Sent to your express agent with privilege of examination—same conditions as all our watches sent out—and if you like it, pay him \$6.45 and express charges.

If you take our word for it, and send money with order, a handsome chain goes with either, and express charges are paid by us, for the prices named above.

Royal Manufacturing Co.

334 Dearborn St., CHICAGO

Mention American Gardening when you write

Indianapolis Flower Show.

The eleventh annual Chrysanthemum show opened on November 2, in Tomlinson Hall.

There were numerous entries for these in the different colors, the awards going to Geo. W. Childs, H. L. Sunderbruch, Mrs. Robinson, T. B. More, Thanksgiving, Solar Queen, Longfellow, The Barrington, Golden Wedding, Mrs. Farsdon, Nyansa, Ivory, and Domination.

In the contest for 15 varieties, three blooms each, Nathan Smith & Co. were first, and Hill & Co. second. These two collections gave the judges a good deal of trouble as to which should receive the award. As an index of the character of the blooms the following varieties in the two sections were shown: Smith's varieties—Philadelphia, Mrs. Robinson, Col. Smith, Georgiana Pitcher, M. Wasmaker, Mrs. G. Morgan, H. L. Sunderbruch, Ed. Hatch, The Queen, Geo. W. Childs, Mrs. Twombly, Charles Davis, Australian Gold, Tahib Bey, and Mutual Friend, with two exceptions, all standard varieties, some of them quite old ones, of deep build, with yellow and light colors predominating.

The most striking in the second prize lot were Evangeline, Mme. Carnot, The Barrington, Mme. G. Henry, Lawn Tennis, Mrs. Peabody, Western Pride, Golden Harvest, and Duchess of Fife.

Henry Riegan, of Indianapolis, was first on cut blooms, ten varieties, three of a kind. These were very fine. The Queen, Modesto, Lady Playfair, Vivand-Morel, Mrs. Geo. West were among the varieties that for this entry won first place.

In the class for 25 pink, Bertermann Co. were first with Mrs. Perrin.

In the class for vase of 25 yellows, Bertermann Co. were first with Major Bonnaffon.

For 25 blooms, bronze, Hill & Co. won with Mongolian Prince.

For vase of 25 white, Hill & Co. received first award for the English novelty Mrs. H. Weeks.

For best 10 white blooms, Chas. Wheatcraft won first premium with Mrs. Robinson; best 10 yellow, Weber & Son with Modesto; best 10 pink, Theo. Bock with Mrs. Perrin; best 10 red, Nathan Smith with G. W. Childs. In this class Stollery Bros. were second with magnificent Mrs. Drexel, immense in size and depth.

Hill & Co. were first with best 25 novelties, introductions of 1897; also on collection of pompons; among them were lovely examples of Elise Dordan, Black Douglas, Cedo Nulli in its three colors, Marie Stuart, the pompon anemone Jersey Beauty, etc.

Hugh Graham, Philadelphia, was awarded a certificate for chrysanthemum Pennsylvania, a bright yellow sport from Philadelphia, identical in every point with that variety save color.

Germantown, Pa. Show.

The fruit and flower show of the Germantown Horticultural Society held in the Y. M. C. A. hall, November 3 and 4, was voted the best ever given by the Society. Chrysanthemums did not monopolize the show, being rather in the minority. This feature was considered by the public as an excellent innovation. Fronting the entrance was a decoration of about 150 feet of floor space of palms, crotons, dracenas and chrysanthemums by Wm. Berger. The stage was entirely hidden by large palms, the work of Albert Woltemate. In front of the stage were two decorations, of 75 square feet each, and the north corner of the same extent. These were by Woltemate, Herbert Cliffe, and John Welsh Young, and were entered in competition, the judging being done by three prominent ladies of the town. The premier award went to Mr. Young, Mr. Woltemate being second.

The exhibit of Chrysanthemum plants was disappointing, the majority of those who entered claiming their inability to get the blooms sufficiently far forward so as to have the plants good enough for show purposes.

The display of cut blooms was very

fine, the new sport Pennsylvania, a very fine yellow shown by Hugh Graham taking the honors. The 12 blooms of this variety shown by this firm averaged 5 1/4 inches in diameter, both in height and breadth making them perfect globes.

The premier awards in Chrysanthemums were secured by John F. Sibson, gardener to Thomas McKean, both in plants and cut blooms.

Chicago Flower Show.

The seventh annual flower show of the Chicago Horticultural Society opened on November 9.

There was a unique exhibit of grafted Chrysanthemums grown by Robert Mueller, gardener to Mr. A. S. Trude, one of which had 14 kinds all well in flower—L. Boehmer, Mutual Friend, Mrs. Bunn, Jessica, Modesto, Morel, The Bard, Mayflower, Mme. F. Perrin, Dean Hole, G. W. Childs, Ninevah, Golden Hair, and Golden Wedding. Another contained six, and still another, seven kinds.

In standards John Reardon, gardener to M. A. Ryerson, Esq., staged Dean Hole, six feet through and loaded with flowers; Mutual Friend grafted on President Smith, very fine; Georgiana Pitcher, six feet, with over 800 blooms, and a 12-inch stem; also a Sunrise, a mass of flowers.

W. N. Rudd had a yellow sport of Mayflower, seven feet high, a beauty. A pair from Crabb & Hunter, Grand Rapids, Mich., were also fine. W. N. Rudd also had a seven-foot Mayflower, well done, and J. C. Vaughan a Miss Georgiana Pitcher, very neat.

In bush plants, John Reardon's Boehmer was six feet through, and three feet above pot, a mass of flowers; The Bard, magnificently done, and a pair of yellows six feet, one of Georgiana Pitcher with over 850 flowers, evenly distributed; a five-foot Ivory, also a six foot Mutual Friend. W. N. Rudd's plant of the same variety was four-foot through; he also had a Chebeague with very large flowers grown quite dwarf. An English variety, Duchess of York—a mass of gold tassel—and W. H. Lincoln, finely done. A. McAdam staged good 10-inch plants including The Bard, Mrs. J. G. Glessner, Mutual Friend, Dean Hole, and Mrs. Perrin.

Of single-stems there were but seven groups, all of dwarf growth. Mr. McAdam had Morel; J. C. Vaughan two groups, one of white, another of yellow; Crabb & Hunter three groups—Robinson, Mrs. Perrin, and Bonaffon.

It took 725 vases to stage the aggregation of cut flowers, and certainly for size and build of blooms this city has never seen their equal. W. N. Rudd took first for best 40 blooms white, yellow, pink, and any other color; best 20, one bloom each; 12, one bloom each, and six in white and yellow, being stopped only by a Highland Park grower in class 9, six blooms pink, with Vivand-Morel.

Picked from among the mass of exhibits for size or general high grade, we name the following: Le Colosse Grenoble, a broad, flat, whitish pink; Vt. de Chazelles, bronze-yellow; Maud Dean, pink; M. H. Jones, a curled pink; Modesto, simply grand; Vivand-Morel, Mayflower, Golden Wedding, Mrs. J. G. Glessner, Iora, The Queen, Oakland, Zuhda, Chas. Davis, Autumn Glory, Brazil, yellow; Mrs. Higginbotham, hairy pink; Golden Gate, Silver Cloud, Mme. Carnot, a curiously formed whorled white; Mrs. G. M. Pullman, W. S. Davis, Mrs. Peabody, Mrs. Geo. West, Mrs. Robinson, Chebeague, Mrs. H. Weeks, a perfect white; Evangeline, Mrs. M. A. Ryerson, Nyanza, an incurved broad petaled Jap.; Sunstone, light yellow; Boule d'Or, Western King, fine; E. Dailledouze, Jennie Falconer, Liberty, Lenawee, Simplicity, and Mrs. Harry Toler.

E. G. Uhllein's gardener had again a table of cut Orchids and another of plants finely in flower.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

Oak-tanned leather Harness



Send your address with 3-cent stamp for Illustrated Catalogue, all kinds of Single and Double Custom-Made Harness, sold direct to the consumer at wholesale prices. WE CAN SAVE YOU MONEY.

KING HARNESS CO., No. 3 Church St., Oswego, N. Y.

Mention American Gardening when you write



METAL WHEELS

In all sizes and varieties, to fit any axle. They last forever. Either direct or stagger spoke. Can't break down; can't dry out; no resetting of tires. Good in dry weather as in wet weather. Send for catalog & prices. ELECTRIC WHEEL CO., QUINCY - ILLINOIS.

Mention American Gardening when you write

A \$1.00 Raisin Seeder for 50c.



POSTPAID.

We are tired of selling dealers and waiting 90 days for our money, so we will sell house-keepers at Jobbers' prices.

Send 50 cents, and we will mail you postpaid one of our best

BAY STATE RAISIN SEEDERS

Guaranteed to seed 1 lb. of raisins in 5 minutes. Simple to operate and easy to clean.

EASTON MFG. CO. D. 10, 64 Federal Street, BOSTON.

Mention American Gardening when you write.

A BARGAIN

We have made arrangements to furnish **THE OHIO FARMER** of Cleveland, O., and **AMERICAN GARDENING**, both papers, one year, making a total of 104 great papers, for only \$1.60.

ONLY \$1.60

THE OHIO FARMER

is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the LEADER of the Agricultural Press of America. A 20-page, 80-column paper EVERY WEEK in the year; employs THE VERY BEST WRITERS that money can produce; a strong, fearless defender of the agricultural interest of this country, and CLEAR in both reading and advertising columns. IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE.

Present subscribers can order this combination at once and have their present term of subscription to **AMERICAN GARDENING** extended for one year. New subscribers to **THE OHIO FARMER** will receive the rest of this year free. Address all orders,

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$2.00. 25 per cent. off to subscribers to American Gardening and Florists' Exchange.

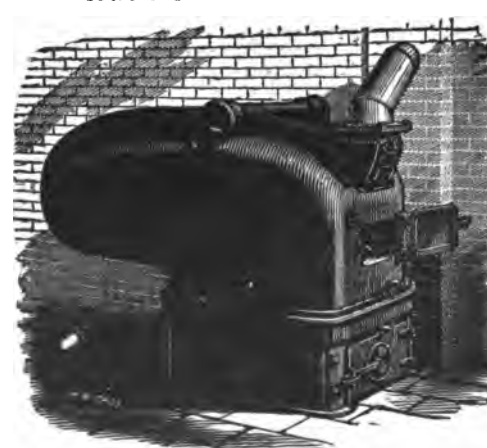
This work contains nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work. On heavy enamelled paper. Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., P. O. Box 1697, New York City.

GREENHOUSE HEATING AND VENTILATING,

Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

**FIVE PATTERNS OF BOILERS
NINETEEN SIZES**

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

Iron Frame Benches with the "Perfect Drainage Bench Tile" or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.

WHOLESALE MARKET REPORT.

New York.

Roses are selling very low; good Bride and Bridesmaid can be bought at \$3 per 100, such as under ordinary circumstances should make \$5 to \$6. Lower grades of these and general stock have no real fixed value. Even special Beauty have been sold as low as \$10 per 100.

Carnations move slowly and are not as good property as they were two weeks ago.

Violets so far are the best selling goods on the market this week and sell for 50c. to \$1.50 per 100.

Violet teas have been a feature in society life this week. It will be to the violet grower's advantage if they continue to be fashionable.

Chrysanthemums are in the cellars and boxes unsold—huge quantities of them. Excellent quality is offered at \$1 and \$1.50 per dozen, but buyers won't be tempted. Not so long ago a similar quality of blooms was bringing \$4 to \$6 per dozen.

Valley is moving fairly well, but it is hard to get; \$8 per 100 for extra grade is realized.

Lilium Harrisii are poor selling stock, and in hundred lots only make \$5; by the dozen \$1 is difficult to get, many being sold for less.

Cattleyas have not been plentiful this week and hold their price fairly well. Cypripediums make 10c. to 12c. each, and are coming in freely.

Roman Hyacinths are seen in quantity

now, but they are evidently poor selling stock. The fruit and vegetable market is in a poor condition at time of going to press. Business is dragging with everything in the buyers' favor; the wet, muggy weather helps these conditions. Toward the end of the week a change may be expected owing to the near approach of Thanksgiving. "If we can only have sharp, cold, clear weather," say the market men, "everything will be all right."

Hothouse grapes are averaging 75c. per pound for European, American-grown are being thrown away unsold.

Tomatoes make 20c. to 25c. per pound. Mushrooms are selling well at 40c. to 60c. per pound.

Frame lettuce are scarce and sell well. Cucumbers are selling slowly, owing to competition of Florida stock; 75c. per dozen is regarded as a very fancy figure.

Apples—Winesap, Va., poor to fair, \$1.50@2.50; good to fancy, \$3.50@4; Johnson's Winter, Va., poor to fair, \$1.50@2.50; good to fancy, \$3.50@4; Snow, State, poor to fair, \$2@2.50; good to fancy, \$3@4; King, State, poor to fair, \$1.50@2.50; good to fancy, \$3@4; Ben Davis, western, good to fancy, \$2.50@3.25; Virginia, poor to fair, \$1.50@2; good to fancy, \$2.50@3; Greening, State, poor to fair, \$1.50@2; good to fancy, \$2.50@3.50; Baldwin, State, poor to fair, \$1.50@2.25; good to fancy, \$2.50@3.25; N. Spy, State, poor to fair, \$1.50@2; good to fancy, \$2.50@3.50;

mixed lots, poor to fair, \$1@1.75; good to fancy \$2@2.50; open heads, poor to fair, \$1@1.50.

Pears—Seckel, per bushel box, \$1.25@2.50; per keg, \$1.50@2.75; Beurré Bon, per barrel, \$2@4; Kieffer, Jersey, per barrel, \$2@3; up-river, per barrel, \$2@2.75; Lawrence, per barrel, \$1.50@2.25; Beurré Clairgeau, per barrel, \$2@3; Beurré d'Anjou, per barrel, \$1.75@2.25; Vicar, per barrel, \$1.25@1.75.

Grapes—Delaware, fancy, per small basket, 13@15c.; common to good, per small basket, 7@12c.; Niagara, fancy, per small basket, 12; common to fair, per small basket, 7@10c.; Catawba, fancy, per small basket, 9@10c.; ordinary, per small basket, 7@8c.; Concord, per large basket, 11@12½c.; fancy, per small basket, 9@10c.; ordinary, per small basket, 7@8c.; inferior stock, small basket, 4@6c.; white kinds, in trays, per 100 pounds, \$1@1.25; Catawba, in trays, per 100 pounds, 85c.@\$1; Concord, in trays, per 100 pounds, 85c.@\$1; very inferior, per 100 pounds, 50@75c.

Nuts—Northern chestnuts are still scarce, but the demand is light; a fair supply of southern offering. Prime to fancy northern quoted at \$5.50@6.50 per bushel of 60 pounds; most sales of southern at \$3.50@4; a few are held at shade higher but without important sales. Hickory nuts firm at \$1.75.

Carolina peas generally brought \$1.50. Brussels sprouts, per quart, 4@8c.

Cauliflowers—Fancy, per barrel, good to prime, per barrel, \$1.25@1.50; poor to fair, per barrel, 50c.@\$1.

Celery—Choice to fancy, large, per dozen, 30@35c.; fair to prime, per dozen, 15@25c.; small and poor, per dozen, 8@12c.

Cabbages—Red, per barrel, 75@90c.; Jersey and Long Island, per 100, \$3@4; State, per 100, \$2.50@3.50.

Carrots—Washed, per barrel, \$1@1.25; unwashed, per barrel, 75@90c.

Cucumbers—Florida, per crate, \$1@1.75.

Egg plants—Florida, per barrel, \$3@8; Florida, per box, \$3@4.

Green peas—Virginia, per one-half barrel basket, 50c.@\$1.75; N. C., per one-third barrel basket, \$1.25@1.50.

Onions—Orange Co., red, prime, per bag, \$1.75@2.25; yellow, per bag, \$1.50@2; white, per bag, \$1.50@3; inferior, per bag, 75c.@\$1.25; State and west, yellow, per barrel, \$1@1.75; eastern, white, per barrel, \$2@3; eastern, red, per barrel, \$2.25@2.50; eastern, yellow, per barrel, \$2.

Okra—Florida, per carrier, \$1.50@2; Charleston wax, prime, bushel basket, 75c.@\$1.50; Charleston, green, per bushel basket, 50c.@\$1.

Squash—Hubbard, per barrel, \$1.25@1.50; Marrow, per barrel, \$1@1.25.

Turnips—Russia, Canada, car lots, per barrel 50@75c.

Potatoes are firm and likely to improve in value.

Boston.

Boston market celery is in good demand at about \$1.50 a dozen; all other grades remain as last week.

Squash—Marrow, \$1.25 a barrel; Hubbard about \$20@25 a ton, if good. Unless the goods are very fancy, they will not bring these top prices; this means hard-shelled; Turbans \$1.25 a barrel, or \$20 a ton.

Onions remain about the same as last week, that is, \$2 per barrel; Spanish nearly cleaned up, \$1.50 a crate, which is supposed to hold 50 pounds, but very seldom does.

Shell beans practically done, only a few coming here; string beans in good demand if good stock, but most of it not very good.

Turnips—Yellow stock 85c.@\$1 a barrel; white French, \$1; white flats 30c. a bushel.

Radishes 25c. a dozen bunches. Spinach 15@25c. a bushel. Beets 50@75c. a dozen bunches. Carrots 75c.@\$1. Parsnips 50@75c. Parsley 50c. Artichokes \$1.50 a box. Leeks 40@50c. a dozen.

The market on cabbage remains very dull; no change in price, 3c. a head. Cauliflower is in a little better demand, selling at 12½@25c. a head.

COULD NOT EAT.

A Woman's Strong Constitution Wrecked. Effects of a Treacherous Disease. A Wonderful Case.

From the Bulletin, Monroe, La.

Mrs. Stephen Robbins is the wife of a prominent farmer living on a large and well-kept plantation just at the edge of Monroe, La. They have resided in this community but two years, having moved here from Illinois. The change was made for the benefit of Mrs. Robbins' health, her physicians having advised her that it was the only hope of her ever regaining her lost health.

"Three years ago this last winter," said Mrs. Robbins, "I was very sick with that most treacherous disease, the grippe. I had a very severe time with it, but was able to get out after being confined to my home several weeks. I think I went out too soon, for I immediately contracted a cold and had a relapse, which is a common occurrence with that disease. For several more weeks I was confined to the house and after this I did not fully recover until recently. I was able to get out again, but I was quite a different woman.

"My former strong constitution was wrecked, and I was a dwindling mass of skin and bones. My blood was thin and I had grown pale and sallow. My lungs were so affected that I thought I was going into consumption. During my illness I had lost thirty pounds in weight. I tried to regain my strength and former good health by trying different medicines and physicians, but nothing seemed to help me. My appetite was gone, and when I ate the food it would not stay on my stomach.

"The only thing my physician said for me to do was to take a change of climate, and on his advice I came here. At first I seemed benefited, but to my sorrow it proved to be only temporary, and in a few months I was in my former condition. The color had left my cheeks, I had no energy, and life was a misery. I had become a burden to myself and family. Finally, I happened to read in a newspaper of how Dr. Williams' Pink

Pills for Pale People had effected a miraculous cure with the same disease which a neighbor of mine had in Illinois.

"On the strength of this testimonial I decided at once to give the medicine a trial. I accordingly sent for a box of Dr. Williams' Pink Pills for Pale People, and gave the pills a thorough trial. I did not notice any change till I had tried the second box. I was discouraged a little with the result of the first box, but knowing that I should not expect a sudden cure of such a chronic case as mine, I tried the second box with the result that I immediately began getting better. I used five boxes of these pills and was completely cured, as you see me to-day, weighing more than ever before."

As evidence of the truthfulness of her story Mrs. Robbins volunteered to make the following sworn statement:

"I hereby affirm that the above statement is every word exact and true."

"Mrs. STEPHEN ROBBINS.

"Monroe La., March 2, 1897."

"Subscribed and sworn to before me, a notary public in and for the Parish of Winn, State of Louisiana, this the 2d day of March, 1897.

AMOS R. JESSUP, Notary Public."

Dr. Williams' Pink Pills for Pale People contain, in a condensed form, all the elements necessary to give new life and richness to the blood and restore shattered nerves. They are also a specific for troubles peculiar to females, such as suppressions, irregularities and all forms of weakness. They build up the blood, and restore the glow of health to pale and sallow cheeks. In men they effect a radical cure in all cases arising from mental worry, overwork or excesses of whatever nature. Pink Pills are sold in boxes (never in loose bulk) at 50 cents a box or six boxes for \$2.50, and may be had of all druggists, or direct by mail from Dr. Williams' Medicine Co., Schenectady, N. Y.

Hothouse cucumbers show very little change from last week, unless very well assorted. Fancy goods bring little above the quotation, \$6@8 a hundred.

Hothouse lettuce in good demand; orders coming in from other sections make our market quite bare of it; selling 85@50c., a raise of 10c. from last week.

Mushrooms selling 25@40c. a pound; very dull.

Hothouse tomatoes 20@80c. a pound.

Hothouse grapes 25@50c. a pound; takes a very choice article to bring the top price.

The potato market is a grade firmer. Green Mountain stock, asking price to-day 80c. a bushel; Hebrons 75@80c.; White Stars about 75c. a bushel. Sweet potatoes \$1.75 a barrel.

Mint 40@50c. a dozen bunches; oyster plant 75c. a dozen.

Oranges—150-176 count. Florida stock, \$4.50. Grape fruit \$6@7.50.

Pears—Market is active; very fair demand for Duchess at \$1.50@2.50; Buerré Bosc \$3@4; Buerré Clairgeau \$2@3; Buerré d'Anjou \$1.25@2. Quinces dull, \$1.50 a bushel.

Cranberries are a little firmer for hard nice goods. It is getting near Thanksgiving when everybody eats turkey and cranberry sauce. Ordinary stock selling about \$5, with fancy \$5.50. Crates \$1.75.

Egg plants in good demand at about \$4.50 per crate of two dozen.

Northern chestnuts \$6 a bushel.

Apples—Greenings \$2.75@3; Baldwins \$3@3.25; fancy red eating apples \$3@3.50 a barrel. These prices are for No. 1 stock.

Grapes—Concords, large baskets 12c.; Niagaras 12c.; Salems and Catawbas 13@14c.; small baskets 8@10c.

Onions and Apples.

The onion growers of western New York have agreed among themselves to hold their product for higher prices. The result is, dealers are buying in Michigan and other Western states at the market price. Ten thousand bushels, purchased at 50 cents per bushel, are en route from the West for storage. Lyons growers have harvested about 20,000 bushels, and but very little of the local crop has been marketed. An early freeze would catch thousands of bushels now piled in tiers out of doors.

The apple market, open, presents marked contrast compared with last year. Kings are worth \$3, Ben Davis \$2.50, Baldwins \$2.75, and Greenings \$2.25 to \$2.50. Cider stock last year brought 5 cents a bushel. The present price is 80 cents. Notwithstanding the tremendous decrease of production this year, it is a fair presumption that the average orchard will produce more profit this autumn than last. A thousand-barrel orchard last year brought in not to exceed \$750 gross. After deducting the cost of barrels at 30 cents each, the proceeds were reduced to \$450. The same orchard this year will clean up about 250 barrels, which, if sold at the present prices, will bring an average of \$2.50 per barrel, or a total of \$625. The cost of barrels will be only \$62.50 this year, leaving \$562.50 to pay for picking and hauling 250 barrels, as against \$450 to pay for picking and hauling 1,000 barrels last year.

From a Well Known Fruit Grower.

I have just finished looking over some back numbers of AMERICAN GARDENING. It seems to be peculiarly fitted to fill the popular need in its line. It cannot fail to be a success and a growing success.

O. W. BLACKNALL.

The Henry Strawberry plants came all right in good condition. I hope they will do well for me, but good or bad, I shall let you know later my treatment of them. AMERICAN GARDENING is always very interesting to me, and more so at this time when we are all under strictest quarantine. I am very much interested in Mr. Jerolaman's letters, and hope after he has exhausted the strawberry, he will write of something else.—C., La.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.		General—Con.	
	A. B.		A. B.
American Agriculturist.....	\$1 00 \$1 85	Donahoe's Magazine.....	\$3 00 \$3 00
Breeders' Gazette.....	2 00 2 40	Eclectic Magazine.....	5 00 5 25
Country Gentleman.....	2 00 2 75	Electrical Review.....	3 00 3 20
Farmers' Advocate (Canada)...	1 00 1 75	Engineering Magazine.....	3 00 4 00
Farmers' Magazine.....	1 00 1 75	Forest and Stream (new only)...	4 00 4 25
Farmers' Review.....	1 00 1 90	Forum, The.....	3 00 3 00
Farm, Field and Fireside.....	1 00 1 50	Frank Harrison's Magazine.....	50 1 40
Farm and Fireside.....	50 1 40	Frank Leslie's Popular Monthly...	3 00 3 50
Farm and Home.....	50 1 40	Godey's Magazine.....	1 00 1 90
Farm Journal.....	50 1 25	Golden Days.....	3 00 3 25
Farm News.....	50 1 20	Good Housekeeping.....	2 00 2 70
Gleanings in Bee Culture.....	1 00 1 85	Harper's Bazaar.....	4 00 4 25
Home and Farm.....	50 1 45	Harper's Magazine.....	4 00 4 25
Indiana Farmer.....	1 00 1 85	Harper's Weekly.....	4 00 4 25
Mass. Ploughman, new.....	2 00 2 60	Harper's Round Table.....	2 00 2 50
Renewals.....	2 00 2 90	Home Queen.....	50 1 25
Michigan Farmer.....	1 00 1 60	Illustrated American.....	4 00 4 30
National Stockman and Farmer...	1 00 1 85	Independent.....	3 00 3 00
Nebraska Farmer.....	1 25 1 85	Jennens Miller's Illus. Mag.....	1 00 1 75
New England Farmer.....	2 00 2 50	Judge.....	5 00 5 20
Ohio Farmer.....	1 00 1 60	Judge's Library.....	1 00 1 25
Orange Judd Farmer.....	1 00 1 85	Ladies' Home Journal, The.....	1 00 1 90
Pacific Rural Press.....	2 40 3 00	Ladies' Home Companion.....	50 1 45
Practical Dairyman.....	50 1 35	Ladies' World.....	35 1 80
Practical Farmer.....	1 00 1 85	Leslie's Illustrated.....	4 00 4 40
Prairie Farmer.....	1 00 1 85	Life.....	5 00 5 40
Rural New Yorker.....	1 00 1 80	Lippincott's.....	3 00 3 25
Southern Cultivator.....	1 00 1 85	Macmillan's.....	3 00 3 60
Southern Farm.....	1 00 1 85	McClure's Magazine.....	1 00 1 90
Southern Florist and Gardener...	1 00 1 75	Munsey's Magazine.....	1 00 1 90
Strawberry Cultivist.....	50 1 85	Nation, The.....	3 00 3 80
Strawberry Specialist, new.....	50 1 00	New England Magazine.....	3 00 3 50
Renewals.....	50 1 25	New York Ledger.....	2 00 2 50
Texas Farmer.....	1 00 1 75	" Tribune (Weekly).....	1 00 1 90
Texas Farm and Ranch.....	1 00 1 85	" World (Tri-Weekly).....	1 00 1 75
Horticultural, etc.		North American Review, The.....	5 00 5 50
Canadian Horticulturist.....	1 00 1 90	Notes and Queries.....	5 00 5 50
Garden and Forest.....	4 00 4 25	Observer, new only.....	3 00 3 25
Gardening (Chicago).....	2 00 2 50	Renewal.....	3 00 4 00
Meehan's Monthly.....	2 00 2 85	Outing.....	3 00 3 35
Vicks.....	50 1 85	Park and Cemetery.....	1 00 1 25
Poultry.		Peterson's Magazine.....	1 00 1 85
American Poultry Advocate.....	25 1 15	Philadelphia Press (Weekly).....	1 00 1 85
Fancier's Review.....	50 1 35	Phrenological Journal.....	1 50 2 25
Farm Poultry.....	1 00 1 50	Popular Science Monthly.....	5 00 5 55
Ohio Poultry Journal.....	65 1 40	Popular Science News.....	1 00 2 50
Poultry Herald.....	50 1 50	Puck.....	5 00 5 10
Poultry Keeper.....	50 1 35	Puck's Library.....	1 20 1 25
Poultry Monthly.....	1 00 1 25	Paritan.....	1 00 1 90
Reliable Poultry Journal.....	50 1 40	Review of Reviews.....	2 50 3 25
General.		Scientific American.....	3 00 3 60
Advance (Cong'l) new.....	2 00 2 60	" Supplement.....	5 00 5 25
Renewals.....	2 00 2 90	" with.....	7 00 7 25
American Field, new.....	4 00 4 25	" Builders' edition.....	2 50 3 10
Renewals.....	4 00 4 50	" Inc. B'l'ds' edit.....	5 50 5 75
American Kitchen Magazine.....	1 00 1 75	" All 3 editions.....	9 00 9 25
American Machinist.....	3 00 3 20	Scribner's.....	3 00 3 60
Aquarium.....	1 00 1 75	St. Nicholas.....	3 00 3 60
Arena.....	3 00 3 60	Sunday School Times.....	1 50 2 10
Art Amateur.....	4 00 4 35	Texas Siftings.....	4 00 4 25
Art Interchange (with plates)...	4 00 4 35	The Etude, new only.....	1 50 2 15
Atlantic Monthly.....	4 00 4 80	Renewals.....	1 50 2 35
Ave Maria.....	2 00 2 70	The Outlook.....	3 00 3 85
Babyhood.....	1 00 1 90	Toledo Blade.....	1 00 1 85
Baptist Missionary Magazine.....	1 00 1 90	Turf, Field and Farm, new.....	4 00 4 25
Carpentry and Building.....	1 00 1 85	Renewal.....	4 00 4 20
Century.....	4 00 4 60	Womankind.....	50 1 25
Chicago Herald (Weekly).....	1 50 2 35	Young Ladies' Journal.....	4 00 4 60
Chicago Inter-Ocean.....	1 00 1 80	Youth's Companion, new only.....	1 75 2 35
Chicago Weekly Times.....	50 1 40	Renewals.....	1 75 2 75
Christian Herald.....	1 50 2 15	Foreign.	
Christian Register.....	3 00 3 85	Farm and Home.....	2 25 3 25
Churchman.....	3 50 4 10	Field.....	10 50 11 00
Colman's Rural World.....	1 00 1 85	Garden.....	4 50 5 25
Cosmopolitan.....	1 00 1 90	Garden Work.....	2 50 3 25
Delineator (Butterick's).....	1 00 1 90	Gardener's Chronicle.....	4 50 5 25
Demorest's Monthly Magazine.....	2 00 2 60	Gardener's Magazine.....	4 50 5 25
Detroit Free Press (Weekly).....	1 00 1 90	Gardening, Illustrated.....	2 25 3 00
Domestic Monthly.....	1 50 2 15	Gardening World.....	2 50 3 25
		Journal of Botany.....	4 75 5 25
		Journal of Horticulture.....	4 00 4 85
		Kew Gardens Bulletin.....	1 50 2 25
		Revue Horticole.....	5 50 6 10

Address all
Orders to

AMERICAN GARDENING, P. O. Box 1897, New York.

Henry Strawberry Plant Premiums

Will be shipped to all who desire them this season until ground freezes.

Owing to the wonderful run on this unequalled Strawberry we are preparing 100,000 Henry plants for Spring delivery, and in this connection we desire our readers to remember

Two Facts

- 1—The Henry Strawberry can be obtained solely through a subscription to AMERICAN GARDENING; as the publishers will not sell plants under any consideration;
- 2—Neither will Mr. Jerolaman.

Who is Entitled to Plants

New and Renewal Subscribers.—Five plants of the Henry will be mailed, postpaid, as a premium to every Renewal or New Subscriber sending us \$1.00 for a year's subscription. When remitting be sure to state if you want this premium.

To Agents and Workers.—For every \$1.00 received from agents and others for New Subscriptions, we mail, postpaid, Ten Henry plants, Five to the New Subscriber and Five to the Agent.

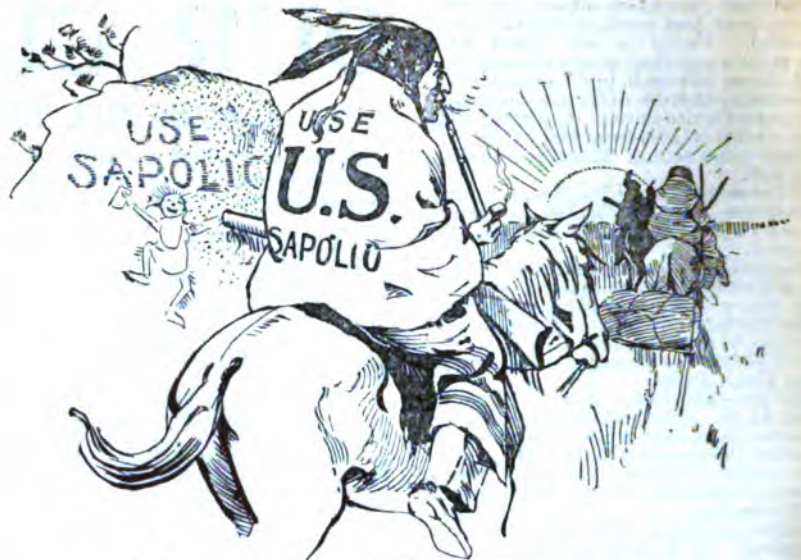
Special to Club Raisers!

Clubs of Ten.—To every agent sending us in a club of Ten New Names and \$10.00, we will forward in payment therefor One Hundred (100) Henry Strawberry Plants, by express, as well as send Five plants, postpaid, to each person in the club.

Mr. Jerolaman's series of articles has been put in pamphlet form; and agents will be supplied with copies on application. Best campaign matter out.

Address Your Letters,

AMERICAN GARDENING,
P. O. Box 1697, NEW YORK.



If we could teach the Indians to USE **SAPOLIO** it would quickly civilize them

Mention American Gardening when you write.

B.M. Watson, Jr.
Bussey Inst. South St.
Jamaica Plains

Lane's Steel Car-
riage Jack
Ask your hardware
dealer.

Makers LANE BROS.
Poughkeepsie, N. Y.



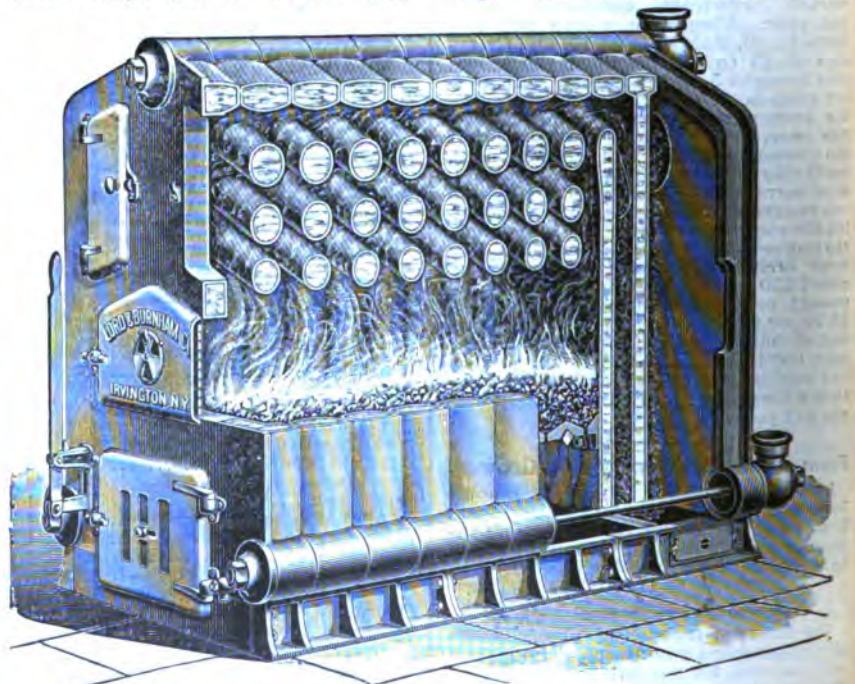
THE CROWN Bone Cutter!
for cutting green bones. For the poultryman.
Best in the world. Lowest in price. Send for
circular and testimonials. Wilson Bros., Easton, Pa.

Mention American Gardening when you write.

Mention American Gardening when you write.

LORD & BURNHAM CO.,
Horticultural Architects and Builders and Manufacturers of Heating and Ventilating Apparatus.
(Established 1856.)

Plans and estimates furnished on application for Heating and Ventilating Apparatus erected complete, or for material only. Highest Awards at the World's Fair



NEW SECTIONAL HOT WATER HEATER.

Specially adapted to large ranges. Will heat up to 16,500 feet of glass. Highest economy. Moderate cost. Also heaters for smaller work. Send six cents postage to New York office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

1846.

1898.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

OL. XVIII. No. 153.
DESIGNED SERIES VOL. LI.

NEW YORK, NOVEMBER 27, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

diverse conditions, overcoming.....	812	of.....	808	Lawn Truck, a useful.....	809	Question Box.....	811	turists.....	807
maryllis.....	812	Cycads and Palms.....	813	Leaves for Manure.....	808	Rose, unruly.....	809	Window Garden, The..	812
anthuriums.....	812	Exhibitions, reports on.....	813	Markets, New York, Boston, Philadelphia.....	818	Shrubs, flowering, list of.....	808	Wyandotte, the Silver.	817
beekeeper, the.....	812	Experiment Station tests.....	810	Pear Trees, management of.....	807	Strawberry Culture in December.....	806	Illustrations.	
brackets, home-made.....	807	Fertilizers for Berries.....	808	Plum Burbank.....	808	Strawberries, Fertilizers for.....	808	Bracket, a home made..	807
bulbs, blue flowered.....	812	Flower Show reports.....	813	Poultry Yard, the.....	817	Vegetable Garden.....	806	Lawn Truck and Sprayer, combined.....	809
Canadian Fruit in England.....	810	Fruit Garden.....	807	Private Gardeners.....	813	West Virginia Horticulturists.....	805	Weeping Willows in Boston.....	805
chrysanthemums, color critics.....	811	Jerolaman, Mr., and his.....	811	Pruning Pear Trees.....	807				



FIG. 232.—WEEPING WILLOWS AS SEEN IN THE BOSTON PUBLIC GARDENS.

For planting on the banks of streams and lakes, there is not a tree that can vie with the Weeping Willow (*Salix babylonica*) for perfection of repose and solemnity of effect. Of beauty as an individual tree, the Weeping Willow is never able to appear to best advantage except when used as suggested above.

On presenting the present picture, we take the occasion to remark that, rarely, if ever, has there been as satisfactory a photograph of this tree, most difficult to picture.

Strawberry Culture in December.

Winter Protection.

Winter protection should be applied as soon as the ground freezes hard enough for a wagon to drive over the fields without breaking through the frozen crust. The chief object in winter protection is to lessen the heaving of the soil and the consequent breaking of the roots and rootlets of the plants. The stiffer the soil the worse the heaving, and the greater the necessity of protection.

The covering should not be thick enough to entirely prevent the soil from freezing, but to greatly lessen the freezing in the severest weather. Pine straw, a little less than an inch deep after it settles, is the proper depth in this latitude. It would have to be deeper in proportion as you went North.

In winter protection at the North, the whole ground should be covered, beds, middles, and all.

The varieties of material that can be used are almost endless. Where pine straw, or pine needles, as it is often called, can be obtained, it is almost the ideal covering. Of all similar material it is the least likely to be blown off. Wheat straw, oat straw, marsh grass and other similar things are used. Cornstalks can also be used, but as they do not lie close a much thicker layer will, of course, be necessary.

The great objection to oak and similar leaves is that they blow off so badly, which is also the case with oat and wheat straw unless they are very fine-cut. Yet such leaves and straw are often used and anchored in place by placing on them small stones or a little earth at short intervals.

All available stable or barnyard manure should be used for this purpose, taking the place of other material. If coarse it can be applied quite thick directly over the plants. If very fine it will be best to use it mostly around and between the plants and to put a coarser, more open material just over the plants. The effect of too close a material over plants is to bleach and make them tender. Whatever covering is used it must be nearly all removed from immediately over the plants about the time that growth begins in the spring. The material can be left around the plants and between the rows, where it will serve the double purpose of keeping the berries clean and of conserving moisture then so essential to a good crop.

Whether winter protection pays or is even advisable south of the Mason and Dixon line is uncertain. I have experimented for many winters. Some winters it did good; some winters it seemed to be rather harmful. It certainly would not be advisable farther South where crickets and harmful insects harbor under it and feed on the plants. Besides, the warmer the climate the more danger of smothering and bleaching the plants.

But stable or barnyard manure is excellent in any climate if properly used. I have never known any insect pests to harbor under it.

At the South it should be applied around and between the plants. Used in this way with a liberal dressing of hardwood ashes (fifty bushels to the acre can be used), or 800 pounds of kainit in place of the ashes and 300 pounds of acid phosphate, a heavy crop of fine berries will almost surely be made. The fertilizer should be applied before the manure. It is also good to use without the manure.

How to Plant.

Plow the land well and deeply, harrowing if cloddy. Sandy loam will rarely need harrowing. Run off rows three feet apart. Two and a half feet will do if land is scarce, though it makes plowing somewhat more tedious. Sow in the furrow cotton-seed meal at a rate of 300 to 500 pounds an acre. Mix it with soil by running cultivator or plow down the furrows. List in this with a light furrow from each side. Work list down very low with hose or a horse drag. Set plants fifteen inches apart, or eighteen

inches if it is a stout-growing variety and the soil is very rich. Plant deep enough to cover roots well. Plants can safely be set a little deeper in winter than in spring.

Other fertilizer can be used. I recommend cotton-seed meal as being less likely to damage newly-set plants should it come in contact with their roots. But there is but little danger of this in the cool, moist fall and winter weather.

Kainit and acid phosphate can be applied at any time afterwards around or between the plants, and in quantities above recommended.

I often use a ton of cotton-seed meal to the acre, applying it broadcast and harrowing it in well before listing and planting. Still a barnyard manure can be used to great advantage if likewise broadcast and plowed in. Where plentifully used no other kind of fertilizer need be then applied.

The Advantage of Late Fall and Winter Planting.

South of the latitude of Washington, D. C., late fall and winter planting is the safest and surest, except on stiff, wet soil given to heaving during hard freezes. On such heaving soil the young plants, if unprotected, are liable to be lifted out of the ground if planted too late to get a hold before very severe weather sets in—say between November 15 and March 1.

But the danger of heaving can be prevented by a moderate covering of straw or manure placed mostly around the plants but some of it on them. In fact, young plants may be set in any climate, be it ever so cold, at any day when the ground is not frozen if at once covered with straw or manure to a depth corresponding to the coldness of the climate. The covering need, and indeed should not be thick enough to entirely prevent the ground from freezing, but only to materially lessen the freezing and heaving.

The advantages of late fall and winter planting are manifold. The ground then being always moist and the sun weak, there is rarely need to wait for rain. Enough fairly pleasant weather is pretty apt to come to plant in. There is then no rush of work as in the spring, and the preparation and planting can be thoroughly done. If a cold snap should stop the work, the plants can easily be packed away to keep until it is past. Even if it should be necessary to keep them for several weeks they are in no danger as long as they are kept moist and cool.

It is very hard not to get a stand at such a time. If the planting is left till spring, bad weather is apt to throw it back until late. The sun—the arch enemy of the newly-set strawberry plant—is then rapidly gaining power and dominion. Drought is more than apt to come. A newly-set plant checked by drought is hard to recover, and is never as vigorous as it would otherwise have been.

I have seen it stated that spring-set plants, starting as they do in freshly-plowed land, grow off better. I will admit that they do grow off nearly or quite as well, if there is plenty of rain. But that is a big "if" of late years.

Spring drought brings more than one evil. The plants are not only checked and retarded in growth, but cut-worms then get in their deadly work on the tender plants. I have never known them to seriously harm fall or winter-set plants, as they are vigorous enough by spring to defy the cut-worms.

I do not mean that strawberries cannot be successfully set in spring, for thousands of acres are successfully planted that way. I mean that on the whole, late fall and winter planting is the safest, surest, and best.

O. W. BLACKNALL, N. C.

Our Strawberry Pamphlet.

Owing to an expressed desire by the writer to thoroughly revise his series of articles on "Big Berries for All," it may be early in December before we will be able to issue the booklet. It will be well worth waiting for, however, as we confidently anticipate that it will prove the best treatise on the subject ever written, and practical to the core.

The Vegetable Garden.

Plan for Another Year.

It is frequently desirable to renew the stock of such permanent roots as rhubarb, asparagus, etc., and it is just as well to determine such matters, while they are in mind, and keep a memorandum of them, so that they may not be overlooked when the time comes to order the seeds.

Rhubarb.

The two varieties of rhubarb, Victoria and Linnæus are the best for culinary purposes, and it is just as well to have a little of both sorts, Linnæus being the earlier. It does not pay to grow the old-fashioned deteriorated small variety, so often seen in the amateur's garden.

Take Note of Variety Behavior.

Make a note of all the varieties of vegetables that succeeded best in your own garden, as well as those that did not appear to do so well, or were unsuitable. There are many little details of this kind on our minds now, which we all think we can remember in the spring, but when that busy time comes, are often overlooked and forgotten, so that it is a good plan to keep notes of such matters. They will prove useful as a guide another season.

Peas.

The most satisfactory all-round variety for general crop with us this year was the Alpha; it is a fine tasting, wrinkled sort, and a very heavy yielder, and growing only about two feet high; it does not require to be planted so close as do the larger growing sorts, and it is also easier to support. Every lover of peas should make a trial of it.

The New Life pea is another very promising new one, and well worthy of a trial.

Beans.

The Early Valentine Wax and Wardwell's Wax are two very excellent croppers; they have a strong constitution, hence they are not so subject to the rust that spoils the appearance of many other beans.

Lettuce.

Henderson's New York is a splendid large-headed sort, standing drought well in the summer without bolting. It is very tender and crisp, and in every way desirable.

The Trianon Cos is deservedly popular with those accustomed to it. It is now and always has been extensively grown in the best conducted gardens, both here and in Europe. Those who have not tried this class of lettuce, should not fail to do so another year.

Beets.

The Brazilian beet belongs to the ornamental section, and is extremely attractive and showy, the leaves are handsomely netted in yellow, pink, and dark red. Some of these planted along the main walk are interesting, and moreover the leaves are excellent as greens.

Any large beet-roots of the ordinary varieties, that are a little old for use, can be utilized at this season to grow greens for winter use, if one have any spare rows under greenhouse benches, or in the hot-beds. If planted thickly in any moderate heat, where they can have some light, they will soon give a crop of leaves.

Vegetable Dainties for Winter.

There is no reason why many little dainties should not be had all through the winter in any ordinary place. Lettuce can easily be had in frames outside, rhubarb in the cellar, chives, parsley, mint, mustard and cress in a warm window. Of course where a greenhouse can be used, these can be grown more satisfactorily, and also many others may be added.

W. M. EDWARDS, Conn.

West Va. Horticulturists' Talk.

The fifth annual meeting of the West Virginia State Horticultural Society met October 12, at Martinsburg, W. Va.

The meeting was well attended and a great local interest was manifested in the number and character of the questions asked. The policy of the promoters of this state organization in carrying it from place to place over the state is proving a good one. It elicits local interest, brings fruit growers from different quarters of the state in touch with one another, and affords those who identify themselves with the work a wider knowledge of the resources and possibilities of the state for horticulture than they could obtain in any other way. This year the interest in our meeting was quickened by the presence of the Assistant Secretary of Agriculture, Hon. J. H. Brigham, of Washington, D. C., who brought many encouraging thoughts to the members of the Horticultural Society. Mr. Brigham pointed out the necessity for more diversified agriculture and the steps which the department is taking to secure a home production of sugar and wool, and also its careful supervision of all meats and dairy products offered for export. All were better acquainted with the U. S. Department of Agriculture at Washington at the close of the address.

The discussion of the San José scale by Dr. A. D. Hopkins, of the Experiment Station, at Morgantown, who had made some investigations of the infested orchards in Berkeley County, was listened to with much interest. The question is a vital one for the fruit growers of the Eastern Panhandle of West Virginia, because it is in the area in which this pest is most likely to be able to establish itself. It is believed the greater portion of the state, because of its altitude, will never be seriously troubled by the pest, should it be introduced. Most careful quarantine and preventive measures should be adhered to in all localities, however, so as not to invite any such menace to horticultural interests of a state as the pernicious scale is liable to prove. Personally, I believe no tree is too valuable to be destroyed if infested by such a terrible pest as the San José scale might prove to be in any locality.

Mr. Rothwell, of the Cold Storage and Cannery Company, pointed out the advantages of cold storage to fruit growers, also mentioned three points which the grower must attain in order to attract buyers; first, variety; second, quality; third, quantity.

How Peaches Ripen.

Varieties of peaches was discussed by Hon. Alexander Clohan. He emphasized one important fact which distinguishes the early from the late peaches. Early peaches ripen from the pit towards the surface, while the late varieties ripen from the surface towards the center. This mark of distinction being sufficient to make the difference between the shipping and keeping qualities of early and late peaches. Softening or ripening near the pit first makes the early peach a poor carrier and a poor keeper.

York Imperial Apple.

Under title of "The Coming Apple," several varieties were discussed and their merits pointed out, but the York Imperial, which is already a valuable commercial apple in Berkeley County, was named as the coming money-maker for that region. "It is now here, for one orchard produced some 5,000 barrels this year, which sold for \$2.50 per barrel."

Prof. L. C. Corbett, Horticulturist of the State Experiment Station, gave some of the many reasons why the people of the state should throw more of their energies into fruit growing and market gardening. The possibility of Western competition was considered, and against this was laid the location, the transportation facilities by rail and water, and the general fitness of soil and climate for fruit growing. The results already obtained by the apple growers of Hancock County, W. Va., were alluded to, and the splendid methods of picking, packing, and storing there practised brought out

the danger of becoming content with present conditions and methods; and the results consequent upon such a quiescent state were set forth with the suggestion that we should study the methods, practices, and conditions of our competitors in fruit production.

Home-made Plant Brackets.

Persons having a small greenhouse, naturally wish to make the most of the limited space. In most houses there are many odd corners and spaces which become available by using brackets of some kind. To make neat and serviceable brackets for such purposes without cost and very little trouble, I have used common tin cans and find them excellent serving both as bracket and saucer. To make, take tin cans of any size, bright clean ones preferred, and with any stout scissors cut as shown in accompanying sketch.

A good-sized carpet tack will hold the bracket firm enough to sustain as large a pot as the bracket will accommodate. They can easily be decorated for use in window gardens, etc.

JOHN VAN DER LIPPE, N. J.

A Flower Pit in Louisiana.

This is the 17th of November and we have had no killing frost yet, but the small tender plants are safe in the pit,

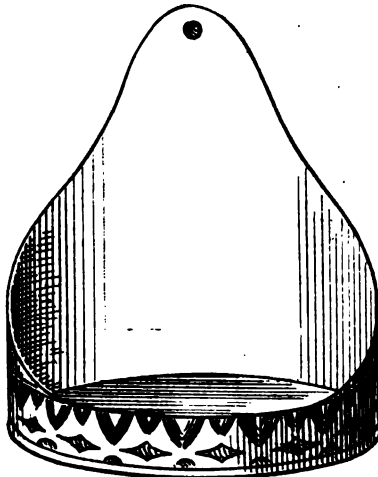


FIG. 223. —HOME-MADE PLANT BRACKET.

and let me tell you what my pit is: Just two long narrow boxes, one four inches shorter and narrower than the other, the smaller set inside the larger, and the space between filled in with dirt and leaves; the box is not slanting at the top, but that would be better. I lay sash over the box or pit as it is called, in severe weather, and if it is very cold, cover over the sash with wheat bran sacks. My pit is on a high ridge and water does not get in. Mine is a little over three feet deep, so will take pretty large plants. During a sleet that lasted a week last winter, I never lost a plant. The pit was an idea of my own. There is a woodshed and stable north of it and shrubbery and vines all around except to the south. The plants in the pit require very little attention.—MARGARET E. CAMPBELL.

About Tobacco.

The information needed can be obtained from a valuable pamphlet containing notes by 14 growers living in different parts of the country, price 25c. Or from another work on the subject, Tobacco, its history, variety, culture, manufacture, etc., by E. R. Billings; price \$2.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

The Fruit Garden.

Pruning of Pear Trees

Looking over the work to be done among the pear trees, it occurred to me that it might interest some of the readers of AMERICAN GARDENING if I added to my former notes on pear trees and the pruning of them, because I have an idea that as regards the latter part of that sentence I have had but little to say. Perhaps because that suited me best, and possibly for fear some may say, "chestnuts" to my facts or figures.

However, as I believe every true gardener is more proud of his own creations than of those left to him by his predecessor, I will try to briefly set forth a few facts regarding my trees and methods of treatment.

The Starting Point.

First, I have no use for extra size long-stemmed fruit trees of any kind, but prefer rather short, young nursery stock, which can be cut back to four feet or less from the surface.

These will make several growths of 10 to 15 inches the first summer. Select three or five from which cut away one-third early in the fall. Any surplus shoots can be cut clean away later.

Second Year.

The following summer let the three best-placed breaks from each shoot grow without stopping until August, when pick out the points, stopping in June all breaks not wanted for leading side branches.

I have not spoken of a central leader, for there is generally too much of that (unless it be in such varieties as Souvenir du Congrès and Josephine de Malines.)

Third Year.

The third summer follow the same general rule, but do not stop the leading branches, for the majority of these points will likely be flower buds. The fruit here or a few bunches on the wood of the second summer, will bring the slender branches to almost a horizontal position, and give the young shoots started near the extreme point a good impulse to extend in the same direction, as the growing weight gradually brings it down.

Fourth Year.

By the end of the fourth summer you can size up your tree and decide if it need root pruning, manure, or only an admirer.

A Few Facts and Figures.

Now for a few facts and figures from some trees worked on the same style, planted in the fall of 1890.

Beurré Hardy has a stem five inches in diameter. Made in 1895 a side growth of 40 inches, on which are now 41 spurs; 19 of these bore fruit this summer. Another growth of 36 inches has 30 spurs, 9 of which bore fruit. The height of tree is 17 feet and spreads 13 feet.

Beurré Superfin; an average growth of 1895 is 30 inches long, with 24 spurs. Height of tree 12 feet, spread of branches 9 feet.

Lawrence, trunk 5 inches in diameter, length 18 inches, spread 12 feet, height of tree 13 feet. A growth of 1895, 24 inches long, shows 16 fruit spurs, from 6 of which fruit was picked, and 2 wood growths of 8 inches. The same main branch extended in 1896 11 inches and this summer made 12 spurs and produced fruit on the point, and a growth of 13 inches.

These trees are not starved, neither have they been root-pruned, because I have spurs as thick as I want them extending right back to the bole of the trees.

This seems a lot of words about a tree or two, but I am rather a crank about a few things, and the annual tree and shrub deformation is one of them.

J. HOLLOWAY, N. Y.

Fertilizer for Berries.

Accepting the conditions of J. M. C. Michigan, page 779, I would rather haul the well-decomposed manure five miles, than get the sawdust mixed in my soil.

Mixing ashes with the sawdust might help to prevent insects being rapidly propagated in the soil, but I would prefer to use the ashes alone, and if the sawdust is fresh or even two or three years old I should not under any consideration, work it into soil where I wanted to plant strawberries.

Some kinds of muck (as it varies in quality) might pay for the trouble of hauling, as it is on the farm, but I would rather spend the time in hauling the ashes and scattering broadcast at the rate of a bushel to the square rod and the decomposed manure well-rotted should be scattered about an inch in depth if soil is in fair condition, and still deeper if poor soil. Cultivate in that it may become thoroughly incorporated with the soil.—C. C. N.

The following is the average amount of plant food contained in two of the materials mentioned:

	Pounds in 100 pounds.		
	Nitrogen.	Potash.	Phos. acid.
Muck.....	0.79	0.00	0.13
Ashes.....	0.00	5.89	1.51

Both varying greatly with the source of sample.

In addition to the plant food which it contains, muck is valuable for its organic matter. It is better in its effect and safer to use than sawdust; the latter, unless very thoroughly decomposed, is very apt to make the soil sour. Five tons of muck and one-half ton of wood ashes per acre would add, on the average, about 60 pounds of nitrogen, 54 pounds of potash and 28 pounds of phosphoric acid to the soil. Only a portion of this plant food is available at once; slacked lime would have but little effect in increasing the availability.

If the slacked lime is mixed with the sawdust at the rate of one ton to ten, thorough decomposition will be hastened and the product could probably be used to advantage on a sandy soil. It is, however, not worth the labor so long as a supply of muck is available.—JOHN FIELDS.

For J. M. C., I would recommend the muck composted with lime in the furrow before setting the plants. Then spread the ashes on top the row after plants were set; would not expect much good from the sawdust. Use plenty of muck and ashes, but not too much lime.—C. WRIGHT, Del.

Fertilizers for Strawberries.

It is more than probable that wood ashes or commercial fertilizers alone would not produce the same beneficial effect as the mulch of fine manure. The latter, in addition to the plant food which it contains, helps the soil to hold the moisture for the young plants. 1000 pounds of wood ashes mixed with 100 pounds of nitrate of soda and scattered on the surface on each side of the rows, as advised for manure, would supply a sufficient amount of plant food. (See page 779.)

If this is then covered with a layer of chopped straw, chaff, leaves, manure, or other material as a mulch, the result would be expected to be practically the same as if it had been possible to follow the method advised.—J. FIELDS.

W. W. Smith (page 779) can find a good substitute for stable manure for his strawberries by plowing under Crimson clover and seeding the ground with cow peas and turning these under. The following spring set plants on this ground, at the same time applying 500 to 1,000 pounds good high-grade phosphate, high in nitrogen and phosphoric acid. Or if he has good ashes, use 50 to 100 bushels broadcast per acre, after the plants are set; or if for old beds that are expected to fruit, apply the phosphate and ashes on the beds in January or February. This plan is largely followed by growers in this vicinity.

Leaves for Manure.

To make leaf mold is always slow work, and needs to be done systematically to insure a good supply. Begin in the fall and store all the leaves possible in a square dug pit or a square heap; build solid, and water them as they are being put together; they will have to stay for a year, and then should be turned thoroughly. After that they rot very rapidly, and soon yield a stock of soil. In turning, see to it that the heap stands on fresh ground, and that will enable you to place each season's new leaves in your sunk pit.

Until you have done this, your leaf soil will have to be gathered from the woods, a system that is never satisfactory.

Leaves vary in their composition according to the season of the year. The following figures may assist our inquirer of last week:

APPLE LEAVES.	Water	Ash	Nitro-Gen	Phos. Acid	Potash
In May.....	72.86%	2.33%	.4%	.25%	.25%
In Sept.....	60.71	4.46	.39	.19	.39
October 1st..	47.98	4.96	.96	.25	.92

For sake of comparison, we insert composition of

Green corn..	78.81%	4.84%	.41%	.17%	.33%
Green rye....	72.08		.80	.12	.64

Thus it will be seen that apple leaves have as much or more of fertilizing constituents than materials commonly used as litter. Other leaves will not vary greatly from these figures. The ash of leaves has about the same value as that of wood ashes and should be saved.—ED. AMERICAN GARDENING.

Decomposition of leaves is quickened by the addition of lime to the heap; but this is unsuitable for leaf mold. Instead, mix sufficient fresh horse manure with the leaves, see that they are moist enough, and turn over in a compact heap, thus inducing them to heat, which greatly accelerates their rotting. If this could be done in any unused building or barn cellar where it is somewhat protected from the coldest weather, and will consequently keep warm longer, the leaves will rot more quickly.—W. M. EDWARDS.

Wintering Berry Seedlings.

J. J. Seelye, N. Y., is advised to sink his boxes of seedling strawberry plants into the ground so that the surface of the soil in the boxes will be even with the surface of the ground, and cover with two inches of dry leaves, and over them place evergreen boughs or the cornstalks will do if the evergreen boughs are not convenient to hold the leaves down. Providing there are holes in the bottom of boxes for drainage, the plants will come through in fine condition. Do not water during winter, as the leaves will hold the proper amount of moisture.—C. C. N.

Plum Burbank.

The fruits from trees grown by taking up sprouts from the Burbank plum, mentioned on page 779, will be worthless, as the tree will not be like the Burbank and it will always persist in sprouting up from the roots.—C. C. N.

As all our trees of Japanese plums are budded upon Marianna plum stocks, the sucker which has come up a few feet from the tree as stated on page 779 would be of little value, as the Marianna bears a small plum much inferior to the Wild Goose.

The double-flowering peach referred to seldom bears fruit. When it does, they are usually twins or triplets, the fruit being elongated, greenish, and with decided almond flavor, but of poor quality. It is only intended as an ornamental tree. It is a rule of our establishment to always send a few extra trees to compensate in part for freight charges; hence this tree was no doubt sent as an extra.—P. J. BERCKMANS.

Margaret E. Campbell's Burbank plum was probably grafted on some plum stock and the suckers are from this. The

Burbank will root above the stock, but I have never seen it sucker. She can easily compare the leaves and wood of the suckers, and if they agree exactly with that of Burbank, plant some and fruit them, but my opinion is the suckers will not bear Burbank.

The peach is some double-flowering sort for ornamental purposes and may have been sent as a gift.—C. WRIGHT, Del.

Chrysanthemums Not True to Color.

Replying to your correspondent (page 779), in reference to Chrysanthemums coming of a color different from that of the type (such as Geo. A. Magee and Vivand-Morel,) I would say that it is no uncommon occurrence for varieties to turn white.

The only solution that I have ever been able to find for it is that there is something in the soil that affects the peculiar coloring matter of certain varieties. Take for instance, the variety Pink Ivory; in many sections of the country this year it is coming white. In my own case a portion of the plants have come true to color, others have come nearly white, and others absolutely white, and so far as I have been able to investigate there appears to be no cause for it other than the chemical conditions of the soil in which the plants are growing.—JOHN N. MAY.

Rose Madam Marie Bianchi.

I do not know any Rose of this name and think your correspondent (page 795) must be slightly mistaken in the name, as there are several varieties with names somewhat similar, but all are varieties not found in general cultivation, as they do not suit our climate, and are not quite good enough to rank with the best.—JOHN N. MAY.

Planting Raspberries in Fall or Spring.

Replying to H. C. C. M., Conn. (page 795), I would prefer fall planting. After the plants are set, cut down the canes to one foot above ground, and when settled cold weather comes, mulch with litter.—W. M. EDWARDS.

How to Use Cow Manure.

Pile it under shelter over winter. Cow manure is excellent for strawberries, but it proves to be the means of introducing many destructive insects, such as white grubs, hence, is not considered safe to use for those plants.—W. M. EDWARDS.

Flowering Shrubs for Cut Flowers.

The following are satisfactory for purposes named by H. J. M., page 795, and will flower nearly in the order named, from April to October; those marked with * are the choicest and best:

Daphne Mezereum, Forsythia (Golden Bells), *Cercis Japonica, *Azalea mollis, *Exochorda grandiflora, *Almond, *Spiraea prunifolia, Halesia (Silver Bells or Snowdrop Tree), Honey-suckle, *Deutzia gracilis, *Viburnum plicatum, Weigela in variety, *Lilacs in variety, *Rhododendrons, Deutzia crenata, Spiraea Bumalda, S. callosa, Clethra (Sweet Pepper Bush), *Hibiscus syriacus (Rose of Sharon), *Hydrangea paniculata grandiflora, Vitex, Symphoricarpos (Indian Currant), Berberis vulgaris.

List of Vines for Piazza.

Replying to the question on page 795, I advise Clematis paniculata, Aristolochia Siphon, Lonicera Halleana, and Wistaria sinensis.—W. M. EDWARDS.

Keeping Gladiolus Bulbs.

I have grown Gladiolus for the past six years, with good success, and have taken the premium at the flower show held at Marblehead the past three years, and in answer to H. M. D., would say that this is my way of growing and taking care of them:

Plant at any time from April to June,

in any fairly good soil, well spaded, set in rows three inches apart, plant in full sun if possible. After fall frost, lift the bulbs, and after removing the tops, let them dry for two of three weeks in any airy position under cover; then, after removing the roots, store them in a cellar or any cool dry place away from frost, for planting again the following spring.

I use ordinary grape baskets to keep them in, suspended on nails, driven in the floor timbers of my house in the cellar.—W. H. S.

E. F. L. can propagate the blackberry by root cuttings. Cut up the roots about three inches long, in the fall; bury in ground and plant early in the spring like potatoes, but cover very lightly till they sprout and come through. The Wilson, Lucretia Dewberry, and other trailing kinds and blackcap raspberries are propagated by making a hole two inches deep, after a rain in September and inserting the tip of the vine in the hole and pressing dirt tight. This makes a bunch of roots and may be removed in November, but is better if it is allowed

A Useful Lawn Truck.

At this season of the year and again in the spring when work on the lawns is considered, one of the problems confronting those who are entrusted with their care is how to use wheelbarrow, cart, or whatever may be available for the purpose of carting away leaves, trimmings, refuse of any sort, or how to get manure on or off without the wheels doing damage to the grass surface.

Very frequently it happens when much work has to be done and running planks are not available, that a most serious loss is incurred in the after making up of the grass surface; and more than that, damage is hard to rectify.

It is the duty then of the gardener or those in charge to prevent this, and that is not always easy to do. However, very recently there has been brought to our attention an invention of the Farmers' Handy Wagon Co., Saginaw, Mich., which obviates the difficulty referred to, and also that of getting about on loose soil. The lawn truck of this concern is the best implement of its kind that we

wheels tracking inside of rear wheels, thereby rolling a space of lawn two feet wide whenever driven over it.

The low, broad platform is just the thing for easy loading by one man, and when rack or side pieces are put on, a man can haul off a large load of dry leaves or rakings.

It is handy for hauling fruit, small loads of hay and for light, one-horse farming.

The track is built narrow so as to allow truck, to be driven on walks, and front wheels turn completely under the platform, permitting truck to be turned in its own length. It makes an excellent foundation for a step-ladder when picking fruit or trimming trees or shrubbery.

It excels as a sprinkling wagon. A man standing on the ground can easily fill loaded water barrels for hauling to shrubbery removed from water works.

That Unruly Rose Again.

Thanks to both of you, November 15, p. 775, but both are wrong! Here in Louisiana we never graft Roses. The



FIG. 224. —COMBINED LAWN TRUCK AND SPRAYING MACHINE.

to remain till spring, cutting cane away from old plant.

Red raspberries sucker and it is only necessary to plant them on rich damp land and cease cultivation early in the season. Nurserymen often take up the green plants and set in rows and make what are termed "transplants" out of them. Heap up the dirt high around the currant bushes which must have been allowed to "stool" a good deal. These will send out a few roots and the following spring set out these plants in rows well manured, and keep cultivated the entire season. Currants often root well by simply making a cutting six or eight inches long and set in nursery rows. The season controls propagation a good deal of all the above. The soil should be closely pressed to the bottom of the cutting at all times.—CHAR. WRIGHT.

Oliver Landreth, aged 64 years, head of the firm of D. Landreth & Sons, died suddenly on Sunday evening last, November 21, of heart disease.

James B. Spaulding, president of the Spaulding Nursery and Orchard Company, died at Riverton, Ill., November 11, aged 73 years. He was a native of Massachusetts.

have yet seen, possessing many features of practical utility. It can be used for carting about heavy tubs and plants; it can be used as a leaf wagon, by fixing on a handy light crate which is specially constructed for the purpose. It can also be used as a carriage for the water barrel, spraying apparatus, or as a fire extinguisher, for which last two purposes special mechanism is provided by the makers. Its construction and use in the latter capacities are explained by the accompanying illustration.

Underneath the platform of the regular lawn truck is placed, when desired, an air condenser, operated by a sprocket chain from the rear wheels. When the truck is in motion the condenser forces air into the steel tank, already nearly filled with water or spraying mixture. Any desired pressure can thus be obtained, either for spraying orchards, shrubbery, wetting lawns or driveways, washing off or cooling down houses or stables, or for extinguishing fires in two or even three-story buildings. A short drive will compress air enough to force ten barrels of water into upper story of a house, and the pressure once generated, the tank can stand till an emergency requires its use.

The wide tires (six inches) with front

one I wrote of was grown 15 years ago, just a hard-wooded cutting taken from an old St. George Rose, the cutting was taken in the winter, stuck slanting near a fence, and let alone for a year, then taken up and set against the west end of the house. After it was so badly frozen I took it up and set it near a fence at the north of the house, but I had to cut it back to near the ground; now the true St. George is about five feet high and blooms just as it and a lot of other St. Georges do, but the long shoots keep growing and branching faster than ever Crimson Rambler does; the foliage and tender growth are the same as in St. George, but so far there has never been a bud. I am going to let one branch go up in the pecan tree and let the others take the fence; perhaps it may bloom some time. St. George Rose is among our hardest and best blooming roses.—MARGARET E. CAMPBELL, La.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 18, 1896.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.,

RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt.

P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Canadian Fruit THE experiment of transporting tender Canadian fruits, such as peaches, plums, grapes, tomatoes, etc., to England by the cold storage system arranged by the Laurier administration, has been carried out, and although the results of the trial shipments have not been as satisfactory as had been hoped for, the degree of success attending the efforts is very encouraging indeed. The experiment has been looked forward to and watched with no small degree of interest by all Canadians, but more especially by those engaged in the pursuit of fruit growing for a livelihood. The possibility of competition with the fruit raiser of the United States is not a remote one either.

The first shipment of fruit on September 7, left the government warehouse at Grimsby, Ontario, where it had been previously chilled and packed under the supervision of Prof. Robertson, and proceeded in refrigerator cars to Montreal, there to be forwarded in cold storage by steamer Merrimac to London, via Bristol. Upon arrival at Bristol the shipment had to again be put in refrigerator cars for a five hours' journey to London.

This trial shipment consisted of 890 cases of Bartlett pears, Crawford peaches, grapes, and tomatoes, each case containing nearly a bushel and making in all two carloads. When the cars arrived in Montreal the cases were again examined

by Prof. Robertson and the fruit was found in excellent condition with the exception of a few peaches which seemed a little too ripe to start on so long a journey.

The condition of the fruit upon arrival was not what had been expected, however, the most of it, with the exception of some apples and pears, being a little over-ripe.

In the first place the Canadian packages lacked sufficient ventilation. They were also too heavy. The California fruit when packed at New York is treated quite differently from the Canadian fruit at Montreal. The packers at New York have a space between the walls of the compartments and the crates, and spaces also allowed about each crate for air and ventilation. The compartments are not filled to their utmost capacity either, and as a consequence the California fruit arrives in the best of condition. As a result of the reports from England subsequent shipments from Canada have been far more satisfactory. Reports of three separate shipments state that the fruit arrived in good condition with the exception of grapes, which though apparently in sound condition, drop from the stems immediately they are handled. The tomatoes sent arrived in excellent condition, but they were too large for the British markets.

While this experiment was being made under the supervision of government officials, another was being made by fruit growers at Burlington, Ontario, a small town about 25 miles from Grimsby. The growers at this point did not have the advantage of a warehouse, which to previously chill the fruit before shipment. If advantage it was, but they met with a far greater degree of success.

An interesting experiment was made in tomatoes. Green, quarter-ripe, half-ripe, and three-quarter-ripe fruits were sent. Those three-quarter-ripe arrived very ripe, but not sufficient to burst the fruit. Those half-ripe were in excellent condition, and those one-quarter-ripe were very ripe indeed, but not wet. Half-ripe tomatoes are therefore recommended for shipments.

That the Canadians intend to push the industry admits of no doubt, and again we urge upon our growers the necessity of strict grading and honest packing. If they intend to hold their own in the markets of the world.

We call special attention to the prospectus for 1898, which appears in the advertising columns.

Dr. A. H. Kirkland, Amherst, Mass., of the Gipsy Moth Commission, reports that Paris green, not having proved sufficiently effective for their use, they had by experimenting found arsenate of soda to serve the purpose better. This was now coming into general use. It being cheaper and less likely to do injury. The necessary substances are to be had in card boxes, arsenate of soda at one end, acetate of lead at the other, in proper quantity, each to be dissolved by itself and the two then poured together. The cost of this in quantity, as used by the Commission, was 7 cents a pound, whereas the Paris green costs 12 cents. In the war against the gipsy moth about half a ton was used daily.

The officers for next year's meeting of Economic Entomologists, to be held in Boston in August, 1898, are: President, Herbert Osborn, Ames, Iowa; vice-presidents, Lawrence Bruner, Lincoln, Neb.; and C. P. Gillette, Fort Collins, Col.; secretary and treasurer, C. L. Marlatt, Washington, D. C.

Experiment Station Tests.

To the Editor of American Gardening.

IN AMERICAN GARDENING of November 18, page 774, I notice an article on experiment station tests, by B. F. Smith, which I was indeed glad to see, as it touches a subject that is of vital importance not only to strawberry growers, but to all gardeners, both private and commercial. What is true of strawberries and the way they are tested is true also of other plants.

How in the name of common sense can any one expect to have a new variety of any kind of plant accepted as good or otherwise when tested as in Mr. Smith's article? While any one may have fair success with a few plants of a given variety, yet when a large grower takes that same variety and gives it the same care as others, he may make (as has indeed been the case) a complete failure of it. It is then and not before that the need of the plant is found out.

It always has seemed to me that in most cases there is harm rather than good done by the experiment station, and both time and money are wasted. It seems to me that the best experimenting is done not by the station, but by the grower, and why? Simply for the reason that while experimental work is all right and we all must do more or less in that line, yet, if it be not done in a practical manner mixed with little common sense, it is worse than useless.

I think there are many gardeners and others who agree with me in this from sad experience; if we had more good practical common sense work and less of this simple experiment work it would be better not only for the large grower, but for the public in general, for what practical use can we get from the reports given out by the stations? They are like the seeds sent out by the government—most of them no good; that is what I found in both cases.

Let us have more practical common sense work and less of what I call guess work and nonsense.

FRED. C. ROSE.

To the Editor of American Gardening.

Mr. Smith (page 774) hits the nail on the head about experiment station reports. I have had the same opinion for some time.

We all know Crescent is one of the most prolific of strawberries; Bubach is large; Warfield firm, and Haverland a strong grower. Now if the new candidate is compared with these and is better (as all new seedlings are supposed to be, at least by the originators), we know what to look for.

Experiment station reports don't go as far with me as they do with a good many. The Van Deman strawberry had not a single unfavorable report from the stations, but after fruiting it a number of years, I found no bigger humbug in the list. The same might be said of numerous others. It's a good deal like the list of fruits recommended by the American Pomological Society for the several states. The grower, who relied on this list would be a "back number" sure.

Almost any up-to-date fruit grower must test most varieties himself to know just what he needs most. When some one tells me a peach ripens with a ahead, or later than, Mountain Rose or Oldmixon, I know whether I want it or not, but if it is said to ripen in New York August 12, or Georgia July 15, I am all at sea. Why not describe it in comparison with a standard variety? For instance: large as Crawford's Late, same shape, color yellow, red cheek, freestone, ripens a week later, etc. Then the public would know what to expect, for any peach grower knows Crawford's Late and he knows whether such a variety would suit him or not.

Apologies of Mr. Berckmans' Ever-bearing peach. I bought some twelve years ago an Ever-bearing apple of Mr. Lindley, of North Carolina, and when it bore I was delighted (?) to find an old friend, the Red June. C. WRIGHT, Del.

THE QUESTION BOX

What questioner shall learn much.—BACON

Readers are invited to forward particulars of any difficulty or perplexity that they are encountered. If the question be one of general interest it will be inserted in this column, so that other readers who may have information to impart can assist their brethren by recounting their own experiences. Questions of a purely individual interest will be replied to by the Editor under the head of Short Answers.

Questions submitted in this department will receive the full attention of the staff of AMERICAN GARDENING and when desirable will be answered editorially.

All communications for insertion should be clearly and concisely written on one side of the paper only, and addressed to the Editor of AMERICAN GARDENING, P. O. Box 1697, New York City. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query or answer is sent, each should be on a separate piece of paper.

Answers should always bear the title of the query replied to and the page on which it appeared, and our readers will greatly oblige us by advising, as far as their knowledge and observations permit, the correspondents who seek assistance. Conditions, soils, and means vary so infinitely that several answers to the same question may often be very useful, and those who reply would do well to mention the localities in which their experience is gained.

Important to Querists.—Correspondents must look through the whole of the paper to see replies to their queries. Answers cannot always be given the week after the queries are received, but there is as little delay as possible in dealing with them.

Cash Prizes will be given for the best set of answers each week. Payment to be made monthly.

Cinerarias Dropping Foliage.

I have a number of Cinerarias raised from seeds sown in August. The plants look vigorous, but I have noticed that one or two older leaves damp off; and as they are quite free of aphids, I am at loss to explain the cause. The temperature of house varies from 80 degrees at day to about 40 degrees at night. Please explain possible cause and remedy.—G. SCHRETZLMEIR.

Rhubarb in Cellars.

Having seen a small paragraph in your paper treating on the English people raising pie plant in their cellars, I became interested, and ask if you will please give me their method.—MATILDA J.

Turnips Are Bitter.

The turnips we have grown this season are very bitter. Would growing near to or near radish cause them to be bitter? They are of good size and look perfect, but not fit for use. Can anyone suggest remedy to overcome the bitter taste?—C. B. W.

Wintering Cannas and Caladiums.

I have a lot of Canna and Caladium bulbs which I have grown on my lawn. I have had no experience in keeping these through winter. Have heard that they rot freely. What are the directions for keeping these bulbs through winter?—G. JOHNSON.

Begonia Rubra.

I have Begonia rubra that grows a tall, cane-like stalk. I have cut off two this season; have one now three feet tall. Should they be cut off or left to grow, and what will be the result if they are left to grow?—W., Wis.

Primroses and Violets from Seed.

What is the best way to raise English primrose (Primula vulgaris) from seed, also Violets?

Can I obtain blooming plants (from seed just set) for next spring.—HARRISON AMATEUR.

Disease of Egg Plants.

Our egg plants were badly affected with a disease the past season. It appeared like a blight; the leaves would turn yellow, then brown, wilt, and die; the brown part would dry so that it could be crumbled. There was no trace of any insect or fungus upon them, and they were growing in well-enriched ground, as about half the plants made a splendid growth, with fine eggs. Did any one else suffer similarly, and what are the cause and remedy?—WILLIAM.

How to Prevent Club Root.

What is the best preventive of club root in cauliflowers?—E. W., Conn.

When to Prune Wistaria.

Should a Wistaria vine be pruned immediately after the flowering season, or during the winter months, to insure best and largest flowers, the following season?—W. M. E., Conn.

Should the Runners Be Cut Off?

I have some 200 Marie Louise Violets in cold frames. They were planted from 10 to 12 inches apart. The plants now touch each other and are blooming. Should the runners be cut off?—G. H. B.

Gladolus for Forcing.

Kindly name the best Gladolus adapted for early spring forcing.—HOOVER & MOORE.

Colorado Fruit Paper Wanted.

Can you give me the name of a good paper on fruit growing in this state?—C. AUSCHICKS, Col.

Short Answers.

(To P. J. McL., Canada)—Your propositions are taken under advisement.

(To W.)—There is no necessity to cut off the shoots of your Begonia. You may do so if you like; it is merely a matter of convenience.

(To Subscriber)—It is not possible to tell you what temperature to maintain unless you tell us what plants are grown and for what purpose.

(To R. B.)—Chrysanthemum Golden Wedding is prone to take on the disease of which samples were submitted. Propagate from sound stock, and if the trouble appear, withhold water and keep the soil open.

Names of Plants.

(To Sparkhill, N. Y.)—I. Euonymus europaeus; 2. E. alatus.

Scene: One of the largest commission houses in New York City. Enter Long Island farmer with sample of turnips. Farmer: "I have a carload of these handsome turnips. Can you sell them for me?" Salesman for commission house: "No! they wouldn't bring the freight and cartage, let alone commission and cost of sacks. We can sell nothing but Canadian turnips." L. I. Farmer: "Why, I thought the tariff was going to keep out potatoes, turnips, and other vegetables." Salesman: "There's where you are mistaken; our customers will have Canadian turnips or none. The price is a secondary consideration. Personally, I feel the same way too. I would rather pay a dollar a barrel for Canadian turnips than have the ordinary white or yellow turnips as they are grown in this section of the country for nothing." L. I. Farmer: "Well, I can at least feed them out to my cattle. Another year, however, I shall plant carrots or some vegetable having a greater feeding value than the flat varieties of turnips."

Mr. Jerolaman Answers His Critics.

I write from my winter home in North Carolina to reply to some recent communications which have appeared in AMERICAN GARDENING.

As it is always good form to answer strangers first, I will commence with Mr. M. W. Smith, who wishes to know how much good wood ashes and other phosphates it would take to replace manure. If Mr. Smith means manure from horses, cows or sheep that have been fed on grain of any kind, corn, oats, or rye, and on good hay, timothy or clover, then in that case there are no ashes or commercial fertilizers on or under the earth that will ever take the place of such barnyard manure as I have described. But if you mean manure from cattle or horses that have been fed on cornstalks and salt hay only, as is often the case, why then ashes alone will excel all such manure.

The only way to put it on strawberries after the plants are set out is as follows for row 100 feet in length: Take a tin or any kind of pail that will hold 12 quarts, and with the hand scatter the ashes gently on each side of the row, taking care that you get but little. If any, on the crowns of plants. Remember 12 quarts of unleached ashes is sufficient for 100 feet, and that pure ashes are nearly all potash, also that nearly all commercial fertilizers, except bone, are composed of more or less potash.

You can get ground bone, mix it with equal parts of lime and ashes; those two ingredients will thoroughly dissolve the bone and all plant roots will absorb it at once, but this is a costly fertilizer.

Why? Because it does not give strawberry plants that which they need, and although 12 quarts will go 100 feet, yet it is dear at that. You cannot get enough on them, without burning the roots, to do them much good. With any kind of phosphates, if you put on enough to do good, it will burn the roots, and with less you cannot find any benefit.

I have often tried bone alone and found but little if any benefit from it. It will make large, dark, and rank foliage, and less fruit is my experience, and unless bone is dissolved in ashes or lime, it will take at least one year before you derive any benefit at all.

In this connection I wish to state to all that ashes, lime, hen manure, and ammonia are all caustic manures and as nearly all our commercial fertilizers are composed of more or less potash and ammonia, I put nearly all of them in one class and call them "burning" manures. I know that not only my pocketbook but my plants have been burnt by them.

But the fertilizer man will tell you that I am ignorant, and do not know how to apply it. I think he is right too, for I have often felt that some one ought to have knocked a little sense into me when I bought his fertilizer. I do not believe he knows how to apply his own fertilizer; he may know all about stimulants, but when it comes to applying them to land, it is altogether different from when applied to man!

To Mr. Henry Snyder, of Maryland, and also to Mr. Wooster, of Maine, and to several others as all of you have nearly the same desire, to wit, to learn just how much I know about strawberry culture (and also how little, I suppose), and to all readers of AMERICAN GARDENING will state that man, according to his knowledge or his ignorance, and water according to its stillness will always find their own level among intelligent men.

Some say that wise men keep their mouths shut, but I have often known fools to keep theirs shut too—because they did not know anything to speak about. To you all together I will state that one of my principal objects in coming South was to get some rest, and write a book on Strawberry Culture; this I am doing at present as fast as I can.

I can assure Mr. Snyder also that I will not charge the cost of producing one crop to any other crop, for instance, that

If it takes 50 or 60 loads of manure to produce a first-class crop of potatoes at a cost of \$1.00 per load, that is \$60 when put on, and it was actually necessary to put this amount on in order to produce a first-class crop; then it would not be fair or even honest to charge it to the next crop of some other kind, because if my crop of potatoes was first-class (full crop), then I ought to get my pay from that crop for the labor and fertilizer put on it for that purpose; in other words render unto him that which belongs to him. Do not be afraid, my dear sir, that I will not charge for the picking, or selling, fertilizers, etc., that it costs to grow a first-class crop of strawberries in order to show to the world that I can produce a good first-class crop of strawberries for less than any other crop that grows out of the earth.

Now I will repeat my statement, that is, I propose to show and convince all that I can produce a first-class crop of strawberries at a less cost per acre than any other paying crop, such as wheat, rye, oats, corn, potatoes, and I will not except turnips (rutabagas).

H. JEROLAMAN.

The Window Garden.

Blue-flowered Bulbs.

Among those grown have been the Camassia, the Chionodoxa, the Tritileia, and Scillas, beside the Hyacinths and the blue and purple-toned Crocuses. One needs say little about the Hyacinths. Aside from these, those wholly satisfactory have been the tall Peruvian Scilla, known as Scilla Clusi, and the Tritileia. Puschkinia is very good, but hardly to be relied on at all times, as there is none of the happy-go-lucky spirit that suits all conditions in its nature. It seems a pity that not all are wholly good, since the most beautiful blues known in flowers appear in some of these bulbs.

Cheapness of Bulbs.

There are so many who consider the high prices of bulbs a bar to their use, that it will do us good, perhaps, to look at the low prices for a little. A standard firm, known the country over, offers mixed Hyacinths at 40c. a dozen. A number of named sorts of Tulips are but 20c. a dozen. Narcissus poeticus, one of our loveliest flowers, is 15c. a dozen. Freesias are the same, and indeed we have seen them offered this season at 10c. a dozen. There is nothing finer. Who says bulbs are too high?

The Pretty Anthurium.

So well has it behaved, this Scherzerianum, during the almost year and a half it has been on trial, that other of its near relatives will be procured as soon as possible, in order to see if they too are so friendly in disposition. No insect has ever touched it, not a leaf has yellowed, not a flower blasted. It has been in bloom nearly two-thirds of the time, and the bloom is vivid in color. The leathery leaves are the most easily sponged of any in the collection. The blossoms, while few, are very lasting. How many other plants have such a surprising list of good qualities for the common living room?

Outside Plants Brought In.

Those that were transplanted, not too early, and left on the ground, just where they grew, for two weeks before removal to the house, have done the best. A late plant of one of the new Scabiosas is growing on well, and these are notably difficult to transplant. Several plants of the novelty, Helianthus cucumerifolius, in the finest size to grow on, have been hardly stricken with mildew, the only ones so troubled. They will be useless. This is a disappointment, as they were thought most promising.

Amaryllis Two Hints.

An expert grower of these favorites is particularly careful not to try to hurry them by giving water until they show that they want to grow. Another point to note is that many a failure is due to keeping the bulbs too cool during the

resting season. In the greenhouses they are often put away under the benches, but home growers sometimes store them away in unheated closets. They need good ripening in the sun, and rather warm quarters thereafter.

The Satisfactory Plants.

Thus far in the season, the most delightful decorative plants in the experimental collection have been the Gynura mentioned several times, Grevilleas, Asparagus Sprengeri, Anthurium Scherzerianum, and, among those lately procured, the Boston Fern and the new Abutilon Savitail. The last two have grown on as if they had never known removal from the moist warmth of the greenhouse. The Asparagus grows daily better, handsomer, larger, and manifests not the slightest concern as to sunshine or warmth. It is grown cool, with fair light and little direct sunshine.

Overcoming Adverse Conditions.

There is little question that the best way to deal with plants to which the conditions at our command are not suited is to leave them off our lists. Yet this is really running away from the enemy, and there are those whose temperaments urge them to battle. They would rather fight for success than to have it without struggle. For such, there is a way of getting around some obstacles. If there is one thing in the surroundings which is unsuited to a particular plant, special care in all other respects will be a great aid in overcoming the trouble. For instance, special care in admitting copious supplies of fresh air, and in showering such plants as do not plainly indicate their dislike of showering, may keep in fair health those which are much out of their element in a dry atmosphere, or in too great heat.

An Indoor Chrysanthemum.

The comparatively new variety known as Maud Dean, is the only sort we have grown on in the pot throughout the season. It has proved very pleasing, even without the best of cultural care. The color lights up very prettily at night, and the bloom is of rather good size and form. It will last a week or two beyond the Thanksgiving season.

MYRA V. NORRIS.

The Henry Strawberry.

Arrangements have been made whereby a bountiful supply of these plants will be ready for spring delivery to subscribers and agents, and in this connection we beg to call the attention of our readers to our generous offer of these plants in another column. We do not think that a more liberal offer has ever been made than the one now advertised, whereby the agent or worker sending us in a club of ten new names, at \$1 each, becomes entitled to 100 Henry Strawberry plants, while five plants will be sent postpaid to each person in his club. This offer will not apply to a club of less than ten. It may be a very long time before such an offer of such a plant can be made again. The wonderful success which has accompanied our premium offer this fall, in the short time at our disposal to advertise it, leads us to believe that the orders for the Henry Strawberry next spring may exceed all anticipations; however, we have planned for a large supply for delivery and trust to be able to meet all demands upon us. Mr. Jerolaman's series of articles is now being placed in pamphlet form, and copies will be mailed free to all who desire to use same in the canvas for new subscriptions.

All the premium Henry Strawberry plants due to date, have been shipped, except where a request has been made to hold them till spring, and judging by the unsolicited acknowledgments received, they are giving immense satisfaction. In order to reduce weight and hinder excessive transpiration some of the leaves are cut off before shipping, this is especially beneficial during a hot spell, and readers can rest assured all is done for the best.

The Bee Keeper.

Timely Topics.

Now is a good time to clean up all rubbish around the hives, allowing no harbor for mice, skunks, etc., for they are enemies of the bees.

The shade boards and other implements not in use now should be stored under roof.

The worst thing you can do with your honey is to send to a commission merchant who has no trade for it and will sacrifice it just to get rid of it.

The best you can do with the surplus you have is to put it up in the finest shape, make it look appetizing, then sell it to your neighbors and at your neighboring grocery. If you will do the right thing they will want more next year.

Do any of your hives need paint? No better time to give them a coat than now before the weather gets very cold.

The covers of every hive should be waterproof. See to this now. Tin is the best, but putty and paint do fairly well.

If you pack your bees for winter, don't use for the purpose anything damp. Dry wheat chaff is the best. Fine excelsior is good. Pine sawdust or planer shavings are also good if perfectly dry. The earlier you pack the hives the longer time the bees have to seal up the covers and close the draught holes.

Have you any wax scraps? Melt them up in plenty of water. The wax will float on top and cool. A few meltings will purify the wax of all impurities.

Use honey in your tea to sweeten it. It tastes good and is healthier than sugar.

Honey is a good remedy for catarrh, one teaspoonful every 15 minutes, taken warm for a few hours will give relief.

Honey and a decoction of sage leaves is a splendid remedy for sore throat.

Very often honey can be substituted for sugar in receipts in cook books. Try it on your strawberry shortcake.

Children would rather eat bread and honey than bread and butter, and honey is the cheaper and will go much further and is more healthful.

Take good fresh whole milk, break light wheat bread into this, and pour a little honey over it—a dish fit for a king.

Have you a poor quality of honey, use it for vinegar. It makes good vinegar. Use one and a half pounds to the gallon of water. It will require about as long for it to ferment and make good vinegar as does cider.

Beeswax and salt will make your rusty flatirons as smooth as glass.

Honey should be kept dry and warm. It readily absorbs moisture and sometimes ferments. If the temperature gets too low it will crystallize or candy, and if in the comb will crack the capping, causing leaks.

If your extracted honey candler, warm it slowly and it will become liquid again. Too much heat will spoil the flavor.

Tin cans are by far the best packages to hold extracted honey. The regular 60 pound jacketed trade can is the ideal.

If you buy early your supplies for next season, you get a big discount off, often 2 per cent. per month.

Inquiries for further information about bees or honey are always in order.

L. W. LIGHTY, Pa.

Our 1898 Art Calendar.

This beautiful gem of art, it would seem, is destined to find great favor among our subscribers, and the orders for it are now coming in rapidly. We still have a good supply in hand, but in order that all of our friends who want it may feel secure they will receive theirs we would advise early applications to be sent us. For particulars as to how it may be obtained, see advertisement.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Thos. Proctor, formerly gardener to Mr. H. F. Cook, Sag Harbor, N. Y., has been engaged to take charge of the gardens of Mr. W. Jennings, Cold Spring Harbor, N. Y. He enters on his new duties Dec. 1.

Cycads and Palms.

I appreciate your report of the Port Chester Flower Show, page 782 and 783, but there is one passage in it, which reads as follows: "The last-named (Gustave X. Amrhy) secured first for best Palm, showing *Zamia horrida* (which, however, is not a Palm at all.—En.)"

I wish to tell you that the "last-named" will never make any mistake in matters of botany, and exhibit a *Zamia horrida* (Cycadaceae) for a Palm. My first prize for best Palm was for a *Kentia Belmoreana*, and my *Zamia horrida*, of which I am very proud, was shown as Cycadaceae, taking the first prize.—GUSTAVE X. AMRHYN, superintendent to Jas. W. Quintard.

Auction Sales.

Roses and other imported stock are now being offered in the New York sales-rooms. The increased tariff has this fall had the effect of reducing very much the quantity of this class of stock, however, and involves the necessity of the bids for all Roses being started above 7c. each, and buyers hardly know what to make of it. The average figures run from 8c. to 10c. each.

A Plant Market.

A movement is on foot to establish a permanent plant market in New York City. This is something that is badly needed, and it is to be hoped that the scheme will be perfected.

Short Hills, N. J.

On Thursday, November 11, the American Bulb Co. purchased from James R. Pitcher all the greenhouses and real estate of the old firm of Pitcher & Manda, used by them for growing exotics. This comprises what is known as the lower range, 20 houses (about 50,000 of glass). This famous establishment, known all over the world as the United States Nurseries, has been re-christened the United States Exotic Nurseries. The specialties of the new firm will be Palms and Ferns, special attention being given to *Adiantum Farleyense*. The members of the new firm are for the most part former employees of the old concern.

Lecture on Violet Disease.

At the meeting of the New Jersey Floricultural Society to be held on Monday evening, December 6, at 8 P. M., in Decker's Hall, Main street, Orange, N. J., a paper on the Violet disease will be read by Dr. Walter Dodge, who has made a bacteriological study of the disease. The paper will be followed by a general discussion on fungoid diseases and remedies. All interested are invited to attend.

Merion Gardeners' Club.

For some time past there has been a desire to start an organization in the vicinity of Philadelphia, Pa., and it is as last a fact, as the outcome of the Chrysanthemum show held at the Merion Cricket Club grounds at Haverford, about eight miles out from Philadelphia, Pa., at which the principal exhibitors have been private gardeners from Haverford, Ardmore, Bryn Mawr, Rosemont, and Villa Nova. All of these places are in the township of Lower Merion.

On Wednesday, November 17, a dinner was held at Dirigo Hall, Ardmore, Pa., those attending being the exhibitors at the late Haverford show. About 60 gardeners were present. John G. Gardner, of Stoke Pogis Nurseries, Villa Nova, Pa., was superintendent of the exhibition, and presided, and after dinner the Merion Gardeners' Club was organized. A committee composed of John G. Gardner, chairman, George M. Hay, gardener to S. H. Austin, Esq., Haverford; Chris Benz, gardener to Allan Wood, Jr., Esq., Conshohocken; Jos. Hurley, gardener to J. M. Rhodes, Esq., Ardmore, and William Fowler, gardener to Mrs. Chas. Wheeler, Bryn Mawr, was appointed to draw up a constitution and by-laws. All those present put down their names as charter members. The purpose of the organization is to hold monthly meetings at which papers will be read. The movement is a good one and will, no doubt, result in promoting comradeship among the large number of private gardeners in the locality.

Philadelphia, Pa.

At the regular monthly meeting of the Horticultural Society on Tuesday last, the Clark premium for collection of seedling chrysanthemums in pots was awarded to Robt. G. Carey, gardener to Thos. C. Price, Esq., who exhibited some very promising varieties. He also staged some flowers of a new white named Robt. G. Carey, of the Japanese type, which forms a perfect ball—evidently a good thing.

New York.

Owing to the exhibition at the Waldorf-Astoria, the regular monthly meeting of the Gardeners' Society was postponed till Saturday, November 20. On the evening of that day there was an attendance of thirty-five at 64 Madison avenue, and several candidates were nominated for active membership. John Scott, Brooklyn, and C. Gloeckner, care of J. M. Thorburn & Co., were elected as associate members.

John Scott exhibited a grand plant of *Eucharis amazonica* with 22 spikes, averaging five to eight flowers each. The plant showed remarkable vigor and the individual flowers were unusually larger.

Under the head of new business a protest against the non-award of the prize on his collection of Roses at the recent exhibition was made by A. A. Taaffe, Irvington, N. Y. He stated that he was the only exhibitor, that he staged eight vases of Roses, and that his entry number was attached to his exhibit. He therefore claimed the Morgan cup. After some discussion on the judges' report, it was unanimously decided that the first prize for the best collection of Roses (a silver cup valued at \$25, given by Mrs. Pierpont Morgan) be awarded to Mr. Taaffe.

Other awards and decisions were discussed, but no alterations were made.

Nomination of Officers.

The following were nominated, and owing to the fact that no other candidates are standing against them, all others having withdrawn, they of course will be elected in due course. For president, W. Scott, gardener to T. C. Eastman, Tarrytown, N. Y.; vice-president, A. Welsing, gardener to Mrs. Erhardt, Waverley avenue, Brooklyn; treasurer, Robert Angus, gardener to Major R. E. Hopkins, Tarrytown; secretary, Wm. Bartholomae, gardener to W. B. Isham, Riverdale, New York City; Executive Committee, R. Brett, F. R. Pierkovsky, W. Anderson, John Shore, A. A. Taaffe, C. Webber, W. Sage, and A. J. Wengerter.

The manager of the late exhibition, J. H. Troy, stated that the "total receipts were \$2,310, expenditures \$1,560, leaving a total of \$750 to be given to charity." Several exhibitors at this juncture asked for their expenses of getting their exhibits to and from the show, stating that such had been guaranteed them by the promoters, but as this matter had been overlooked and no expenditure of that kind provided for in the final distribution, there were no funds left for the purpose.

W. and D's. "Sure Crop"

MUSHROOM SPAWN

8 LBS. FOR \$1.00.

Hyacinths, Tulips, Narcissus, Lily of the Valley, Spiras.

SPECIAL PRICES TO CLEAR.

WEEBER AND DON,

Seed Merchants and Growers,
114 Chambers Street, NEW YORK.

Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and
dealers in Cut Flowers

50 West 39th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Commission. Best market prices guaranteed.
Mention American Gardening when you write.

HATCH Chickens BY STEAM
With the MODEL
EXCELSIOR Incubator
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatchery made.
GEO. H. STAHL,
114 to 122 S. 6th St. Quincy, Ill.

Mention American Gardening when you write.

A GOLD DOLLAR
is about the actual worth of our new book on Incubation and Poultry. Contains full and complete description of the Reliable Incubator & the Brooder of same name, together with cuts and instructions for building poultry houses and much of interest and value to the poultryman. Sent on receipt of 10c.
RELIABLE INCUBATOR & BROODER CO.—QUINCY, ILL.

Mention American Gardening when you write.

A Poultry Encyclopedia.

THE POULTRY KEEPER, edited by P. H. Jacobs, one of the best informed men of the age on poultry subjects, and who is aptly termed a walking poultry dictionary, has published four large pamphlets, covering every subject connected with the feathered tribe, which it entitles ILLUSTRATORS Nos. 1, 2, 3 and 4. The series constitute a veritable "POULTRY ENCYCLOPEDIA," covering the ground so completely that by the aid of the "Four Illustrators," and the regular monthly visits of the "POULTRY KEEPER," the reader can glean all the information necessary to become a successful poultry raiser.

You could not get any similar series in the whole world, even for \$50 each, for they do not exist. Were they given in regular book form with elaborate binding and colored cuts you would think them easily worth \$5 each, but what is wanted is not elegant printing, so much as valuable information that you can make use of. They have cost much in labor and cash, but we offer the set for almost nothing. A partial list of the subjects treated is as follows:

ILLUSTRATOR No. 1.—Poultry Houses, Incubators, Brooders, Coops, etc. 25 cents.

ILLUSTRATOR No. 2.—Artificial Incubation, Raising Chicks, Testing Eggs, etc. 25 cents.

ILLUSTRATOR No. 3.—Poultry Diseases, Lice, Gapes, Moulting, Egg Eating, etc. 25 cents.

ILLUSTRATOR No. 4.—Judging Fowls, Description of Breeds, Mating, etc. 25 cents.

\$1.50 Buys This: \$1.50

For \$1.30 we will send American Gardening, (weekly) one year, The Poultry Keeper (monthly) one year, and the Four Illustrators, as above.

ORDER NOW.

AMERICAN GARDENING, P. O. Box New York.

KNOWN WORTH

You judge a man by his reputation. His reputation is formed by what he does. So in selecting a musical instrument—study its reputation. That represents what it does. Look into the merits of the

"Bay State" {
Guitars
Mandolins
Banjos
Zithers
Pianos

Their superiority invites the closest scrutiny. Their reputation is their warranty, for it tells what it does. In choosing a "Bay State" you purchase known worth. Twenty-seven awards. Only winners of American gold medals.

Send for Catalogue and Prices

JOHN C. HAYNES & CO.

453-463 Washington St.
BOSTON.

Mention American Gardening when you write.

DANCE MUSIC

FOR
THE
PIANO

MUSIC AND STEPS OF THE ROUND AND SQUARE DANCES

CONTAINS full instructions for performing the proper steps of all the most fashionable dances, together with pleasing music for the same. Piano or organ part, \$1.00; violin, separate, 50 cts.

Favorite Waltzes.

A choice collection of favorites by the most eminent waltz composers of the world. Price, 50 cts., by mail, postpaid, 65 cts.

Popular Dance Collections.

TWO VOLS. I. AND II.

Two collections of dance music made up of the best selling music in sheet form, embracing the cream of American and European publications. Price, \$1.00 each. Boards, \$1.25; Cloth, Gilt, \$2.00.

Choice Collection of Marches.

Twenty-four American compositions, bound in handsome cover. 728 pages, large sheet music size. Price, \$1.00, postpaid.

Royal Collection of Dance Music.

Forty-six selections. Contains a variety of well-chosen pieces—waltzes, polkas, mazurkas, etc. Price, 50 cts., postpaid.

ANY piece or book of music published in any part of the world can be procured of us at shortest notice. Catalogues free.

THE MUSICAL RECORD.

The best musical journal in this country. Able editorials, valuable contributions by the foremost writers, correspondence, criticisms, etc. 16 pages of new music in each issue. Edited by Philip Hale. Published on the first day in each month. Single copies, 10 cents. Yearly subscription, \$1. With every new subscription we give a handsome volume of bound music. Send for Premium sheet.

OLIVER DITSON COMPANY

453-463 Washington St., Boston

NEW YORK PHILADELPHIA
C. H. Ditson & Co. J. E. Ditson & Co.

Mention American Gardening when you write.

President Shore brought up the matter of associate members having no privileges such as to vote, also stating that there was but little inducement for them to become interested in the work of the Society and regularly attend its meetings. A suggestion was then made by John Fursey that the by-laws be amended to read that associate members be granted all privileges except the holding of any of the principal offices. J. I. Doulan strongly opposed the suggestion, stating that the privilege of attending the meetings, and meeting the boys should be ample compensation for the dues paid, and further, that for any associate member to expect more, he must have dishonest or mercenary motives. On the motion of J. M. Hunter, the matter was laid on the table and the meeting adjourned.

New Bedford, Mass. Show.

A very meritorious exhibition was the result of the efforts of the Gardeners and Florists' Club this year. The handsome silver cup, offered by Mr. Frederick Grinnell, becomes the property of James Garthley, by his winning it again this year. This exhibitor put up a magnificent group of Chrysanthemums, occupying 40 square feet. William Keith, gardener to Thomas M. Stetson, Esq., exhibited a group, occupying 60 feet square. He won first prize. Peter Keith, gardener to Miss Julia Delano, had a grand Orchid display.

William Keith was first for 10 white blooms with Mrs. Henry Robinson; second for 10 yellow, with H. L. Sunderbruch; first for 10 bronze, with Col. W. B. Smith.

Other prize winners were: B. J. Conolly, of Taunton, for one vase of 10 white Chrysanthemums, the Queen, second; special exhibit of Chrysanthemums, Pitcher & Manda; yellow Chrysanthemums, Sunderbruch; six Japanese distinct varieties; six Japanese, three varieties.

Alex. MacLellan, of Newport, 12 Japanese distinct varieties, second; six Japanese distinct varieties, first.

J. Eaton, six Chinese, three varieties, first; one vase of 30 flowers, first.

A. B. Hathaway, 12 Japanese, first; six Japanese, three varieties, second.

S. S. Peckham, M. M. McCarthy, J. Stanley, J. W. Frazier, A. J. Fish, J. Eaton, Jr., R. H. Woodhouse, C. H. Waite.

Toronto, Flower Show.

The eighth annual chrysanthemum show of the Gardeners and Florists' Association was opened in the Pavilion on the 10th inst. It was the best exhibition ever held here.

In class 1, section 1 to 6, Robert Gow, gardener to Sir C. Crsowski, took all the first prizes in most of the sections without any competition. His plants were fairly well grown and well bloomed, but were too tall to be really good, several of the plants in 8-inch pots being over five feet in height. The one specimen plant Lincoln was very well-grown and a credit to the grower. The best varieties shown among the pot specimens were Lincoln, Niveus, Golden Wedding. George W.

\$100 Reward, \$100.

The readers of this paper will be pleased to learn that there is at least one dreaded disease that science has been able to cure in all its stages and that is Catarrh. Hall's Catarrh Cure is the only positive cure now known to the medical fraternity. Catarrh being a constitutional disease, requires a constitutional treatment. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system, thereby destroying the foundation of the disease, and giving the patient strength by building up the constitution and assisting nature in doing its work. The proprietors have so much faith in its curative powers, that they offer One Hundred Dollars for any case that it fails to cure. Send for list of testimonials.

Address, F. J. CHENEY & CO.,
Toledo, O.

Sold by Druggists, 75c.

Childs, Mrs. Robens, and Helen Bloodgood.

In the classes for plants, single stems, and single flowers, there was lots of competition.

The cut blooms of chrysanthemums were all good. The vases of 20 and 25 made a fine exhibit. In the 20, one variety in a vase, Niveus took first prize, with Ivory second, and Mayflower third. The Mayflower were very fine blooms, but their dirty yellowish tint looked so bad against the pure white of the other varieties that they were quite out of it. In 12 blooms white, Queen was first, Niveus second, Ivory third. Good Mayflower were also shown here, but with the same result as above.

For the 12 pink, President Smith was the fancy; for 12 yellow, the best were Bonnaillon, with E. Dailedouze and Golden Wedding in the order named. In the best six white Niveus was the winner; six pink, Harry Balsley, with Mrs. Perrin close after them. Best six yellow Georgiana Pitcher was first; they were fine examples of that variety.

The collections of orchids were better than usual here, and they made a fine and interesting show on the table in front of the stage.

Mount Kisco, N. Y.

The third annual show of the Bedford Flower Club, under the management of the Westchester County Horticultural Society, opened Tuesday, November 9, in the Mount Kisco Opera House and will continue until the following Saturday night. Much credit is due to Mr. Herbert Spavins, the superintendent of the show, for the artistic grouping of the exhibits and general decoration of the hall. Taken as a whole, this season's show is a decided improvement on the preceding two. The general average of both plants and flowers was better. The number of individual exhibitor was larger than ever before, and competition for the prizes was keen—especially was this true of the Bailey prize, which was awarded to J. D. Lang. Among exhibitors in the trade F. R. Pierson Co., Tarrytown, N. Y., made a fine display of palms and other plants not for competition. Doyle Bros. captured the silver cup for best collection of decorative plants. Herbert Spavins won the silver cup offered for best collection of ferns; also the prize for best araucaria. O. V. Roden obtained a certificate for best collection of geraniums, also prize for flowering begonias; A. L. Marshall, gardener to J. B. Dutcher, Esq., was also a very successful competitor, taking first for carnations, cannas, best specimen fern, begonia rex, and the silver cup for best six plants most suitable for house decoration.

Providence, R. I., Show.

The Rhode Island Horticultural Society opened its November, or annual exhibition to the public Thursday afternoon, 11th inst., in Music Hall. Never in any previous year has there been such a full exhibit and so high a class of both plants and blossoms. The exhibits of potted plants were rather meagre compared with former years as regards number, but the standard of quality was much higher. In cut blooms the present exhibition was vastly superior.

Opposite the center of the stage was the display of Mrs. T. P. Shepari, consisting of palms interspersed with chrysanthemums, crotons, and other decorative stock.

One of the most attractive of the collections was that of the Park Greenhouses (J. G. Jensen). In the center was a round pillar some eight feet high, on one side of which was a solid bank of white and the other of yellow chrysanthemums, the former entwined with asparagus and the latter with hardy English ivy with respective interspersings of Scott and McGowan carnations. On the top of this was a large potted fern, over which hovered a pure white dove. Around this pillar were grouped palms, ferns, araucarias, adiantums, chrysanthemums, etc.

William Goddard (Alfred Powell, gardener) made a fine display of artistically arranged plants and chrysanthemums.

William E. Chappell showed a group of miscellaneous palms, ferns, and chrysanthemums.

There were really but three exhibitors of any moment in this class—Farquhar (sacrae, of Providence; Robert Laurie, Newport; and Bernard J. Connolly, of Taunton, Mass. In addition to the leading varieties, three particularly fine special exhibits of new chrysanthemums attracted attention. These consisted of vase of the Pennsylvania exhibited by Hugh Graham, of Philadelphia.

Mr. Laurie captured the much coveted special prize, a solid silver tea set, for the best six vases of blooms, with Mr. (sacrae a close second.

Worcester, Mass., Show.

The annual show of the Worcester Horticultural Society was equal to its predecessors.

The principal exhibitors were F. A. Blake, H. F. A. Lange, W. E. Sargent, C. J. Thayer, Moses Brierly, Orpet of Lancaster, W. J. Wood, Mrs. Austin Ward, A. Loper, of Tewksbury, and Fred Madaus.

One of the most beautiful exhibits in the hall was that in the class calling for 12 cut blooms. The finest two were those of Mr. Lange and C. D. Thayer. In Mr. Thayer's were grand blooms of A. H. Fewkes and Major Bonaffon. These were especially large and their deep yellow color was particularly noticeable.

The show of carnations was extensive. C. W. Ward, of Queens, N. Y., had a large collection, comprising an immense Mrs. George M. Bradt, the bloom being a trifle over three inches in diameter; a beautiful pink variety C. A. Dana; Maceo, a very dark red, almost maroon; Maud Dean, Gold Nugget, which is almost a clear yellow, and New York, a very beautiful bloom of a darkish pink color.

The display of chrysanthemums this year was the largest and finest ever seen in this city. One of the members of the Society said that it was easily 50 per cent. finer than at any previous exhibition. The blooms were larger and handsomer and more varieties were shown. One of the finest of the absolutely new kinds was Red Warrior, a large bloom with reflexed petals, and of a deep terra cotta hue. It was shown by Mr. Lange. But for the most part the specimens were of old standard varieties.

Syracuse, N. Y., Show.

The average quality of the display here on Nov. 9, was not quite up to last year's standard. In the large specimen plants the blooms were good, but the foliage was deficient, and the shape of the plants was not so good.

P. R. Quinlan Co. had a large central display of decorative plants interspersed with vases of cut flowers, among which were two exquisite vases of Major Bonaffon. Grove P. Rawson, of Elmira, N. Y., supplied an artistic novelty in the shape of an immense floral picture, with a frame of ivy leaves; in the center was a pitcher of Chrysanthemums and sprays of native Prunus. The special prize for native Ferns brought out some interesting and instructive exhibits. M. H. Ochsner, of Eastwood, being first with 25 varieties, all labeled and nicely staged.

The competition for the prize offered by the makers of the "Yellow Fellow" bicycle was naturally the premier attraction, and brought out seven competitors—Grove P. Rawson; Nathan Smith & Sons, Adrian, Michigan; A. McLellan, Newport, R. I.; E. G. Hill & Co., Richmond, Ind.; and Walter Menelly, George Ham, and L. E. Marquisee, of Syracuse. The competition was very keen. The three chosen for the final were the exhibits of Mr. Rawson, Nathan Smith & Son, and E. G. Hill & Co., Mr. Rawson's being ultimately chosen by the representative of the company. The pedigree of the winner is Golden Gate seed parent, and Niveus.

In cut blooms for 24 varieties, one bloom of each, Nathan Smith & Son took first with a fine level lot. The varieties were Sunstone, Lady Playfair, Mrs. Geo. A. Magee, Vivand-Morel, Mrs. J. G. Glessner, Minnie Wanamaker (a grand bloom), Golden Gate, G. W. Childs, Mrs.

A FARM PAPER

ought to be as reliable a guide to the farmer as the dictionary is to the student. If your land does not produce well, if your animal thrives, if your tree or vine bears fruit, the farm paper should find the reason and point the way to better results. The

Rural New-Yorker

is doing this for its readers every day. We would like to do it for you. Write us your question or difficulty, and we will get you the advice and experience of the best-informed men in the country on that particular subject. It need cost you nothing. Send us \$1.00 for a year's subscription. Read the paper three months—thirteen weeks. Then if you are not satisfied, we will return your full dollar. Send your dollar to-day; it will put money into your pocket later on. Sample free. For \$1.75 we will send it and AMERICAN GARDENING both one year.

THE RURAL NEW-YORKER

401 PEARL ST., NEW YORK

Mention American Gardening when you write.

\$4 Worth of New Music

for the ladies and

"Scribner's Lumber and Log Book"

for the men are the premiums we are offering with one year's subscription to

"The Market Basket," at \$1.

Send the dollar, we will send you a long list of music from which you can select 10 pieces, which sells regularly for 40 cts. each.

"The Lumber and Log Book"

is a board bound book of 190 pages. No farmer, mechanic, saw mill man or business man should be without it. It is invaluable. It treats over a hundred different subjects. It's just what you ought to have. It's a perfect schoolmaster. We send the \$4 worth of music, the Lumber and Log Book and the Market Basket for one year, all for \$1. Send the \$1 now, and we will send the Market Basket free until January 1.

THE MARKET BASKET PUB. CO.,

120 So. 2d St., Philadelphia, Pa.

A. J. MERRILL, Manager.

Mention American Gardening when you write



Lane's Steel Car Jack
Ask your hardware dealer.

Makers LANE BROS.
Poughkeepsie, N. Y.

Mention American Gardening when you write.

The man who

Will not Advertise

Will not

Meet with

Success

The man who

Advertises judiciously

Will

Succeed

Don't

Fritter away

Your money

In worthless mediums

Advertise

Only in

Successful papers

Advertise in

American Gardening

Publishers AMERICAN GARDENING:

Gentlemen—It may interest you to learn that my advertisement in your paper brought me customers from Mexico, New Zealand, Canada, New Brunswick and Manitoba, as well as from our own country.

F. L. WRIGHT, Mich.

November 19, 1897.

The Water Garden

BY WILLIAM TRICKER.

PRICE, \$2.00. 25 per cent. off to subscribers to American Gardening and Florists' Exchange.

This work contains nine beautiful plates, eighteen full page descriptive views of leading Water Gardens and Ponds, and numerous smaller pictures prepared with special reference to this work. On heavy enamelled paper. Elegantly bound. Large octavo.

The text describes all operations from the growing of plants in tubs to the large water garden, excavation of grounds, construction of ponds, adapting natural streams, planting, hybridizing, seed saving, propagation, the aquatic house, wintering, correct designing and planting of banks and margins, and all other necessary details.

A. T. DE LA MARE PTG. & PUB. CO. LTD., P. O. Box 1897, New York City.

The Henry Strawberry!

To Meet The extraordinary demand for this unequalled Strawberry we are preparing 100,000 Henry plants for delivery thorough next Spring to

Premium Earners

Henry Strawberry Plants can be obtained solely through a subscription to AMERICAN GARDENING; as the publishers will not sell plants under any consideration;

Neither will Mr. Jerolaman who has signed a contract with us to that effect.

Who is Entitled to Plants

NEW SUBS. AND RENEWALS

Five plants of the Henry will be mailed, postpaid, as a premium to every Renewal or New Subscriber sending us \$1.00 for a year's subscription. When remitting be sure to state if you want this premium.

TO AGENTS AND WORKERS

For every \$1.00 received from agents and present subscribers for New Subscriptions, we mail, postpaid, Ten Henry plants, Five to the New Subscriber and Five to the Agent.

Special to Club Raisers!

CLUBS OF TEN

To every agent sending us in a club of Ten New Names and \$10.00 we will forward in payment therefor One Hundred (100) Henry Strawberry Plants, by express, as well as send Five plants, postpaid, to each person in the club.

All orders are now held for Spring Delivery....

The series of articles on "Big Berries for All," written by Mr. H. Jerolaman for AMERICAN GARDENING, with additions, will soon be in pamphlet form; and agents and friends will be supplied with copies on receipt of stamp. It will be the most unique pamphlet on the Strawberry ever issued.

Address Your Letters to
AMERICAN GARDENING, NEW YORK.
P. O. Box 1697.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

WANTED, position as head Gardener, manager of private place; practically versed in all branches of horticulture and landscape work; accustomed to the management of help; 24 years' experience; references. W. P. Herbst, care of American Gardening.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advt., and each initial or a number, counts as one word. No cuts or display type allowed.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

DO YOU WANT the best flower pots? If so, send address to The Whildin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boekoop, Holland.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

\$5 Hand Bone, Shell, and Corn Mills for Poultrymen. Daisies Bone Cutter. Power Mills. Circular and testimonials Free. **WILSON BROS.,** Eastern, Pa. Mention American Gardening when you write

Home-Mixed Fertilizers

A man can save hundreds of dollars by mixing his own fertilizers. He saves about half the first cost; he can use the materials best adapted to the particular crop, and consequently secure the best results possible for the money spent. *Nitrate of Soda* should be used to furnish the nitrogen (ammonia). It is not only the *cheapest*, but the most soluble, available, and in every way the best form of nitrogen.

Free A 40-page book, "Food for Plants." Tells all about mixing and using fertilizers. Please ask for it.

S. M. HARRIS, MORETON FARM (P. O.) N. Y. Mention American Gardening when you write

ESSEX

Flower Food

10c

makes House Plants thrive and bloom.

Use once in ten days the first month and once a month thereafter. The 10c. package will feed twelve plants one year. Full directions in every package.

ASK YOUR DEALER FOR IT.

Save the plants by using Essex Flower Food—then save the wrappers of the 10 cent package. For twelve of these wrappers we will mail a beautiful study of Jacqueminot Roses, by the celebrated artist Paul de Longpre. This picture has no advertising. If your dealer does not have the 10 cent package send eight 2c stamps to Russia Cement Co., Gloucester, Mass., and get full size package by return mail.

Mention American Gardening when you write.

Jerome Jones, Iora, The Queen, Mrs. V. C. Egan, Nyansa, Mayflower, Western King, Reine A. Angletterre, Philadelphia, Margaret Jeffords, Silver Cloud, Melinda, Col. W. B. Smith, Mme. Philippe Rivoire, E. Dailedouze, and Admiral Avellan.

In the prizes for six vases, six varieties; one vase yellow, 12 blooms; one white ditto; one pink ditto, there was no competition against L. E. Marquisee. The first mentioned consisted of Gladys Vanderbilt, Hicks-Arnold, Philadelphia, Thomas Emerson, Mutual Friend, and Sunclad. For 12 yellow he staged Peter Kay; for white, Mayflower; for pink, Maud Dean. The last two were grand, the best of a very fine exhibit.

In the class for 24 single stem and bloom not larger than six-inch pots, C. E. Phillips was the only competitor, but he certainly merited the prize. The varieties were: Major Bonnafon, Pitcher & Manda, Peter Kay, Mrs. Geo. Magee, Mrs. Geo. West, John Shrimpton, Jayne, Georgiana Pitcher, V. More, Lincoln, A. H. Fewkes, White Bochner, The King, Helen Wright, Maud Dean, Minnie Wanmaker, Eda Prass, Mayflower, Golden Wedding, Niveus, Elma O'Farrell, Philadelphia, and a white sport of Vivand-Morel. Mr. Phillips also took first for the largest bloom on exhibition with Peter Kay grown in a six-inch pot.

In the gardeners' class the competition was chiefly in large specimens. The amateurs showed up well, Stephen Mowry and C. E. Phillips staging fine cut blooms.

For collection of Roses Peter Crowe of Utica, was first. For best three vases, L. E. Marquisee led, Mr. Crowe's second being very close indeed. The latter exhibited a vase of the Rose Christine de Noe. The style is after Papa Gontier with a deeper color.

St. John N., B., Show.

The Horticultural Association of St. John held its annual display of chrysanthemums in the Mechanics' Institute assembly rooms on November 4 and 5. As the show was held a week earlier than in previous years, it did not bring out all the exhibitors who would have made displays had the plants been in fit condition for the show. But what was lacking in quantity was made up in quality, there being some of the finest bloom ever seen in the "City by the Sea."

The Horticultural Association made its usual grand display of plants and cut blooms, and took up the whole space of one of the two large rooms. The plants were not as fine as usual; but the flowers were excellent, all being fine specimens. Some 250 cut blooms were staged.

John Culkshaw made a creditable display of plants. His 30-foot group was tastefully arranged. Some of his blooms were very fine.

Herbert E. Gould, of Sussex, also made fine exhibits of cut blooms and plants. He captured all the prizes in plants, there being no competition in this class.

Wm. McIntosh, gardener to Joseph Allison, Esq., made a very pretty display of foliage plants, which added much to the show.

LIFE PRODUCERS

THE SUCCESSFUL INCUBATOR.

LIFE PRESERVERS

THE SUCCESSFUL PRESERVERS.

All about them in our 120 page Catalogue. Sent for 6c, worth at

DES MOINES INCUBATOR CO., Box 99 DES MOINES, IA.

Mention American Gardening when you write.

INCUBATIONS Self-regulating. Catalogue free **G. S. SINGER, Cardington, G.** Mention American Gardening when you write

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticultural Landscape Gardener. Plans and estimates furnished

[LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Joe Forsyth Johnson, P. O. Box 167, New York City.

The Poultry Yard.
The Silver Wyandotte.

It is nearly ten years since so prominent a judge as B. N. Pierce considered the Wyandotte a fowl of such importance as to deserve a volume to itself; which volume appeared under the title of "Wyandotte Culture," and dealt almost wholly with the Silver Laced variety, the White and the Golden Wyandotte being not then admitted to the standard. As to the Blacks and Buffs, who had even heard of them? There was even a chapter on "Growing Wyandottes," and the statement was made that never in the history of fowls had a new breed sprung up and gained in popularity as had the Wyandottes, meaning, of course, the Silvers.

Since this was written, the value of the Silver Wyandotte has become even more fully understood, and its devotees have been numerous and staunch. But the novelty of the newer varieties, the extreme beauty of the Golden, and the special adaptability of the White Wyandotte to broiler needs have a little crowded aside the great original sort. This does not indicate that it is one whit less valuable or less popular than before, but only that there has been more talk about the others.

First and forward, the Silver Wyandotte is valuable as a prolific producer of eggs. As a producer of meat for the table which excels in juicy tenderness and in the proportion of breast, it is noted. A characteristic by no means to be despised is that of fattening easily for the table at any age, from ten weeks up. The yellow skin and legs are attractive, and the bones are comparatively small. Some one has stated the value of the breed in this way: "If you want the maximum number, both of eggs and pounds of flesh at the minimum cost, you can find it in the Silver Wyandotte." This is a fair and temperate statement, not to be placed by the side of those ultra enthusiastic affirmations that the initiated smile at it, and do not think worth while to contradict because few believe them.

As in all breeds, it will be found that the Silvers differ much in different hands, and it is well to look carefully before buying. From one show, it was reported that a pen of birds of this breed, of full age, averaged but five pounds. Pullets of the breed, shown by another, averaged six pounds. These hens must have been thrown out of competition for prizes, for the standard weight of hens of this breed is six and a half pounds.

Certain faults, generally due to the make up of the original specimens, are prone to crop out in every breed, to the annoyance and often to the despair of the breeder. In the Silver Wyandotte, feathers on the legs have been a frequent annoyance; also single combs, lop combs and crooked backs and tails. Yet strains differ so much that we obtained from one breeder a lot of birds which never, I think, gave us a specimen showing either of the defects first mentioned. And this in the earlier days of the breed, when these evil tendencies should have been far stronger than now.

The handsome rose comb, oval over the top so as to snug down to the head to some extent, is a strong feature of the Wyandottes all through. We found it strongly transmissible by the Silvers, even when crossed. It cannot be improved upon for utility in cold climates. These birds should not have white in the lobes of the ear, nor should they show that jumble of color in the main feathers, which the experts term "mosaic."

While the birds have the quietest and best of dispositions as regards their owners, and are never nervous or troublesome, they are jealous and ugly at times toward companions, especially if these are of other breeds, or of weakly, delicate habit. They are affectionate, but have no chivalry.

M. V. N.

Established 44 Years.

ARCHDEACON & CO.

Commission Dealers

166 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

CYPRESS
IS MUCH MORE DURABLE THAN PINE.

CYPRESS
SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.

GREENHOUSE
AND OTHER BUILDING MATERIAL.

Send for our Illustrated Book
"CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.

THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

A BARGAIN

We have made arrangements to furnish **THE OHIO FARMER** of Cleveland, O., and **AMERICAN GARDENING**, both papers, one year, making a total of 104 great papers, for only **\$1.60**

THE OHIO FARMER is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the **LEADER** of the Agricultural Press of America. A 20-page, 80-column paper **EVERY WEEK** in the year; employs **THE VERY BEST WRITERS** that money can produce; a strong, fearless defender of the agricultural interest of this country, and **CLEAN** in both reading and advertising columns. **IT HELPS MAKE THE FARM PAY.** **SAMPLE COPIES FREE.**

Present subscribers can order this combination at once and have their present term of subscription to **AMERICAN GARDENING** extended for one year. New subscribers to **THE OHIO FARMER** will receive the rest of this year free. Address all orders,

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

BETTER THAN KLONDIKE GOLD, \$3.60 for \$1.00

New York Weekly Tribune, greatest 20 page newspaper in the United States, \$1.00
Young People's Weekly, religious, colors, 12 pages, size Youth's Companion, .60
Farm Journal, best 24 page farm paper, most popular in the United States, .50
Poultry Keeper, twenty pages, printed in colors. It leads, others follow, .50
P.K. Illustrator No. 1, 100 illustrations, poultry houses, incubators, brooders, etc., .25
P.K. Illustrator No. 2, 75 illustrations, artificial incubation, care of chicks, etc., .25
P.K. Illustrator No. 3, Poultry Diseases, Gapes, Roup, Cholera, Moulting, etc., .25
P.K. Illustrator No. 4, Judging Fowls, description of breeds, Mating, Points, etc., .25

For only \$1 we send these 4 papers 1 year and 4 books, postpaid, grand total, **\$3.60**

Sample P. K. with other offers **FREE.**

POULTRY KEEPER CO. Box 39, Parkesburg, Pa.

Mention American Gardening when you write

HENS AND EGGS

Undoubtedly there are many readers of **AMERICAN GARDENING** who keep hens who do not take a poultry paper; possibly some take the wrong one. Gardening, fruit culture and poultry keeping dovetail together perfectly, each filling a season comparatively dull in the others.

Realizing the above facts, we have arranged with the publishers of **POULTRY MONTHLY**, to offer that journal in club with **AMERICAN GARDENING**, for the coming subscription season, both journals postpaid, one year, for the **SMALL SUM OF \$1.25.**

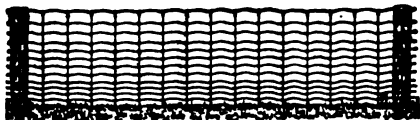
POULTRY MONTHLY is now in its nineteenth year; it has always been recognized as the leading publication in its particular field. Sound and reliable in its teachings, and not the mouthpiece of cranks, cliques, or rings. Its correspondents are practical and successful men, in the harness to-day. The publishers of **AMERICAN GARDENING** recommend **Poultry Monthly** as being one of the very best poultry papers issued, and advise all interested to accept this Great Combination Offer.

A WONDERFUL OFFER!

American Gardening (Weekly), \$1.00 } Both \$1.25
Poultry Monthly, - - 1.00 } One Year, postpaid,

Present subscribers who are in arrears must pay up in full to become eligible to this offer.

Address **AMERICAN GARDENING, P. O. Box 1697, New York City.**



The Spaniards Say

"By the street of By-and-by one arrives at the house of Never." While fence building is delayed damages sometimes result which would pay for the fence. SUCH economy (?) does not "lead to wealth."

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

A \$1.00 Raisin Seeder for 50c.



POSTPAID.

We are tired of selling dealers and waiting 30 days for our money, so we will sell housekeepers at Jobbers prices.

Send 50 cents, and we will mail you postpaid one of our best

BAY STATE RAISIN SEEDERS

Guaranteed to seed 1 lb. of raisins in 5 minutes. Simple to operate and easy to clean.

EASTON MFG. CO. B. ID, 64 Federal Street, BOSTON.

Mention American Gardening when you write.

=JADOO=

Chrysanthemums grown in JADOO FIBRE and watered with JADOO LIQUID were awarded

FIRST and SECOND PRIZES.

Crotons grown in JADOO FIBRE were awarded First and Second Prizes.

At the Annual Exhibition of Penna. Horticultural Society, Philadelphia, Nov. 9, 1897.

Plant your spring Bulbs in JADOO FIBRE and become Prize Winners.

THE AMERICAN JADOO CO.,
813 Fairmount Ave.,

PHILADELPHIA, PA.

Mention American Gardening when you write.

DO YOU NEED WATCHING?



Or, to put it another way,

Do You Need a Watch?

We sell them, sell them at such an exceedingly low price that you can't afford to go watchless.

Got 'em all sizes and styles.

But we'll just mention two:

An Elgin or Waltham Watch, best movement made, hunting case, accurate time-keeper, handsomely engraved, Double Case, heavily gold-plated—last for all time. Ladies' or gentleman's size.

We'll send it to your address with privilege of examination. If it's not entirely as represented, send it back—costs you nothing. If you like it, pay the agent express charges and \$6.50. That's fair. Or this—

A Hunting Case Watch—beautiful, fully engraved case, first-class movement, any size, heavily plated (14k)—looks just like a \$40.00 gold watch—keeps as good time as any of them. Sent to your express agent with privilege of examination—same conditions as all our watches sent out—and if you like it, pay him \$3.45 and express charges.

If you take our word for it, and send money with order, a handsome chain goes with either, and express charges are paid by us, for the prices named above.

Royal Manufacturing Co.
334 Dearborn St., CHICAGO.

Mention American Gardening when you write

WHOLESALE MARKET REPORT.

New York.

The horse show created great expectations in the flower market in the way of clearing out and raising prices. This it failed to do, but, fortunately for growers, there was a slight falling away in shipments and at the same time an increase in shipping orders from out of town, together with an increased funeral and family trade. Dealers have been able to clear out without the terrible sacrifices of recent weeks. Roses have improved but slightly in value. Beauty still keeps in excess of the demand, and \$3 per dozen was the highest possible figure obtainable for fancy stock.

Carnations are in better demand and are again up to the \$1 and \$1.50 mark, with strictly fancy going at \$3 and a few specials making more.

Violets towards the close of the week improved considerably: \$2 per 100 for good Violets was the prevailing figure.

Valley is firm at from \$3 to \$4 for good grades.

Lilies are slow to move at \$6 and \$8 per 100.

Chrysanthemums have not kept pace with Violets and show but little if any improvement over last week, except for a very few.

The fruit and vegetable market continues to clean out steadily, and on the eve of Thanksgiving business is good; no shortage of any particular stock is reported neither is there any noticeable boom in values. Just normal conditions prevail and that is all.

Hothouse grapes (European) make \$1 per pound.

Tomatoes move freely with 25c. per pound top figure.

Hothouse lettuce are plentiful, No. 1 stock, six dozen to a barrel make 50c. per dozen.

Cucumbers 60@75c. per dozen, demand light.

Apples—Albamarle Pippin, Va., poor to fair, \$1.50@2.50; good to fancy, \$4@5; Winesap, Va., poor to fair, \$1.75@2.50; good to fancy, \$3.50@4; Johnson's Winter, Va., poor to fair, \$1.75@2.50; good to fancy, \$3.50@4; King, State, Va., poor to fair, \$2@2.50; good to fancy, \$3@4; Ben Davis, western, poor, to fair, \$2@2.25; good to fancy, \$2.50@3.25; Greenings, State, poor to fair, \$1.75@2; good to fancy, \$2.50@3.50; Baldwin, State, poor to fair, \$1.75@2.25; good to fancy, \$2.50@3; N. Spy, State, poor to fair, \$1.75@2.25; good to fancy, \$2.50@4.

Pears—Seckel, State, per bushel box, \$1.25@2.50; Boston, fair to fancy, per box, \$2@6; Beurré Bosc, per barrel, \$2@4; Beurré Bosc, Boston, fair to fancy, box, \$2@3.50; Kieffer, per barrel, \$2@3; Lawrence, per barrel, \$1.50@2.50; Beurré Clairgeau, per barrel, \$2@3; Beurré d'Anjou, per barrel, \$1.75@2.50. Grapes—Delaware, per small basket, 10@14c.; Niagara, fancy to ex. fancy, small basket, 14@20c.; Catawba, fancy, per small basket, 10@12c.; Concord, per large basket, 11@13c.; white kinds, in trays, per 100 pounds, \$1@1.50; Catawba and Concord, in trays, per 100 pounds, \$1@1.25; very inferior, per 100 pounds, 50@75c.

Cranberries—Cape Cod, special varieties, fancy, large, dark, per barrel, \$7.50@8.50; Cape Cod, fancy, sound, per barrel, \$7; Jersey, sound, medium color, per barrel, \$5.75@6; Jersey, sound, medium to good color, per crate, \$1.75@1.90.

Oranges, etc.—Florida, bright, fair to choice, per box, \$3@4; Florida, russet, fair to choice, per box, \$2.75@3.50; grape fruit, bright, per box, \$5@7; mandarins, per box, \$6@7; tangerines, per box, \$7.50@12.

Pineapples—Florida, per case, \$2@4. Brussels sprouts—Per quart, 4@8c.

Cauliflowers, fancy, per barrel, \$2.50@3; fair-to-prime, per barrel, \$1.25@2.25; culls, per barrel, 75c.@\$1.

Celery—Choice to fancy, large, per dozen, 35@40c.; fair to prime, per dozen,

15@30c.; small and poor, per dozen, 8@12c.

Cabbages—Jersey and Long Island, per 100, \$3@4; State, per 100, \$2.50@3.50.

Cucumbers—Florida, per crate, 75c.@ \$1.50.

Egg plants—Florida, per barrel, \$5@7.50; Florida, per box, \$2.50@3.50.

Lettuce—Florida, per basket, \$1.50@2.

Onions—Orange Co., red, prime, per bag, \$1.75@2.25; Orange Co., yellow, per bag, \$1.50@2; Orange Co., white, per bag, \$1.50@3.50; Orange Co. interior, per bag, \$1@1.25; State and west, yellow, flat hoops, \$1.25@1.80; State and western, yellow, bulk, per barrel, \$2@2.25; eastern, white, per barrel, \$2@3; eastern, red, per barrel, \$2.25@2.50; eastern, yellow, per barrel, \$2.

Okra—Florida, per carrier, \$1.50@2.

String beans—Charleston wax, prime, bushel basket, \$1@2; Charleston green, per bushel basket, \$1@1.75; Florida, wax, per basket, 50c.@\$1.25; Florida, green, per basket, 50c.@1.

Turnips—Russia, Canada, car lots, per barrel, 50@75c.

Tomatoes—Florida, per carrier, \$1.50@2.50.

Turkeys of good quality are clearing out well at an average of 15c. and 16c. per pound. There is a large quantity of inferior stock and these are difficult to quote. The quotations are on dry packed.

Turkeys—Jersey and up-river, fancy, per pound, 16c.; state and Penn., fancy, per pound, 15c.; state and Penn., good to prime, 12@13c.; western, fancy, per pound, 14c.; western, good to prime, per pound, 12@13c.; western, poor to fair, per pound, 8@10c.

Spring chickens—Phila., fancy, per pound, 12@14c.; spring chickens, Phila., fair to good, 8@11c.; Jersey, prime, per pound, 10@11c.; state and Penn., good to prime, 9@10c.; western, prime, per pound, 8½@9c.; western, fair to good, per pound, 7@8c.; western, inferior, 5@6c.

Fowls—State and Penn., good to prime, 8½@9c.; western, prime, 8@8½c.; western, fair to good, per pound, 7@7½c.; western, inferior, 5@6c.

Ducks—Eastern and L. I., spring, per pound, 12c.; western, fancy, per pound, 9@10c.; western, fair to good, per pound, 7@8c.

Geese—Eastern, spring, white, per pound, 14@15c.; eastern, spring, dark, per pound, 12@13c.; Maryland, prime, per pound, 11@12c.; western, prime, 9@10c.; western, fair to good, per pound, 7@8c.

Squabs—Choice, large, white, per dozen, \$2.25.

Boston.

Good hard-shelled Hubbard squash in good demand at \$25 a ton; other grades will bring about \$20; Marrow \$20, Turbans \$25, Bay State \$25.

Onions meet a good demand at \$2.25 a barrel; if stock is fancy will bring \$1 a bushel for home-grown.

Turnips, White, French stock selling \$1 @1.25 a barrel; yellow stock \$1; white flats \$1 per barrel.

String beans selling \$1@1.50 a basket; mint 40@50c. a dozen bunches; radishes, good demand, at 30@40c. a dozen bunches; spinach 25c. a bushel; parsley 30@75c.; carrots 75c.@\$1; beets 50@75c. a dozen bunches; artichokes 75c. a peck; leeks, 75c. a dozen; Brussels sprouts 10@15c. a quart.

Egg plant still continue in good demand at \$3@4 a crate; green peas \$2 a basket; if choice would bring higher figures; Boston Market celery \$1.50@1.75 a dozen; German celery same as last week, 75c. a dozen.

Oranges, 150-176 count, \$4.50@5; 126 count, \$4; grape fruit, \$7@8 per box, counting from 54-80. Cauliflower market firm at \$1.25@1.50 per dozen heads. Cabbage market remains the same as last week, in fact, has remained about the same for a number of weeks.

Hothouse cucumbers are in good demand, if very choice, \$1@1.25 a dozen.

hothouse lettuce little weaker from last week, dropped back to 25@35c.

Mushrooms, fair demand, 50c. If good, that is per pound.

Hothouse tomatoes selling 25@30c. a pound; a good demand in consequence of Thanksgiving.

Hothouse grapes 30@50c. a pound.

Green Mountain potatoes, if choice, worth 80c. a bushel; Hebrons 75c. Sweet potatoes selling \$1.75 a barrel for Virginia stock, and \$2.25 for Jersey stock.

Apples, Greenings, \$2.50@2.75 a barrel, No. 1 stock; Baldwins, \$2.75@3 a barrel. Prices not quite so firm as last week's.

Pears, fancy Seckels out of the market; Duchess, \$1.50@2.50; Beurré d'Anjou, \$1.50@2; Beurré Bosc, \$3@4; Beurré Clairgeau, \$2.50@3; very few on the market now.

Cranberries still continue firm, \$5@6 a barrel; \$1.75@2 a crate; some very choice would bring \$6.50@7.

Quinces are now out of the market, and we cannot give any different prices on grapes from last week.

Philadelphia.

Both foreign and home-grown hothouse grapes are very quiet, there being very little demand for either.

Receipts of apples are increasing, while there has not been any improvement in the demand; prices in consequence have ruled a trifle lower. Kings, per barrel, choice and fancy, \$3.25@3.50; Wineaps, per barrel, choice and fancy, \$3@3.25; do. fair to good, per barrel, \$2.25@2.75; Ben Davis, per barrel, choice and fancy, \$2.75@3 do. fair to good, per barrel, \$2@2.50; Rome Beauty, per barrel, choice, \$3@3.50; do. fair to good, \$2@2.75; Greenings, per barrel, choice and fancy, \$2.75@3; do. fair to good, \$2@2.50; Baldwins and Spies, per barrel, choice and fancy, \$2.75@3; do. fair to good, \$2@2.50; mixed varieties, per barrel, choice, \$2.50@2.75; do. fair to good, \$2@2.25.

Grapes, New York: Concord, per 5-pound basket, 8@8½c; per 10-pound basket, 12@13c; N.-Y. Niagara, per 5-pound basket, 10@11c; N. Y. Catawba, per 5-pound basket, 7@8c.

Native grapes are plentiful and are selling fairly well.

Cranberries are only in moderate supply with prices firm, under a good demand. Cape Cod, fancy large varieties, per barrel, \$7.50@8; medium, per barrel, \$5.75@6.50; per crate, \$1.75@2.50. Jersey, per crate, \$1.25@1.75.

Florida oranges are selling very well at steady prices; choice, per box, \$3@3.50.

Pears—Kieffer, Jersey, per barrel, \$2.25@3.50; Seckel, per barrel, \$4@6; very few being offered.

Potatoes—There is a good demand for choice stock, which is scarce, indicating that it is being held for an advance. The market is liberally supplied with medium stock. Prices are for choice stock, per bushel 70@75c.; fair to good, 60@75c. per bushel. Jersey sweets, per basket, choice, 45@55c.; fair to good, per basket, 20@30c.

Caiflower—Choice, per barrel, \$1.25@1.50; fair, per barrel, 50@75c.

Celery—Choice, large, per dozen, 20@35c.; fair to good, per dozen, 10@18c.

Cabbages are in large supply, and prices favor buyers. Prices, per 100, heads averaging 6 to 8 pounds, \$2.50@3; heads averaging 4 to 6 pounds, per 100, \$1.50@2; lighter heads, per 100, \$1@1.25.

Cucumbers—Florida, per crate, \$1.50@2.

Egg plants—Florida, per one-half barrel box, \$2@3.

Green peas—Per one-half barrel basket, 75c.@\$1.50.

Onions—Yellow, per barrel, \$1.25@1.60; choice, white, per bushel, 85@70c.; yellow, per bushel, 55@60c.; common, per bushel, 40@45c.

String beans—Per one-half barrel basket, 20@35c.; wax, per one-half barrel basket, 20@40c.; Charleston, green, per bushel box, 15@25c.

Mushrooms are now very plentiful and prices have fallen to 35@40c. per pound.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.		A.	B.	General—Con.		A.	B.
American Agriculturist.....		\$1 00	\$1 85	Donahoe's Magazine.....		\$3 00	\$2 00
Breeders' Gazette.....		2 00	2 40	Eclectic Magazine.....		5 00	5 25
Country Gentleman.....		2 00	2 75	Electrical Review.....		3 00	3 20
Farmers' Advocate (Canada)...		1 00	1 75	Engineering Magazine.....		3 00	4 00
Farmers' Magazine.....		1 00	1 75	Forest and Stream (new only)...		4 00	4 20
Farmers' Review.....		1 00	1 90	Forum, The.....		3 00	3 60
Farm, Field and Fireside.....		1 00	1 50	Frank Harrison's Magazine.....		50	1 40
Farm and Fireside.....		50	1 40	Frank Leslie's Popular Monthly		3 00	3 50
Farm and Home.....		50	1 40	Godey's Magazine.....		1 00	1 90
Farm Journal.....		50	1 25	Golden Days.....		3 00	3 35
Farm News.....		50	1 20	Good Housekeeping.....		2 00	2 70
Gleanings in Bee Culture.....		1 00	1 85	Harper's Bazaar.....		4 00	4 25
Home and Farm.....		50	1 45	Harper's Magazine.....		4 00	4 25
Indiana Farmer.....		1 00	1 85	Harper's Weekly.....		4 00	4 25
Mass. Ploughman, new.....		2 00	2 60	Harper's Round Table.....		2 00	2 50
Renewals.....		2 00	2 90	Home Queen.....		50	1 35
Michigan Farmer.....		1 00	1 60	Illustrated American.....		4 00	4 30
National Stockman and Farmer		1 00	1 85	Independent.....		3 00	3 60
Nebraska Farmer.....		1 25	1 85	Jenness Miller's Illus. Mag.....		1 00	1 75
New England Farmer.....		2 00	2 50	Judge.....		5 00	5 20
Ohio Farmer.....		1 00	1 60	Judge's Library.....		1 00	1 85
Orange Judd Farmer.....		1 00	1 85	Ladies' Home Journal, The.....		1 00	1 90
Pacific Rural Press.....		2 40	3 00	Ladies' Home Companion.....		50	1 45
Practical Dairyman.....		50	1 35	Ladies' World.....		35	1 30
Practical Farmer.....		1 00	1 85	Leslie's Illustrated.....		4 00	4 40
Prairie Farmer.....		1 00	1 85	Life.....		5 00	5 40
Rural New Yorker.....		1 00	1 80	Lippincott's.....		3 00	3 25
Southern Cultivator.....		1 00	1 85	Macmillan's.....		3 00	3 60
Southern Farm.....		1 00	1 85	McClure's Magazine.....		1 00	1 90
Southern Florist and Gardener		1 00	1 75	Munsey's Magazine.....		1 00	1 90
Strawberry Culturist.....		50	1 35	Nation, The.....		3 00	3 80
Strawberry Specialist, new.....		50	1 00	New England Magazine.....		3 00	3 50
Renewals.....		50	1 25	New York Ledger.....		2 00	2 50
Texas Farmer.....		1 00	1 75	" Tribune (Weekly).....		1 00	1 90
Texas Farm and Ranch.....		1 00	1 85	" World (Tri-Weekly).....		1 00	1 75
Horticultural, etc.				North American Review, The.....		5 00	5 50
Canadian Horticulturist.....		1 00	1 90	Notes and Queries.....		5 00	5 50
Garden and Forest.....		4 00	4 25	Observer, new only.....		3 00	3 25
Gardening (Chicago).....		2 00	2 50	Renewal.....		3 00	4 00
Meehan's Monthly.....		2 00	2 85	Outing.....		3 00	3 35
Vicks.....		50	1 35	Park and Cemetery.....		1 00	1 85
Poultry.				Peterson's Magazine.....		1 00	1 85
American Poultry Advocate.....		25	1 15	Philadelphia Press (Weekly)...		1 00	1 85
Fancier's Review.....		50	1 85	Phrenological Journal.....		1 50	2 25
Farm Poultry.....		1 00	1 50	Popular Science Monthly.....		5 00	5 65
Ohio Poultry Journal.....		65	1 50	Popular Science News.....		1 00	2 50
Poultry Herald.....		50	1 40	Puck.....		5 00	5 10
Poultry Keeper.....		50	1 35	Puck's Library.....		1 20	1 95
Poultry Monthly.....		1 00	1 25	Paritan.....		1 00	1 90
Reliable Poultry Journal.....		50	1 40	Review of Reviews.....		2 50	3 25
General.				Scientific American.....		3 00	3 60
Advance (Cong'l) new.....		2 00	2 60	" Supplement.....		5 00	5 25
Renewals.....		2 00	2 90	" with.....		7 00	7 25
American Field, new.....		4 00	4 25	" Builders' edition.....		2 50	3 10
Renewals.....		4 00	4 50	" Inc. B'l'ds' edit.....		5 50	5 75
American Kitchen Magazine.....		1 00	1 75	" All 8 editions.....		9 00	9 25
American Machinist.....		3 00	3 20	Scribner's.....		3 00	3 60
Aquarium.....		1 00	1 75	St. Nicholas.....		3 00	3 60
Arena.....		3 00	3 60	Sunday School Times.....		1 50	2 10
Art Amateur.....		4 00	4 35	Texas Sittings.....		4 00	4 25
Art Interchange (with plates)...		4 00	4 35	The Etude, new only.....		1 50	2 15
Atlantic Monthly.....		4 00	4 30	Renewals.....		1 50	2 35
Ave Maria.....		2 00	2 70	The Outlook.....		3 00	3 85
Babyhood.....		1 00	1 90	Toledo Blade.....		1 00	1 85
Baptist Missionary Magazine...		1 00	1 90	Turf, Field and Farm, new.....		4 00	4 25
Carpenter and Building.....		1 00	1 85	Renewal.....		4 00	4 60
Century.....		4 00	4 60	Womankind.....		50	1 20
Chicago Herald (Weekly).....		1 50	2 35	Young Ladies' Journal.....		4 00	4 60
Chicago Inter-Ocean.....		1 00	1 80	Youth's Companion, new only.		1 75	2 35
Chicago Weekly Times.....		50	1 40	Renewals.....		1 75	2 75
Christian Herald.....		1 50	2 15	Foreign.			
Christian Register.....		3 00	3 85	Farm and Home.....		2 25	3 25
Churchman.....		3 50	4 10	Field.....		10 50	11 00
Colman's Rural World.....		1 00	1 85	Garden.....		4 50	5 25
Cosmopolitan.....		1 00	1 90	Garden Work.....		2 50	3 25
Delineator (Butterick's).....		1 00	2 90	Gardener's Chronicle.....		4 50	5 25
Demorest's Monthly Magazine...		2 00	3 60	Gardener's Magazine.....		4 50	5 25
Detroit Free Press (Weekly)...		1 00	1 90	Gardening, Illustrated.....		2 25	3 00
Domestic Monthly.....		1 50	2 15	Gardening World.....		2 50	3 25
				Journal of Botany.....		4 75	5 25
				Journal of Horticulture.....		4 00	4 85
				Kew Gardens Bulletin.....		1 50	2 25
				Revue Horticole.....		5 50	6 10

Address all
Orders to

AMERICAN GARDENING, P. O. Box 1697, New York.



We Call on every reader to secure at least one new subscription now to **AMERICAN GARDENING** for 1898, so they will not miss any of the following offers and inducements:

Prospectus for 1898

All the Good Things Continued

Which have made **AMERICAN GARDENING** the standard publication of the Horticultural world, and given it more bona fide subscribers than all other Horticultural papers combined.

Cash Prizes Offered Every Week

For Photographs of Well-grown Specimens (flower, fruit, vegetable or plant), with description as to how the result depicted was attained—from start to finish.

Cash Prizes Offered Every Week

For Best Answers to Question Box. This department is absolutely free, and there is no necessity for any reader to remain in ignorance on any subject which may puzzle him.

Colored Art Supplement Every Month

Free to every subscriber.—Beauties all. Every one values a good picture. Ours will be more than good.

Cash Prize for Best Essay

On a Subject of General Interest. One Prize every month.—This feature we expect to prove a drawing card.

Literary Supplement Monthly

Special Feature for Advanced Readers, containing articles of more permanent and scientific interest.

New Writers on New Subjects

Which we know our readers will appreciate.

And with all this

{ Array of
Attractions

We Give Premiums

To those who obtain us a new subscription as well as to the new subscriber. See advertising columns.

Don't fritter away your time and money on worthless reading. Subscribe to a practical publication, admitted by all the standard authority of the age and country. Take our advice: Talk American Gardening to your friends, get their subscriptions, and they will bless you evermore.

1840 OLD COLONY NURSERIES. 1897

Hardy Shrubs, Trees, Vines, Evergreens and Perennials. . .

A large and fine stock of well-rooted plants, grown in a sandy loam. Good plants, best sizes for planting; very cheap. Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.

Mention American Gardening when you write

Oak-tanned leather Harness



Send your address with a-cent stamp for Illustrated Catalogue, all kinds of Single and Double Custom-Made Harness, and direct to the consumer at wholesale prices. **WE CAN SAVE YOU MONEY.**

KING HARNESS CO., No. 3 Church St., Orange, N.Y.

Mention American Gardening when you write.

Peach Trees for everybody. Wholesale and retail

M. B. JUNKER, Box 21 Stockley, Del.

Mention American Gardening when you write.

We PAY FREIGHT BOX and Pack free. **PAPER** line all boxes. **REPLACE** free. Give **BUYER'S** choice; low **WHOLESALE** prices orders large or small; 10 trees at 100 rate, 300 at 1000 rate. Guarantee **SAFE ARRIVAL**, trees **TRUE** to name. **FREE** from **SAN JOSE** scale, and of **BEST** quality. Guarantee **SATISFACTION**.—**WRITE** for lists, photos and **FULL** particulars of foregoing **Stark 12 CHALLENGE** Points. **STARK BROS., Louisiana, Mo., Stark, Mo., Export, Ill., Danville, N.Y.**

Mention American Gardening when you write

STARK

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All of our pots from 7 in. and upwards have our Patent Exterior Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of **Bulb Pots**.

THE WHILLON POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

GLASS FOR GREENHOUSES, GRAP- ERIES, CONSERVATORIES, HOTHOUSES AND HOTBEDS. GLASS

MORNE, GRIFFEN & CO.,
Glass. 40 to 48 VESTRY STREET, COR. GREENWICH ST. **NEW YORK.**
Importers

Mention American Gardening when you write.

L & BURNHAM CO.,
Horticultural Architects and Builders Steam and Hot Water Heating Engineers.

(Established 1856.)

Plans and estimates furnished on application for Greenhouses, Conservatories, and all kinds of Horticultural Buildings, erected complete with our patent iron construction; or for material only, ready for erection.



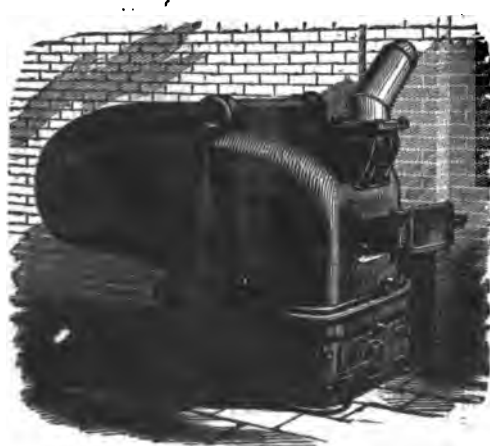
Largest Builders of Greenhouse Structures. Plans and construction embrace latest improvements. Six highest awards at the World's Fair.
Send four cents postage to New York office for latest catalogue.

NEW YORK OFFICE:
180 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

GREENHOUSE HEATING AND VENTILATING,
Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

FIVE PATTERNS OF BOILERS
NINETEEN SIZES

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

Iron Frame Benches with the "Perfect Drainage Bench Tile" or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.
Mention American Gardening when you write.

1846.

1898.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII, No. 154.
COMBINED SERIES VOL. LI,

NEW YORK, DECEMBER 4, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Apple Export Trade ... 826	use..... 824	Labeling 828	under glass..... 828	Vegetable Garden..... 825
Beekeeper, The..... 832	Cyclamen, Culture of.. 831	Leaves for Manure..... 824	Poultry Yard..... 833	Vines for Piazza..... 824
Cannas and Caladiums, Wintering..... 824	Digging, Fall vs. Spring 823	Lettuce, forcing profitable..... 827	Private Gardeners..... 829	Window Garden, The.. 831
Celery..... 825	Draining Land with Trees and Shrubs.... 823	Lettuce in cold frames. 825	Question Box..... 827	
Challenge taken up... 826	Flower Box, A Dainty.. 823	Market Reports, New York, Philadelphia, Boston..... 834	Rosa rugosa as a hedge 824	Illustrations.
Chrysanthemums certificated..... 829	Flowering Shrubs for cut flower..... 824	Obituary, Grey, Wm.. 829	Shows reported..... 830	Christmas Mantel Decoration..... 825
Cinerarias drop foliage 824	Fruit Garden..... 822	Peaches and Nectarines	Stinking Toadstool, the 824	Flower Box, A Dainty.. 823
Cow Manure, How to	Greenhouse Heating... 824		Tomatoes..... 827	Peach Tree grown in a tub..... 821
			Tomatoes under glass. 823	
			Tree for lawn specimen 824	



FIG. 225.—TREE OF FOSTER'S SEEDLING PEACH GROWN UNDER GLASS IN A TUB.

Illustrating a comparatively new method of culture. (See page 822.)

Peaches and Nectarines Under Glass.*

Probably some will say "what's the use of growing peaches and nectarines under glass, when we have at command such fine specimens as the California produce?" and, of course, we must admit the California peaches are nice to look at, and that's about all that can be said in their favor. No doubt if we were in California and could gather the peaches ripe, that they would be pretty good in flavor. In order to ship peaches from California to New York, they must be gathered before ripe, which spoils the flavor. All stone fruit should be ripe before it is gathered.

Hothouse peaches and nectarines when properly handled have no equals in all the line of fruits, and it is to be hoped that fruit growing under glass is in its infancy in the United States. Anyone who realises the value of fruit, cannot but wonder when visiting some of the principal private establishments, that there is no fruit of any kind grown under glass. In my estimation a private establishment with any pretensions to glass, if in the country, is not complete with the fruit house (or houses) left out.

I presume that in presenting a paper on a given subject it is customary to give something of its history, etc. I, however, will pass that over. It matters little to me whether the peach originated in Persia or in Egypt; but let us return thanks to our forefathers for taking in hand so valuable a fruit, when we look over the list of peaches and nectarines at our command and consider the improvements that have been made. It's difficult to draw the line in regard to varieties for our limited space.

The title of my subject is peaches and nectarines, but I am inclined to reverse matters, and class the nectarine before the peach. We are greatly indebted to Rivers, of Sawbridgeworth, England, for the wonderful improvement he has worked on both fruits; the name of Rivers is known to fruit men all over the world, and I think I am safe in stating that he's done more than any other one man in bringing out new and meritorious varieties of fruits, and those that he's sent out will be as monuments to his name for generations to come.

But we must not lose sight of the American varieties of peaches especially, Hale's Early peach, for instance, is one of the very best for early forcing both here and in Europe; Crawford's Early, Crawford's Late, Foster, Mountain Rose, are all fine varieties of American origin and should be in every collection.

Later on, to the best of my ability, I will speak of the varieties with which I have had experience, and know to be good, starting with the earliest and grading down to the late. And this matter of succession is surely an important one in fruit growing under glass; to have your trees so arranged that they give a continuous supply from the time you start gathering until the season is ended is a necessity. In our own case, with three peach houses at our own disposal, we have no difficulty in extending the season from the middle of May to the end of September, giving a continuous supply all the way through.

The nectarine is not so widely known as its merits deserve. The fruit is not as large as the peach, but we can carry more on the trees, so there is not much lost in that respect after all. Speaking from experience, there's something in the flavor of a nectarine that one never seems to get tired of; whereas, of peaches one does tire.

I would not advocate the growing of nectarines exclusively; I believe in a mixture.

The following is a list of nectarines which are all A1, and will give a long season of fruit, commencing with the earliest and on in succession:

Early Rivers, a valuable early nectarine not widely known in this country. A few words of introduction will not be amiss. It's one of Rivers' latest productions, and a variety of which he may

well be proud; it supersedes all others of my acquaintance as an early nectarine. Fruit large, trees of vigorous habit.

Then comes Lord Napier, Improved Downton, Elruge, Rivers' Orange, (an Improved Pitmaston Orange) Pineapple, Chaucer, Humboldt, Stanwick, and lastly Victoria, will wind up the season.

There may be other varieties just as good as these named, although I am not acquainted with them; I am simply giving those with which I have had experience, and whoever plants the above list will have a long season of nectarines and varieties of the best quality.

As to peaches with such a long list of varieties at hand, it would be a difficult matter for the beginner at fruits under glass to know where to start the selection, and once started where to leave off! The following is a list of tested varieties given in order of succession: Alexander, Hale's Early, Rivers' Early, Early York, Mountain Rose, Crimson Galande, Belle-gard, Foster, Crawford's Early, Crawford's Late, Prince of Wales, Princess of Wales, Lord Palmerston and Lady Palmerston. The last-named should certainly be in every collection of late peaches under glass; it is fully two weeks later than Crawford's Late, and for flavor cannot be surpassed. It is between a nectarine and a peach; in fact this magnificent variety was raised from a stone of the Pineapple nectarine.

Now that we have our varieties selected and graded, the next important point for attention is the border. Peaches cannot be grown without perfect drainage either inside or out. It does not matter how careful we are with the general treatment, with imperfect borders the results will be unsatisfactory. I would suggest in building fruit houses that they be erected where the water has a good chance to get away, and it is less expensive not having to provide drains to carry off the water.

Our fruit houses have no drains to carry off the water. The bottom of the border is filled in with about one and a half feet broken stone, followed by two and a half to three feet of good mellow soil. Peach trees don't like sandy soil, neither do they like one too stiff, just a happy medium is demanded in making up a border for peaches and nectarines. It pays to thoroughly firm the soil.

Another thing should not be lost sight of; by no means make the border too rich, or the trees will have a tendency to make such rank wood that it will be almost impossible to keep them within bounds. It is better by far to add food to the trees, as they need it; and it is easier to add than to take away. In taking visitors through the houses, I have often been asked questions that I could not answer, the one most generally asked is, how long will the trees last? That is a question I cannot answer. During this past season I have gathered some of the finest fruits from the oldest trees. The variety was Crawford's Late and individual fruits measured one foot around and weighed fifteen ounces. My opinion is that a fruit tree is just as good at ten years old as at five, when properly handled. In the treatment of the trees from the time they are started until the fruit is gathered, probably any two growers will vary a little in detail, but one thing is certain, success for next year depends largely in finishing up the wood this fall. If the wood is not thoroughly ripened in the fall, it is impossible to get high-class fruit.

I have been fortunate in having been under some first-class fruit growers, both in England and Scotland, where I was always taught to tie in the young wood on peaches and nectarines. It must be admitted the trees look neat handled that way, but I have found through experience that I can get better wood, more thoroughly ripened, by not tying in the young wood at all during the summer. Anyone not having tried this plan will probably think it an untidy method, but it is the crop we are after, and during the winter months the old wood can be cut away and the trees can be tied into fairly good shape. Or it would be better to cut away the useless wood as soon as the crop comes off the trees, so

as to give next year's wood a better show to ripen up.

One is apt to neglect the trees in fall after the crop is off, but it is a mistake to do so, and an expensive one. Peaches and nectarines need attention until the foliage comes off, and should not be allowed to get very dry. After the crop is off they don't need the amount of water they do when they are carrying their fruit, but a tree should never be allowed to wilt for want of water. By giving the trees good attention in fall, thoroughly ripening the wood, there should not be much trouble with the trees dropping their fruit next season.

In getting a house ready to start, I know of nothing better than to give the trees a good wash with gishurst compound or whale-oil soap, except the fruiting wood; that I never wash. After the trees are tied into shape clear all the loose soil off the border, give a top dressing of cow manure, a little bone meal and wood ashes, and fresh soil forked in. I then consider the house in shape to start.

I have come to the conclusion the less we use of chemical manures the better, although the man who has the fertilizer tells me I can't have good results unless I use some of his best grade. On that subject, however, I have my own opinion; I say again cow manure is good enough for me.

(To be concluded.)

The Fruit Garden.

Grafts.

Where any are wanted they should be cut, labeled, and stored away out of the reach of frost. A good way is to pack them in a box and cover with sand.

As to Labeling.

Speaking of labeling reminds me that this detail can be carried farther by seeing that all the trees you are sure of are labeled correctly. As to those you are not certain about, why, find out the names of them, which is not a hard matter where the "want to" is good. Another thing is, it will make the trees more interesting to you, to the workman, and to your visitors.

Of course, a label that can be seen 20 feet away is not wanted nor called for, but zinc labels, such as recommended in AMERICAN GARDENING for January 9, page 21, are good, and the narrow end can be wound, one and a half turns about a small twig, or a nail in a certain part of the tree. I have used pieces of zinc cut $1\frac{1}{2} \times 1$ inch and fastened to the trunk by one wire nail.

Of course there are some men who can remember the names of everything—or make them to order—and other men who prefer to keep the names privately in a book, and leave a number on the tree for the hired men. Neither of these methods is very encouraging for the lad who wants to learn, nor are they very flattering to the one in charge. He's a poor teacher who cannot keep ahead of the pupils!

Caterpillars' Eggs.

When pruning keep a sharp eye for eggs, a likely place for them is under an ordinary looking dead leaf, but that leaf does not get blown away, and serves to keep the bunch of eggs dry.

Covering of Strawberries.

Don't forget to provide some covering for the plants; it is to be used some dry day when the ground is frozen hard and dry, so that it is fit for working on.

(J. HOLLOWAY.)

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

*Paper by W. Turner before the Dutchess Co. Horticultural Society, Dec. 1, 1897.

Draining Land With Trees and Shrubs.

I recently found it necessary to select a location for the cesspool of a new house, and in the light of past experience I fixed upon a place a rod and a half from an elm of a century's growth, and within a few feet of a proposed line of hedge. The location would also be where a bunch of shrubs, or evergreens, could be grouped to give a good effect to the lawn when laid out. I placed the cesspool in this situation because I had learned by experience that trees and shrubs drink up enormous quantities of liquids from the ground, and that their roots delight to feed upon just such impurities as will soak out into the surrounding ground from cesspools and sink drains. No one would believe that quantities of water the roots of a single tree even, will take up from the ground, unless he has had a practical demonstration before his eyes. I well remember what first brought the matter to my attention. A country home, in whose owners I was interested, had an open sink drain, that in the summer season became very much of a nuisance. The ground was filled with and covered with an ill-smelling flood of soapy water. I procured a supply of young evergreens and set a hedge alongside the drain. The trees grew rapidly, and the ground that before had been like a sponge filled with water became hard and firm and drained so. I do not recommend open sink drains, though these are much better than closed drains that are not properly trapped, but where such a drain exists, and is likely to exist, or where a cesspool is to be located, I know the presence of trees and shrubs is desirable. Hedges may be made doubly serviceable in this connection oftentimes, serving the purpose just described, and that of wind-breaks and of objects of beauty for a well-kept hedge about one's house is exceedingly attractive, and such a hedge can be procured right at home, many of our native shrubs and trees making the very best of hedges.

WEBB DONNELL, "Quillerott," Maine.

Autumn vs. Spring Digging.

The subject of digging is a more important matter than appears at first sight, because modern investigation has thrown a fresh light upon much connected with the soil and the conservation of its properties.

For a large number of cultivated plants, the supply of nitrogen is of the utmost importance, and this is obtained chiefly from the nitric acid of soluble nitrates derived either from applied manures or from decomposing substances already in the soil. During the summer months, and with a due amount of moisture present, the production of these sources of nitrogen proceeds continuously and at a much greater proportionate rate of increase than in the winter. The constant stirring of the surface by means of hoes or other instruments in the warm months considerably accelerates the formation of the compounds named, by the admission of air.

Thus, if a piece of ground is unoccupied by a crop during the summer, and it is attended to in the surface-stirring mentioned, there is by the time autumn arrives a material increase in fertility. Even if it be occupied by a crop, unless it be a very exhausting one, or close planting is adopted, there may be some accumulation if the land has been previously well manured.

In the autumn and winter, however, the condition of affairs is reversed; so long as the soil continues warm, and not over-saturated with water, the nitric acid formations will continue, though in a lessening degree, until in the winter very little indeed is produced. Then, too, we have the greatest waste going on, particularly in a wet season; the compounds formed during the summer are rapidly washed away if the soil is not occupied with a crop, and we have to

make up this loss by the addition of costly manure, or the land becomes impoverished.

Regarded, therefore, solely from the point of view of naturally increasing the fertility of the soil, we know that in digging ground in spring or summer we are certain to gain, while the same operation in autumn or winter will as certainly lead to some loss of the constituents, and perhaps in a great degree if the winter prove to be wet. In both cases this is assuming the ground to be unoccupied—but in few gardens can ground be allowed to lie fallow for several months; therefore it only occurs when a crop is removed in the autumn too late to put anything else on it. Then if it have to wait for a crop until spring it would be economical to defer the digging until spring. An ordinary rich garden soil that has been in cultivation for many years contains such a superabundance of humus that the winter loss is not a very serious matter, as it is soon made up by decomposition.

The mechanical advantage of autumn digging when dealing with rough and heavy ground cannot be questioned, as whatever loss may be sustained by drainage is more than compensated by improved workable condition of the soil, while the more ready escape of water increases the warmth of the soil. Heavy

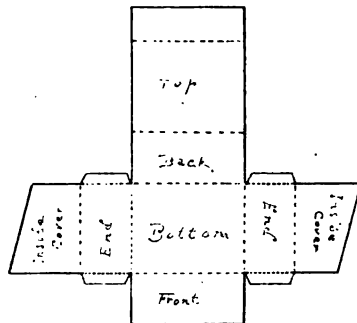
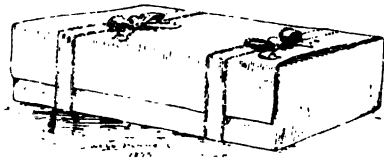


FIG. 226.—A DAINTY FLOWER BOX.

ground that has not been under good cultivation, dug roughly in autumn, and exposed to winter frosts, will be in a better state for planting in the spring than three times the labor could effect at that time. The rough exposure of ground to the frosts also has a tendency in a severe winter to greatly reduce the insect-pests which find shelter in the soil.

The storage of humus in soil is an important matter beyond all doubt, but it only gradually restores to land what the crops have absorbed. Sir John Lawes says: "Humus (in which term I include all vegetable matter in a state of decay) is very insoluble in water; but sooner or later it assumes the form of nitric acid, which combines with lime or other alkaline substances in the soil, and then becomes very soluble in water. These compounds rise and fall with the water in the soil, coming to the surface in dry weather, and passing into the drain. In the absence of growing vegetation in wet weather. When a crop is in the full vigor of growth the soil-water may contain more or less nitrate. Being soluble in water and entering into no combination with the soil, nitrate cannot accumulate. Each year fresh nitrates are formed from the decomposition of the humus, the fertility of the land depending largely upon the amount of nitric acid liberated every year. What we call condition is so much added to the stock

of organic matter which in the course of a few years is decomposed, yielding nitric acid and mineral substances."

Autumn digging should always, where possible, be followed immediately by a crop of some kind. Without that there is a certain, though variable, loss of nitrogen-yielding and other compounds during winter. In gardens and in improving heavy soils, this loss is counterbalanced by other advantages, but in large areas of land, such as fruit plantations, it is more economical either to crop the land or to leave the digging until spring.—Gardeners' Chronicle.

A Dainty Package of Cut Flowers.

One frequently desires to make an especially dainty offering of choice blossoms, to some sick friend, perhaps, and when this is the case, the receptacle for the flowers becomes an object of concern. Something a bit out of the common is shown in the accompanying illustration. This little box is made of rough, heavy paper, cut after the pattern that is given, and folded on the dotted lines. The paper on which water-color drawings are made is excellent for this purpose. When the flowers have been arranged within, secure the cover by two pieces of narrow white, or daintily colored ribbon, tied in bows at the top. A daintier offering could scarcely be conceived.

WEBB DONNELL.

Tomatoes Under Glass.

In securing an abundant supply of tomatoes during the winter months, much depends upon the start the plants have made, the aim being to set a heavy crop of fruit before the short and perhaps sunless days. They should be trained not less than two feet apart, so as to give the bunches of flowers plenty of light and air, without which they become weakly and fail to set. Crowding must in all cases be avoided.

The single stem system of training seems to be the best, which briefly described, consists in rubbing out all side shoots as they form, the main stem being encouraged to grow and form strong clusters of fruit. Allowing side shoots to grow only weakens the plant as well as the bloom. Their early removal favors a large crop.

The first clusters of fruit ought to be freely thinned out, all large ugly flowers removed early, or otherwise a good succession of fruit will seldom result. Artificial pollination of the flowers is also necessary throughout the winter; this can best be accomplished by the aid of a camel's-hair brush or by shaking the plants gently toward midday or when the pollen is the driest. On no account should this be neglected, failure to set crop being the principal or most frequent cause of failure.

Give plenty of air; on all moderate days the temperature should be kept as near as 65 degrees at night with 10 to 15 degrees higher by day in sunlight. The tomato, in fact, is a subject that will not endure much of the nature of forcing, and if practised at all it must be done in a very gentle and judicious manner or the result will be a bad attack of fungus.

Watering has to be done in a careful manner in the early growth of the plant. It will do no harm to keep the atmosphere moist only on sunny days, that is merely to wet down the walks. At the time of fruit setting, of course, the atmosphere has to be dry around noon or the brighter part of the day, in order to pollinate the flowers. When watering the plants care must be taken. It is always best to wait till they are dry, then give a good soaking. Never water in a careless manner, which usually leaves surface wet and the under soil dry.

As to varieties, there are the Lorillard, Volunteer, Beauty, Golden Queen, and Dwarf Champion; the Lorillard is the standard. JOHN J. FARRELL, Conn.

The Stinking Toadstool.

I advise G. L., N. J., under heading "The Stinking Toadstool," page 798, to freely use flowers of sulphur which is certain death to all forms of fungi.—JESSE ROBBINS.

Rosa Rugosa as a Hedge.

The plants referred to in a Newport garden (page 795) were planted by me in 1889, and as I recall the matter, were about 2½ feet apart, which answers well for a low wind-break.

A variety of rugosa Comte d'Epresmesnil has semi-double flowers, very fragrant, and bears many flowers throughout the summer, but is not so free in producing hips (seed-pods).—J. HOLLOWAY.

Those in the group referred to in your issue of August 14 last, are planted from 2 feet to 2 feet 4 inches apart in the rows, and the same distance between the rows, there being eight rows altogether to form the screen.—ALEX MACLELLAN, Newport.

How to Use Cow Manure.

Stack it by spreading a layer of it on sods or soil. Cover it with a layer of soil and so proceed, cutting down and mixing both together later. The old cow manure pile is a favorite place for developing the larvae of May bugs, which in the white grub stage sometimes do considerable damage to strawberry plants for feeding on the roots.—J. H.

This material, unmixed with litter of any kind, is very inconvenient to handle and difficult to quickly prepare for use. There is a variety of opinions as to the cause of the difficulties which are experienced. If the material is mixed with about 10 per cent. of quick-lime and placed in small piles sprinkled over with gypsum, decomposition should be fairly rapid with but little loss of nitrogen; the operation should be carried out under shelter.

I can see no reason why well-rotted cow manure should not be used for strawberry growing provided there is enough potash in the soil to balance up the nitrogen from the manure.—J. F.

Night Soil.

Storer's Agriculture, Vol. II., pp. 28-34 and 69-76, covers the night soil question fully.—J. F.

Leaves for Manure.

Ten per cent. of lime mixed with the moist leaves will hasten decomposition if the pile is kept moist and forked over occasionally.—J. F.

Planting Raspberries in Fall or Spring.

The beginning of October and the end of March are times of about equal choice for planting red raspberries, but the busy man finds he has more time in the fall, and generally does the work then. Blackcaps should be always planted in spring.—J. H.

Vines for Piazza.

The following is a select list of vines to cover piazza posts, as asked for on page 795: *Actinidia polygama*, *Akebia quinata*, *Aristolochia siphon*, *Clematis paniculata*, *Lonicera Halleana*, *L. reticulata aurea*, *Wistaria sinensis*, and variety *alba*, *Periploca græca*. All the foregoing are hardy.—W. T.

Greenhouse Heating.

The figures given by Wm. Hanson, page 795, merely show the length and width of the house, but give no idea of its form or of the amount of glass exposed, and it will be impossible for any one to give an intelligent answer to the questions asked. However, to aid Mr. Hanson in ascertaining for himself the amount of radiating pipe he will require for his house, I will say that I should use one linear foot of 1¼-inch pipe for every square foot of glass in the house plus one-fifth of the exposed wall surface, provided

he lives where the temperature falls to 10 below zero, and if he wishes to propagate stove plants. I would have one as an overhead flow and the returns could be about one-half under the propagating bench and the others where they would best maintain the temperature of the house. The proposed plan of inserting the heating coil into a stove would answer if the work is properly done. While one-inch pipe can be used and enlarged as proposed, I should prefer to put in a 1¼-inch coil.

While a coil one-fifteenth or even one-twentieth as long as the radiating pipe would answer, I should use about one-twelfth as much free surface as radiating surface.—L. R. TAFT.

Specimen Tree for Lawn.

Some time back an inquirer asked for advice as to what tree would be good as a lawn specimen, something attractive. I would suggest a Norway Maple. It is a handsome tree, not particular as to soil, and in the fall takes on a glorious yellow color lighting up the garden wonderfully, and in refreshing contrast to the red-brown tones around.—STEPHEN HOYT, Conn.

Wintering Cannas and Caladiums.

Cannas or Caladiums if kept cold and wet during the winter rest will almost of a certainty rot. They must be stored in a dry spot and so kept in an intermediate temperature and condition that they will keep plump and fresh without being excited into growth until needed.

Why Cinerarias Drop Foliage.

There is too great a rise in the temperature in the daytime to suit the plants mentioned on page 811. Through such extremes all the moisture is driven out and from around the plants, hence the loss of leaves.

The best Cinerarias we have ever had have been grown in pits kept at from 40 to 45 degrees and sometimes the temperature fell dangerously near to freezing; even then the plants seemed to like it. The chief danger at such a low temperature was damping, but judicious ventilation in the daytime avoided trouble.

One thing certain about this plant is, if you want to get great, clear green foliage with lots of spread and afterwards large bold heads of bloom, the plants must be grown on a cool moist bottom at a low temperature, avoiding frost of course. For while the plant likes to be grown cool, it gets nipped by frost more easily than almost any plant.

Plants grown in a warm temperature develop small leaves and draw up spindly with flowers correspondingly small, and worse still aphids breeds the faster.—ED. A. G.

Flowering Shrubs for Cutting.

With the long list of flowering shrubs at command, probably no two people would select the same. They are all worthy of a place around our homes, and with a good selection, there is flower from May, the first of May to September. A selection is: *Cydonia japonica* and varieties, *Deutzia crenata flora plena*, *D. Pride of Rochester*, *D. gracilis*, *D. Waterlily*, *Wiegela* in variety, *Eleagnus longipes*, *Exochorda grandiflora*, *Forsythia Fortunei*, *F. suspensa*, *F. viridis-sima*, *Halesia tetraptera*, *Hydrangea paniculata grandiflora*, *Lonicera tartarica*, *Philadelphus coronarius* and varieties, *Rhodotypos Kerrioides*. The Spiræas are too numerous to mention, the following are a few of the good things: *Spiræa prunifolia*, *S. Reevesii*, *S. Thunbergii*, *S. Van Houttei*, *S. crataegifolia*, *S. callosa*, *S. callosa alba* and *superba*. Lilacs in variety and *Viburnums*.

The above is a fairly good list of flowering shrubs, although some of the berried plants and foliage plants would help to brighten up the planting; such are *Berberis Thunbergii*, *Prunus pissardii*, *Symphoricarpos*, etc.—WM. TURNER.

The following list shows also the date of flowering at Newport, R. I.:

April 30, *Forsythia suspensa*, *F. viridis-sima*, and *F. Fortunei*. May 8, *Spiræa Thunbergii*. May 20, *Spiræa Van Houttei*, *Cydonia japonica*, and *Cornus florida*. May 28, *Deutzia gracilis*, *Staphylea colchica*, *Azalea amena*, *Lonicera tartarica*. June 1, *Halesia tetraptera*, *Rhodotypos Kerrioides*. June 5, *Spiræa crataegifolia*, *Azalea mollis*, *Berberis vulgaris*. June 15, *Weigela rosea*. June 22, *Chionanthus virginica*. June 25, *Weigela virginica* *Lavellii*. June 25, *Rosa rugosa*. *Philadelphus coronarius*, var. *grandiflora*. June 30, *Deutzia crenata*, *Rubus odoratus*. July 8, *Rosa Madame Plantier*. July 6, *Rhus cotinus*. July 10, *Rhus glabra lacinata*, *Deutzia crenata* fl. pl. July 15, *Spiræa Bumalda*. July 24, *Hydrangea nivea*. August 28, *Hydrangea paniculata grandiflora*.

All are hardy here, and in the latitude of New York would be in bloom at least one week earlier than the dates given.—ALEXANDER MACLELLAN.

Indoor Decorations.

At the approach of the Christmas season there is a natural interest in suitable decorations to duly honor the ancient festival. To those who have a large quantity of evergreen shrubbery at hand the problem of gathering sufficient material is not one of any difficulty, but unfortunately not all of us have such possessions. The owner of a small lot of shrubs does not care to cut them for indoor ornamentation, and most properly so!

It is an old truism that where a demand exists some one will arise to supply it, and in connection with the desire to refresh their dwellings with draperies of greenery, our readers will no doubt be glad to know that the richness of the Southern evergreen growth is placed at the disposal of all for a very moderate charge.

Our illustration of a mantel decoration shown in fig. 825 represents what may be done in any home for the small expenditure of \$1.50, including express charge. That surely is cheap enough! These boxes of decorative greenery are put up by Caldwell the Woodsman Co., Evergreen, Ala. Other lots can be had for more elaborate and larger decorations.

For decorating an interior we would urge a careful study of our illustration, not that it should be slavishly copied, but to inculcate a vital point if the best effect be desired. In all such work as is here suggested, it is always advisable to avoid formality. Thus to refer to our figure, if the Palm Crown had been placed in the center and the Smilax and Holly evenly distributed around by a geometrical arrangement, the effect would not have been so satisfying as it now is. Again, seeing there is a doorway on the right of the fireplace, the Palm could not be used to such advantage on the left side. Why? Because the continuous drapery of Smilax on the left acts as a balance to the dark doorway and actually brings that into the picture scheme while at the same time the leaves of the Palm which reach over it act as a relief and are shown to advantage against the dark background.

What is technically termed "composition" in a picture is as great a factor as the material used. Expressed simply, without elaborating, it may be said that the figure of a pyramid should always be the basis of work, but that the apex should never be directly over the center of a horizontal base line. The angles of this triangle should be the three heavy or three light points as the occasion demands.

In our picture the light points are the mirror, the jardiniere, and the wall space to the low; left while the dark centers are the base of the Smilax and Holly on the left, the bottom of the door and the conspicuous angle of the lintel which if not thus drawn into the scheme of decoration would have been an eyesore and a source of irritation to the artist's mind. L. E.



FIG. 227.—CHRISTMAS MANTEL DECORATION. (See page 824.)

The Vegetable Garden.

Celery.

This has proved to be favorable fall weather for celery left out-of-doors—it has frequently been noted that this vegetable should always be left in the ground as late in the fall as possible. Of course, judgment must be used in this matter, everything depending upon the weather of the locality, and other influences.

Celery stored away must be freely ventilated, and that outside in pits or left earthed up where grown, must now be provided with some suitable material for covering at the approach of cold

weather, although a few degrees of frost will not hurt it in the least, too much will accelerate its early decay.

Brussel Sprouts Are Now in Season.

In picking the sprouts, commence at one end of the patch and as you go, pick clean all that are fit for use, so that when hard weather comes, a few good rows will remain unpicked, and by covering these with some light litter, salt hay, or leaves, will keep a long time and can easily be gathered on warm days.

Treatment of Vacant Ground.

Plow or dig all the vacant ground,

leaving it as rough as possible, so that the winter frost will pulverize and sweeten it.

Lettuce in Cold Frames.

These should receive constant attention. If the weather is fine and the sun shining in the morning, ventilate a little at first, adding as the day warms up, but close the sash early in the afternoon, before 3 P. M. When it is necessary to water, do it early in the morning, so that the leaves will dry up before evening. Water should be sparingly used in cold weather; it is better to keep on the dry side.

W. M. EDWARDS, Conn.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1906.

PUBLISHED BY

A. T. DELAMARE PTO. & PUB. CO. LTD.

ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.

Telephone, 2154 Cortlandt. P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society; the New York Gardeners' Society, and the American Institute Farmers' Club.

The Apple. THE export trade in apples from New York Export Trade. begins to assume considerable proportions early in November, and the shipments to that city—the greatest distributing center for the trade—continue to the middle of winter.

Liverpool is the greatest distributing center for our apples abroad, and it stands next to New York in the number of apples received and sold. London, Glasgow, and Hull are also large consumers of American apples; but at Liverpool most of the auction rooms receive and dispose of the export crop. As many as one hundred thousand barrels have been sold in one week at remunerative prices in Liverpool, and every week from now on the sales of American apples will form a conspicuous feature of the auction rooms of that city.

The auction system has materially improved the apple trade in England, says the N. Y. Evening Post, and it has helped to reduce the cost of placing the fruit on the British market. The ocean freight on a barrel of apples varies from forty to sixty-five cents, but the charge in Liverpool for dockage, town dues, insurance, advertising, sampling, and the labor of handling amount only to about 7d. (14c.). Add to this 5 per cent. commission on sales, and you have the cost of delivering and selling apples in England.

The picture of the auction sales is well

drawn by our contemporary. "The auction rooms are well-arranged places, and on the days of advertised sales buyers appear in large numbers. There are regular sales on Mondays, Wednesdays, and Fridays. The apples are brought direct from the steamer to the auction place, and are catalogued according to the shipping marks and variety. Some of the shippers are so well known that their goods are sold upon their reputation without being examined; there is always a demand for such goods. All of the other brands are sampled in this way: In the center of the auction room, where all of the buyers can see what is going on, two barrels out of every twenty are opened, and the contents of one barrel emptied into baskets. Each buyer has to take at least twenty barrels; but if any in the lot he has purchased are 'slack,' they are replaced by others. A 'slack' barrel is one which rattles when roughly shaken. These 'slack' barrels are sold separately, and where a regular barrel will bring 16s. (\$4), the 'slack' barrels from the same lot will be knocked down to 2s. to 4s. (50c. to \$1)."

This last point is one of much interest to our fruit growers and has operated very powerfully to make shippers pack their apples with great care.

Each auctioneer who has apples to dispose of has forty minutes in which to sell his fruit, and if not all sold he must then stand aside until all of the others have had their turn and it comes around to him again. The auctions frequently go on until midnight on days when heavy consignments arrive by steamer. A single auctioneer has sold as many as 15,000 barrels of apples in one day.

Speaking of varieties the article stated the British buyer has very decided preferences for certain varieties of apples. Baldwins have in the past been great favorites on account of their high color and attractive appearance; but the Ben Davis apple has replaced the Baldwin to a large degree lately. More of the Ben Davis variety are shipped abroad than any other, and more orchards are being planted with these than with Baldwins and Greenings combined. King, Snow, Gravenstein, Pound Sweets, and Greenings and York Imperial are also good sellers and Newtowns always sell well if true and of high grade.

Our export apples are now invading the markets of Germany. Germany has for many years imported her apples largely from the Austrian Tyrol; but the superiority of the American apples has gained an ascendancy over these in the large cities. The Alpine-raised apples are handsome fruit—prettier, in fact, than the average American apples—but they lack flavor, juiciness, and tenderness. The agrarian press of Germany has been ready to find fault with all imported American products, and it has directed some sharp criticisms against certain defects in the American apples, but at the same time it has strongly advised all German farmers to obtain grafts of American apple-trees and plant them extensively. Heretofore the worst of our apples have been shipped to Germany, the choicest going direct to Liverpool; but the excessive crop of last year altered the conditions. New markets had to be found and with improved packing and selection the trade opens more auspiciously this year than ever before.

A Challenge Taken Up.

Concerning Mr. Jerolaman's recent challenge we have received the following letters:

To the Editor of American Gardening.

Mr. H. Jerolaman on page 795 says, it seems, in a letter to you: "I have had eleven men for the past two days setting out plants of the Henry and Mary in a new bed for my own use, in order to show all growers what may be done in strawberry culture by setting out plants the last of October. Will wager \$1,000 with any one that it will by June next outyield any of its size (in the United States), that was set out this spring." I should think that this offer ought not to go begging for takers. If it had not been the poorest reason the past season to grow plants to get them in good fruiting condition for the next fruiting season that I have ever known, and if I had not made it a life rule never to gamble, I should be in it sure.

As it is, I have got one good acre of ground that I am going to set in the spring, which I intend to make do his best. I will put this acre against one that Mr. Jerolaman may set the following October to fruit the next spring. Each shall keep a detailed account of method of culture and all expenses. These records to be made under oath, and submitted to a delegate sent by the AMERICAN GARDENING to either fruit patch at the time of first pickings. He is also to make his report under oath; all for publication in AMERICAN GARDENING, for the benefit of its readers. There is to be no money consideration except what either one gets from the direct results of such a contest.

It is fully a month later here in the fruiting season than in New Jersey.—E. W. WOOSTER, Hancock Pt., Me.

To the Editor of American Gardening.

I notice in your issue of November 20 that Mr. Henry Jerolaman offers to wager \$1,000 with any one in the United States that his bed of strawberry plants, set out the last of October, 1897, will outyield any bed of its size in the United States, that was set out last spring.

Now, Mr. Editor, while I am opposed to gambling in any form, I will accept that wager, as I do not consider it as being a bet, merely a gift from Mr. Jerolaman. This offer is good on from one to ten acres as he may select.—D. McNALLIE Sarcoxie, Mo.

"The Laborer is worthy of his Hire: so also is the Publisher."—Addressed to subscribers in arrears.

Book Premiums.

Our friends may have forgotten that our very best premiums consist of Books. This is the time of year when everybody has leisure to read, so now is the time to work up orders. Note advertisement in this issue.

If we were to judge from appearance of this week's Question Box, a fair conclusion would be that there were only six readers who wanted others to help them. Of course this is all wrong; 'tis merely the late holiday and thoughts of future festivities have disorganized the garden side of one's nature. That's all very well, but just turn about now and immediately on reading this send in, say, one question.

THE QUESTION BOX

He that questioneth much shall learn much.—BACON.

Readers are invited to forward particulars of any difficulty or perplexity that they have encountered. If the question be one of general interest it will be inserted in this column, so that other readers who may have information to impart can assist their brethren by recounting their own experiences. Questions of a purely individual interest will be replied to by the Editor under the head of "Short Answers."

Questions submitted in this department will receive the full attention of the staff of AMERICAN GARDENING and when desirable will be answered editorially.

All communications for insertion should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of AMERICAN GARDENING, P. O. Box 1697, New York City. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query or answer is sent, each should be on a separate piece of paper.

Answers should always bear the title of the query replied to and the page on which it appeared, and our readers will greatly oblige us by advising, as far as their knowledge and observations permit, the correspondents who seek assistance. Conditions, soils, and means vary so infinitely that several answers to the same question may often be very useful, and those who reply would do well to mention the localities in which the experience was gained.

Important to Querists.—Correspondents must look through the whole of the paper for replies to their queries. Answers cannot always be given the week after the queries are received, but there is as little delay as possible in dealing with them.

Cash Prizes will be given for the best set of answers each week. Payment to be made monthly.

Blackberries in the Orchard.

In one of the horticultural papers I recently saw the dictum that one must never set blackberries between the rows, in a young orchard. As that is just what I contemplated doing, I have been much interested to know why? If it is permissible to plant hoed crops, strawberries and other small fruits, why not blackberries? Will you kindly enlighten a "tenderfoot"?—L. R. D., Brooklyn, N. Y.

Pears for Wisconsin.

What varieties of pears would do well and bear fruit in our Wisconsin climate?—FRED. JONAS.

Algae in Lily Pond.

My beautiful lakelet of Pond Lilies and Lotus and other aquatics was almost submerged with a vigorous growth of Algae, when in their finest growth and bloom. Will some one tell me what to do to destroy the hydra-headed monster?—G. N. C.

Disease of Heliotrope.

What causes the black spots on Heliotropes and how to get rid of them?—P. G.

How to Grow Ginger.

Will some one give the soil best adapted to the culture of the ginger plant (Zingiber officinale).—H. V. B., Fla.

Are Bees Necessary for Cucumbers?

This is my second winter raising tomatoes and cucumbers. Tomatoes are well along and I shall plant cucumbers at once. Now is it all important to have a hive of bees for my cucumbers? I note what Mr. Hale says in regard to English cucumbers, page 742, also Mr. Fraser's remarks on page 793 as regards bees for tomatoes. I take no stock in Mr. Fraser. He may be right, but I never saw a bee on a tomato blossom.

Have all our cucumber growers got into a rut and keep a hive of bees because some one else does?

This is quite an important question,

and the growers should know which is right. I cannot take the risk of running my house without the bees in the absence of positive advice.

Why should English cucumbers grow and White Spine not be the question? Please answer.—W. H. BROOKS, Me.

[We believe that it is necessary to insure fertilization of the American type of cucumbers. As to the use of bees for tomatoes, we know that nothing is gained by their assistance.—ED.]

Criticisms on Tomatoes.

To the Editor of American Gardening.

It is with pleasure I reply to Mr. Fraser (page 795) concerning Eclipse tomato as grown here. I can speak of its merits only: demerits it has none. In examining the trusses of Eclipse to-day, I find they run from five to twelve fruits to the truss; although there has been considerable dull weather this month, I find this variety setting freely with perfect shaped fruit. Another thing in favor of this variety up to this writing is that not a speck of disease has appeared on the foliage.

Nicholson's Hybrid I am not acquainted with and lastly I don't use any bees! WM. TURNER, N. Y.

What Is Profitable Lettuce Forcing.

To the Editor of American Gardening.

I notice on page 774 of AMERICAN GARDENING of November 13, that Wm. Thompson in his article on the Forcing of Lettuce in Winter, states six successful crops of lettuce can be raised easily throughout the winter. I would really like to know whether by successful he also means profitable?

What weight does he calculate to be a marketable size for the Boston Market and Grand Rapids lettuces?

As I have only benches to raise lettuce, I grow the Grand Rapids. My first crop this season (125 dozen) is all out of the way, and the second crop has been started from November 6 to 25. My first crop was planted 7x6½ inches and the heads weighed 8 to 10½ ounces. It was grown in from 65 to 75 days from the seed. I think I will be doing well if the next crop matures in 90 days.

Does Mr. Thompson have a house purposely to start his plants in? If not, how would it be possible for him to grow the six crops in six months? His plants must be at least two months old when they are transplanted the last time, or they would not make marketable heads in 80 days.

Would it not take up half the room of a greenhouse to raise plants that are large enough to transplant and mature in 80 days? If such be the case, or that you have to start your plants in another house, where is the profit?

Again Mr. Thompson says "my first sowing of seed was made September 5, and 70 dozen heads were sold by the end of December. Most of us would have to sell more than that to pay for the coal used. Does he mean to say that it took from September 5 until the end of December to come to a head? I don't suppose he does, but probably that was the result of two or three sowings. Let him please give us the facts and see if six successful crops can be raised with profit.

My own limited experience has shown me that the more water that a plant will absorb the faster it will grow, and that a sun heat of 80 to 90 degrees for lettuce is none too high and the more water it will then absorb. Is this not so? W. R. MESEROLE.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere

Our 1898 Art Calendar.

We have a few thousand copies still on hand, but would advise those who are thinking of getting one to write promptly. See advertisement on page 828.

Read what a few of the recipients think about it:

Your 1898 Art Calendar received. Thanks for your promptness and please allow me to say that I consider it an exquisite work of art. However, I was not surprised, for I always look for the best of everything when it comes from you, and so far I have never been disappointed.—F. S. MULLER, Ala.

Your Calendar received and it is truly an "Art" Calendar. Any beauty-loving person would surely be pleased with it. It is an ornament anywhere.—E. L. PRICE, Ia.

Your 1898 Calendar was received in good shape. It is really a gem. I find it both useful and ornamental and it has given great pleasure to my family and myself.—JNO. FARRELL, N. J.

Am very much pleased with your Art Calendar. It is very fine and an ornament to the home.—JAY BUSHNELL, Mich.

Your 1898 Art Calendar is beautiful, and a fine adornment to any home. I was very happily surprised when I received it, for I had not expected so choice a work of art.—(MRS.) A. L. CLARK, Mass.

The Calendar recently ordered is received and I am very much pleased with it. It is as represented, and I feel sure that its receipt must not only please, but surprise all that you are able to give such an artistic and expensive work of art on such liberal terms.—JAS. L. JACOBS, N. Y.

Your Calendar came to me duly. It is really quite artistic; many of the flowers look as if hand-painted and are quite true to nature.—C. H. SHEPARD, N. Y.

The Art Calendar has given me every satisfaction. It is very useful and pretty. No home should be without one.—JNO. THATCHER, Pa.

I am in receipt of your handsome Art Calendar for 1898. It is beautiful in design and a pretty ornament, in fact, it is all and more than you claim for it.—JNO. H. PARROTT, Md.

Your Art Calendar for 1898 is fully up to the publisher's representations. My people are delighted with it and have given it a prominent place in our parlor.—THOS. J. OBERLIN, Pa.

Your Art Calendar for 1898 was received; many thanks for same. The pictures look like water color paintings. It should adorn every home.—LEVI BELL, N. Y.

Your Art Calendar duly received. I am very much pleased with same, for which accept my thanks.—M. D. GILES, Mass.

My family all admire the Calendar you sent. It is beautiful enough to adorn any parlor, and also eminently useful.—J. B. TREFETHEN, Mass.

Your Art Calendar is much more beautiful than I expected.—RICHARD VALENTINE, Wis.

I received the beautiful Art Calendar and am very much pleased with it.—GUS H. MINX, Ind.

Your Calendar for 1898, which you present to all subscribers, new and old, has come to hand. I may truly say that it is all your represent it to be and more too; it is simply beautiful in its embellishments of Roses and maidens.—JNO. GROB, Ill.

The Calendar you sent is beyond expression. It is the most beautiful work of art for a calendar I ever came across.—J. J. THOMAS, Colo.

The Calendar sent me by you is a work of art and of no mean order of merit. It has the best place in my library, giving it precedence over any other calendar I have, and I value it very highly. It should be an inducement, with the many others that you have, of subscribing for AMERICAN GARDENING. Accept my thanks for same.—G. H. SADELSON, N. C.

There is Not a Home in the Land

But calls for a yearly Calendar.

Every family tries to get one or more; generally more.

There are Calendars and Calendars

Some are good, some bad, most of them indifferent.

There Will Not be a Calendar Issued for 1898

To exceed in artistic elegance, finish, beauty of designs and effective coloring, the one we to-day offer as a premium to every subscription to AMERICAN GARDENING received before December 31, 1897.

EVERY SUBSCRIBER IS ENTITLED TO ONE

AND CAN EASILY EARN TWENTY.

OUR magnificent **Rose and Girl 1898** six sheet **Art Calendar**, two months to a sheet, each sheet $8\frac{1}{2} \times 11\frac{1}{4}$ inches, is superbly lithographed in eleven colors, and printed on hammered paper; the whole tastefully tied with silk bow—undoubtedly a work of art fit for the most elegant home, and as handsome a Calendar as was ever published. Each one of the six designs presents a distinct type of female loveliness and a fresh study in roses, the coloring on each sheet being rendered in harmony with the design. There is not a line of advertising on the Calendars to detract from their value. They will not be sold by us for less than \$1.00 each.

Description

Who is Entitled to a Calendar?

EVERY SUBSCRIBER renewing before December 31, 1897, enclosing Five Cents additional to pay packing and postage.

EVERY NEW SUBSCRIPTION—To induce people to test the value of AMERICAN GARDENING we will send the Calendar absolutely free to every name received direct not previously on our mailing list. Remit \$1.00 for A. G. 12 months.

EVERY ONE sending us a club of Four 3-month trial subscriptions at twenty-five cents each, will get a Calendar, free as a premium, by return mail.

EVERY NEW name sent in by an agent.

NOTE.—We have ordered manufactured for us a large stock of these superb Calendars in the endeavor to have sufficient supply for all demands, but will not guarantee to fill orders after supply is exhausted. Therefore, order yours now.

Special to Agents A copy of our Art Calendar to show people will clinch the argument and obtain the subscription. Bona fide Agents will be mailed one copy, securely wrapped, on receipt of only Twenty-five cents (one-fourth its value.) Armed with this superb Calendar we misjudge human nature greatly if any ordinary mortal cannot secure a big list of new subscriptions every day. Every new subscriber you send us gets a Calendar by return mail.

We Pay Agents

Every new subscription at \$1.00 entitles the agent to **Five of the Wonderful Henry Strawberry Plants**, to be delivered next Spring. Thus 100 new subscriptions would secure agents 500 plants; a possession worthy of your consideration. Every new subscriber taken by agent will receive one of our Art Calendars free by return mail. Agents who do not want the Henry Strawberry Plants can retain as their payment **20 cents in cash** on each subscription they take, or will be credited **twenty-five cents** on any book, magazine or publication they wish to obtain through us.

Address all
correspondence

AMERICAN GARDENING, P. O. Box 1697, New York.

REMIT BY P. O. or EXPRESS MONEY ORDER—IT IS SAFEST.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movements are requested to forward particulars of the same for publication in this column. No charge is made.

Samuel J. Trepass as gardener to J. R. Maxwell, Esq., Glen Cove, L. I., N. Y. Mr. Trepass was lately in partnership with H. M. Sanders at Spokane, Wash., as a florist.

Lance-Corporal Patrick Milne, the brave piper who continued playing "Cock of the North" on his pipes after being bowled over by a shot in each leg, in the famous charge at Dargal, on the Indian frontier, is a native of Ardoyne near Inch, Aberdeenshire, where his father was a small farmer. The latter is now gardener at Waterside, Newburgh, in the same county. Young Milne first smelt powder at the battle of Malakand, and in the next encounter of the same campaign he again had a narrow escape, while a bullet through the pipe-bag silenced his music.

Death of William Grey.

In the death of William Grey we have lost one of the most prominent and most respected gardeners of the day. He was indeed a *doyen* of the old school.

William Grey, who died on November 25 at his home on the Corning farm, Albany, N. Y., was a Scotchman, born at Greenlaw, Berwickshire, February 18, 1828. When still young, in the spring of 1851 he came to the United States and spent a time in the nurseries of James Wilson, Lydias street, Albany. He was gardener to Mr. Joel Rathbone, at Kenwood, for about a year and later started westward, settling in western Iowa, intending to become a nurseryman, but finding the winters too severe returned again to the East, and accepted a position as head gardener to Mr. John T. Norton, of Farmington, Conn., where he remained about four years, after which time he was in charge of the choice collections of Gen. J. F. Rathbone until engaged as superintendent by the late Hon. Erastus Corning. Here he had remained until his death, and here too he did his life's work.

The deceased was a great lover of Orchids and the collection under his charge was one of the most famous and noted in existence and was rich in choice hybrids that had been raised on the place.

Mr. Grey was also a well-known entomologist and spent many years in pursuit of this study, his collection embracing over 30,000 specimens was rich in perfect specimens and in many cases types, and were obtained from all parts of the globe; especially was it rich in Sphingidae, Noctuidae and Melanitic and Dimorphic forms.

He leaves behind a wife, three sons (all in the profession), and two daughters. His many friends will learn with regret of his death which occurred after a short illness.

Newport, R. I.

At a meeting of the Horticultural Society, held November 24, four new members were elected which makes a total of forty-two received since October 1. The question discussed was "Should the decision of the judges be final?" referring to committees on awards employed at the regular meetings and exhibitions of the Society. The majority seemed to favor the affirmative providing awards were made according to a scale of points adopted by the Society.

A certificate of merit was awarded to a new plant, a seedling from *Schismatoglottis Roebelina*, differing from the parent in having narrower leaves, and being of a drooping habit, the coloring of the leaf being similar to the parent. Exhibited by MacLellan.

Morganton, N. C.

The annual Chrysanthemum exhibition

at the State Hospital, Morganton, N. C., was held November 3, in the hall of the Hospital to which the general public were admitted from 1 P. M. to 6 P. M., and the patients from 6:30 till 9 P. M. There was an attendance of about 1,800 people, including 700 patients, and with the small space at our disposal cramped us pretty badly. Tables were arranged on both sides of the hall on which were placed most of our foliage plants such as *Latania Borbonica*, *Livistona*; *Phoenix reclinata*, *rupicola*, and *syvestris*, *Curculigo recurvata*, and *Pandanus utilis*, seven feet through; we also had two pots of *Psidium Cattleianum* (Guava) in fruit, interspersed here and there were several hundred *Chrysanthemums* all the best blooms being reserved for the center table; some of our best blooms this year were Mrs. J. H. Starin, Philadelphia, Mutual Friend, Mrs. G. Magee, Bonnie Marjory, Col. W. B. Smith, Good Gracious, Golden Wedding, Geo. W. Childs, Domination, E. G. Hill, Fisher's Torch, Gov. Matthews, G. Bramhall, Helen Bloodgood, Major Bonaffon, Modesto, Marion Henderson, Mrs. E. O. Wolcott, Mrs. F. Gordon Dexter, Mrs. McK. Twombly, Pluto, Portia, Signal Light, The Queen, Trilby, Wm. Simpson, and Yellow Queen. Mrs. J. H. Starin measured 10½ inches across; we had 3,500 blooms on exhibition in 167 varieties. The varieties of Roses we grow here are Bride, Bridesmaid, Meteor, K. A. Victoria, Perle des Jardins, Souv. du Pres. Carnot, La France, Belle Siebrecht, American Beauty. We had several ferns such as *Cibotium Schellii*, *Davallia Mooreana*, *Davallia Filensia plumosa*, and two pans of *Adiantum Williamsii*.—A. R. MACLACHLAN.

[Some excellent photographs of the display accompany the foregoing notes.—ED.]

Chrysanthemum Society of America.

Secretary's Official Report.

At the meetings in November, seedlings were passed upon by the committees as follows:

BOSTON, November 2.

Grace E. French, exhibited by Geo. Hollis, South Weymouth, Mass., creamy white, reflexed, scored 87 points.

November 6.

Frank Hardy (imported), exhibited by A. Herrington, Madison, N. J., white, Japanese incurved, scored 94 points.

Pennsylvania, exhibited by Hugh Graham, Philadelphia, Pa., sulphur-yellow, Japanese incurved, scored 90 points.

Kineo, exhibited by C. S. Goddard, est., Woodford, Me., yellow, shaded orange, reflexed, scored 80 points.

Ophis same exhibitor, deep yellow, Japanese, scored 84 points.

NEW YORK, November 6.

Frank Hardy, exhibited by A. Herrington, Madison, N. J., white, Japanese incurved, scored 95 points.

Pennsylvania (sport from Philadelphia), exhibited by Hugh Graham, Philadelphia, canary-yellow, Japanese incurved, scored 90 points.

CINCINNATI, Nov. 6.

No. 57, exhibited by N. Smith & Son, Adrian, Mich., Japanese, straw yellow, shading to white; scored, commercial scale, 73 points.

Pennsylvania, exhibited by Hugh Graham, Philadelphia, Pa., incurved Japanese, light yellow; scored, commercial scale, 87 points.

CHICAGO, Nov. 6.

Snow Queen, exhibited by Fred. Dornier & Son, Lafayette, Ind., white; scored, commercial scale, 85 points.

PHILADELPHIA, Nov. 6.

Frank Hardy, exhibited by A. Herrington, Madison, N. J., incurved Japanese, creamy white; scored, commercial scale, 89; exhibition scale, 88 points.

Alice F. Carey, exhibited by Robert G. Carey, Chestnut Hill, Pa., reflexed Japanese, light pink; scored, commercial scale, 78; exhibition scale, 87 points.

W. and D's, "Sure Crop"

MUSHROOM SPAWN

8 LBS. FOR \$1.00.

Hyacinth, Tulips, Narcissus, Lily of the Valley, Spirasas.

SPECIAL PRICES TO CLEAR.

WEEBER AND DON,

Seed Merchants and Growers.

114 Chambers Street, NEW YORK.

Mention American Gardening when you write.

MacDONALD & McMANUS, Wholesale Florists and

50 West 30th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Commission. Best market prices guaranteed.

Mention American Gardening when you write.

Business Cards.

O. D. Zimmerman, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. J. O. Forsyth Johnson, P. O. Box 1897, New York City.

A \$1.00 Raisin Seeder for 50c.



POSTPAID.

We are tired of selling dealers and waiting 30 days for our money, so we will sell housekeepers at Jobbers rates.

Send 50 cents, and we will mail you postpaid one of our best

BAY STATE RAISIN SEEDERS

Guaranteed to seed 1 lb. of raisins in 5 minutes. Simple to operate and easy to clean.

EASTON MFG. CO. D. 10, 64 Federal Street, BOSTON.

Mention American Gardening when you write.

KNOWN WORTH

You judge a man by his reputation. His reputation is formed by what he does. So in selecting a musical instrument—study its reputation. That represents what it does. Look into the merits of the

"Bay State" { Guitars
Mandolins
Banjos
Zithers
Flutes

Their superiority invites the closest scrutiny. Their reputation is their warranty, for it tells what it does. In choosing a "Bay State" you purchase known worth. Twenty-seven awards. Only winners of American gold medals.

Send for Catalogue and Prices

JOHN C. HAYNES & CO.

453-463 Washington St., BOSTON.

Mention American Gardening when you write.

Oak-tanned leather Harness



Send your address with 2-cent stamp for Illustrated Catalogue, all kinds of Single and Double Custom-Made Harness, sold direct to the consumer at wholesale prices. WE CAN SAVE YOU MONEY.

KING HARNESS CO., No. 3 Church St. Oswego, N. Y.

Mention American Gardening when you write.

Corn

responds readily to proper fertilization.

Larger crops, fuller ears and larger grain are sure to result from a liberal use of fertilizers containing at least 7% actual

Potash

Our books are free to farmers.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.

We PAY CASH each WEEK the year round, if you sell Stark Trees. Outfit free. STARK NURSERY, LOUISIANA, Mo., Stark, Mo., Rockport, Mo., Bensville, N.Y.

Mention American Gardening when you write.

Luck With Flowers

You will have no more ill luck with your plants if you nourish them with Peerless Flower Food. A scientific aid to nature. Makes any kind of plants grow as they should grow. Clean and odorless. Price 25c. per pound pkg. By mail 40c. Sharpless & Carpenter, 124 S. Delaware Ave., Philad.

Mention American Gardening when you write.

1840 OLD COLONY NURSERIES. 1897

Hardy Shrubs, Trees, Vines, Evergreens and Perennials. . .

A large and fine stock of well-rooted plants, grown in a sandy loam. Good plants, best sizes for planting; very cheap.

Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.

Mention American Gardening when you write.

\$4 Worth of New Music

for the ladies and

"Scribner's Lumber and Log Book"

for the men are the premiums we are offering with one year's subscription to

"The Market Basket," at \$1.

Send the dollar, we will send you a long list of music from which you can select 10 pieces, which sell regularly for 40 cts. each.

"The Lumber and Log Book"

is a board bound book of 190 pages. No farmer, mechanic, saw mill man or business man should be without it. It is invaluable. It treats over a hundred different subjects. It's just what you ought to have. It's a perfect schoolmaster. We send the \$4 worth of music, the Lumber and Log Book and the Market Basket for one year, all for \$1. Send the \$1 now, and we will send the Market Basket free until January 1.

THE MARKET BASKET PUB. CO.,

120 So. 2d St., Philadelphia, Pa.

A. J. MERRILL, Manager.

Mention American Gardening when you write

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

Miss Gladys Vanderbilt, exhibited by John N. May, Summit, N. J., reflexed Japanese, creamy white; scored, commercial scale, 92; exhibition scale, 89 points.

CHICAGO, November 12.

Autumn Glory, exhibited by E. G. Hill & Co., Richmond, Ind., pink, Japanese reflexed, scored 87 points.

No. 111, same exhibitor, yellow, Japanese incurved, scored 83 points.

Black Hawk same exhibitor, intense crimson, Japanese, scored 85 points.

Iowa, exhibited by John Beinford, Milton, Iowa, white, Japanese, scored 74 points.

Frank Hardy, exhibited by A. Herrington, Madison, N. J., white, Japanese incurved, scored 93 points.

Pennsylvania, exhibited by Hugh Graham, Philadelphia, yellow, Japanese incurved, scored 86 points.

Blooms from Redondo Beach Floral Co., Redondo Beach, Cal., arrived in too poor condition for judging.

November 13.

Silver Wedding, exhibited by W. G. Gomersall, Fishkill, N. Y., pure white, Japanese reflexed, scored 76 points.

Autumn Glory, exhibited by E. G. Hill & Co., Richmond, Ind., shell pink, Japanese reflexed, scored 87 points.

No. 1, same exhibitor, yellow, Japanese incurved, scored 67 points.

PHILADELPHIA, November 13.

No. 2, E. G. Hill & Co., deep yellow, scored, commercial, 87 points; exhibition, 88 points.

No. 3, same exhibitor, pink, reflexed, scored, commercial, 87 points; exhibition, 86 points.

Robert G. Carey, exhibited by Robert G. Carey, Chestnut Hill, Pa., creamy white, Japanese incurved, scored, commercial, 90 points; exhibition, 85 points.

CINCINNATI, November 6.

Pennsylvania, exhibited by Hugh Graham, Philadelphia, light yellow, Japanese incurved, scored 87 points.

November 13.

Mrs. E. N. Roth, exhibited by J. A. Peterson, Cincinnati, O., canary yellow, Japanese incurved, scored 81 points.

Mrs. Samuel Heddon, same exhibitor, bluish white, Japanese, scored 87 points.

No. 1, exhibited by E. G. Hill & Co., white, Japanese, scored 82 points.

No. 2, same exhibitor, yellow, shaded bronze, Japanese, scored 78 points.

No. 3, same exhibitor, light salmon pink, Japanese, scored 87 points.

Ohas W. Crouch, exhibited by Chas. W. Crouch, Knoxville, Tenn., magenta-pink, Japanese reflexed, scored 85 points.

ELMER D. SMITH, Sec'y.

Springfield, Mass., Show.

The Hampden County Horticultural Society held its annual chrysanthemum show November 10, 11, and 12.

The show as a whole was a very fine display of well-grown blooms. Among the private gardeners John Barr, gardener to Mrs. B. P. Cheney, South Natick, led with blooms, taking first for 25 cut blooms, in 25 distinct kinds, also for 12

How's This!

We offer One Hundred Dollars reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O. WARDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists.

mixed, named, vase of 12 pink (Vivian-Morel) single specimen (Mrs. Jerome Jones); vase of 50 blooms mixed and vase of 25 mixed. Donald MacGregor, gardener to Mr. E. H. R. Lyman, Northampton, made a good showing of well-grown flowers in several classes, taking a goodly share of the prizes.

Of the commercial growers, A. N. Pierson, of Cromwell, Conn., led in quantity and quality. His 12 vases of six flowers each were given first; the varieties were: Minnie Wanamaker, Maud Dean, Mrs. G. M. Pullman, Queen, W. H. Lincoln, Major Bonaffon, Mrs. Perrin, Ermisilla, Mrs. Jerome Jones, Vivian-Morel, Mayflower, and H. E. Widener. Several other classes were equally well filled. His vase of Major Bonaffon led all yellows, John Barr's being a very close second. Mr. Pierson's vase of Mrs. Perrin (50 blooms) took first in class 231.

Mr. E. H. Howland, of Holyoke, put up the best exhibit he has ever staged; his gardener, Mr. Sinclair, may well feel proud of his efforts. In the class for white, Mr. Howland took first with Niveus; this was a grand vase. In Mr. Howland's general exhibit was a vase of Peter Kay, new with us. From this season's experience it is a good keeper, full flower, and in every way a satisfactory variety to grow.

John Coombs, of Hartford, Conn., made a good showing, Queen, Mrs. F. H. Schomb, Marion Cleveland, being among the best. Mr. Coombs received several prizes.

Plants were scarce. The specimens from Mrs. B. P. Cheney were as perfect and uniform as possible, taking first. E. H. Howland, of Holyoke, took first for 6, 12, and 25 single bloom plants, and second for standard. A. Lundstedt first for standard. In the class not open to professionals, Mrs. Justin Spaulding, of Chicopee, took first on three and one bush plants.

The inter-state classes were not filled as well as last year, but many of the flowers were of better quality. Mrs. B. P. Cheney (John Barr, gardener) took first for Massachusetts, also the capital prize. Robert Laurie, Newport, took first for Rhode Island; Nathan Smith & Son, Adrian, first for Michigan; and A. N. Pierson first for state of Connecticut. The flowers staged for the Massachusetts exhibit were Mayflower, John Shrimpton, Eugene Dailledouse, Maud Dean and later-Ocean, magnificent specimens. Mr. Pierson's state entry was a close second; he staged for this class Maud Dean, Major Bonaffon, Vivian-Morel, Minnie Wanamaker, and Niveus. His Niveus were the best in the hall. Of the Michigan state exhibit, Philadelphia appeared to best advantage, and Mrs. Jerome Jones and Mme. Hoste in the Rhode Island entry.

Several seedlings were entered, although none scored the required 85 points to entitle them to an entry in class 229. Two were granted diplomas: one was a yellow marked P. 2, the other an old-gold and red marked S. 3. These were raised and entered by Alexander MacLellan, Newport, R. I. This last variety mentioned was quite unlike anything on exhibition, and as a decorative flower I think it has a place.

Mr. J. J. Van Alen's gardener, Arthur Griffin, Newport, R. I., sent for exhibition his Begonia semperflorens hybrids.

E. H. Howland had an interesting collection of pompon and anemone flowered chrysanthemums for exhibition. E. D. Shaw, of Holyoke, arranged two tables of roses, carnations, chrysanthemums, ferns, palms, etc., from Rosemont, for exhibition only. His roses were the admiration of the throng.

Wilmington, N. C.

At the chrysanthemum show held here in the Young Men's Christian Association rooms, first prize for the finest display of pot and cut chrysanthemums went to Will Rehder, as did the prize for the finest display of cut chrysanthemums. The premium for the finest grown chrysanthemums, one or more blooms, was captured by Lat Williams, of Wilson; and the one for the finest miscellaneous display of cut and pot flowers and plants by Miss Lucy B. Moore.

The Window Garden.

The Value and Culture of the Cyclamen.

The value of the Cyclamen to the florist, as a plant to sell in bud and bloom may be seen from this fact: Last week, several vases of cut Cyclamen blooms were seen for the first time at a flower show, notwithstanding the fact that these bulbs have been grown in quantity for at least one or two decades. It is doubtful whether another plant could be named which has the value of the Cyclamen in flower to both florist and amateur.

In the first place, it is a clean plant; it is also a handsome one, especially in the giganteum forms, with their beautifully marked foliage. It is a compact grower, and besides being clean from insects as a rule, it is also easily freed from the little dust which may settle on the glossy, but broad leaves. All this praise may be given it before mentioning the fine blooming qualities of the plant, or the beauty of the blooms. Add that it does not require much sunshine, and you have a category of good qualities unexcelled, if approached. The small and narrow-petaled form of *C. persicum*, which we once thought so delightful, has been superseded in favor by the far finer giganteum forms, but the Cyclamen is a perpetual monument to the patience and care of the florist in that all the newer forms have been evolved by selection and culture from the original *C. persicum*. The butterfly, or fringed form, the crested ones, and the doubles may or may not prove more beautiful and popular than the older Cyclamen as we have known it for a decade past; but in any case, it is worth while to secure the knowledge of this plant's susceptibility to change of form, and that knowledge is a prophecy of interesting and probably useful things to come.

When all this has been said, it is remarkable indeed that we may go further, and affirm that the plant is one of the easiest to grow from seed, the only qualifying phrase needed being to the effect that a good stock of patience must be laid in with the stock of seed. The bulbs are extremely slow of growth, and it is probably this fact which has given rise to the idea that they are difficult of management. We have never found them in the least difficult; but there are two points to be noted which are quite likely to be overlooked by the general grower. One of these is that the best season for sowing the seed is not that usually most devoted to seed sowing, viz., early spring. Even at the most rapid rate of growth, it is rare to get these bulbs in bloom under 14 or 15 months, and in order to bring them on when bloom is most wanted, the seed is best sown in late summer or early fall.

The other most frequent cause of failure comes from a misinterpretation of the directions concerning the resting period. The bulbs are not to be dried to the point of severe shriveling, but merely not to be encouraged in any way to growth during the period when they ought to rest. They may be planted outside during summer, after having bloomed, and have been known to flourish for almost a decade of years, under this treatment, growing better with each passing year. It is the more general custom, however, to procure new corms every second or third year, either from seed or by direct purchase.

Some failures with this favorite have been due to the fear of injuring the bulbs by the use of fertilizer. Care in selection is certainly necessary, but well-decayed cow manure is good for Cyclamens, and soot water may be used in reasonable quantity, after the buds are well started, if not before. Rough bits of coarse-graveled mortar, known as mortar rubble, from old masonry, are considered a good addition to the sandy soil used for potting the Cyclamen. M. V. N.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

You Want Books!

A little energy will earn you a Library.

Do You Know

That AMERICAN GARDENING issues the most comprehensive Catalogue of Books on all subjects connected with the Home in the Country?

Also That We Allow

A credit of Forty Cents in Books for every New subscription sent us at \$1.00.

Just Think of It

Only Five New Subscriptions to earn any Two Dollar Book in our List.

If you have not received one of our Book Catalogues send stamp for a copy at once. Now is the accepted time.

AMERICAN GARDENING, NEW YORK.

P. O. Box 1897.



THE CROWN Bone Cutter
for cutting green bones. For the poultryman. Best in the world. Lowest in price. Send for circular and testimonials. Wilson Bros., Boston, Pa.

Mention American Gardening when you write.



Imported German CANARIES.
Beautiful, hardy birds, elegant singers; worth \$3.00 each; sent prepaid anywhere in the U. S. for only \$3.50; pair for \$4.75; nice for presents. Parrots and Superb Gold Fish cheap. BIRD BOOK just issued, worth 50c to anyone having a bird, free for one stamp. IOWA SEED CO., Des Moines, Ia.

Mention American Gardening when you write.



It will keep your chickens strong and healthy. It will make young pullets lay early. Worth its weight in gold for moulting hens, and prevents all diseases.

Large Cans Most Economical to Buy. Sold by Druggists, Grocers and Feed Dealers. It is a powerful Food Digestive.

Therefore, no matter what kind of food you use, mix with it daily Sheridan's Powder. Otherwise, your profit this fall and winter will be lost when the price for eggs is very high. It assures perfect assimilation of the food elements needed to produce health and form eggs. It is absolutely pure. Highly concentrated. In quantity costs less than a tenth of a cent a day. No other kind is like it.

If you can't get it send to us. Ask First Single pack, 25 cts. Five \$1. Large two-lb. can \$1.50. Six cans \$8. Exp. paid Sample "BEST POULTRY PAPER" free I. B. JOHNSON & CO., 24 Custom St., Boston, Mass. Mention American Gardening when you write.

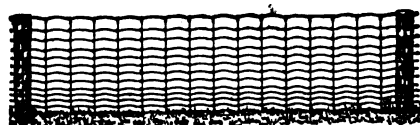
Blindness Prevented

The Absorption Treatment, "a Heaven sent blessing." Hundreds successfully treated at our Sanitarium and at their homes without knife or risk.

A. H. Colvin, State Treasurer of New York and a resident of Glens Falls, says: "The history of the Bemis Sanitarium and its advance by marvelous strides is due to Edward H. Bemis, Eye Specialist, whose marvelous success makes his name familiar to thousands all over the United States and in many foreign lands, and God speed him."

Pamphlets Free, explaining the treatment for impaired vision and diseased eyes. Address, THE BEMIS SANITARIUM, - Glens Falls, N. Y. We have no branch offices.

Mention American Gardening when you write.



"Cry No Horrying

'till you have it in the net." The Dutch proverb is right. As we have before remarked, the only U. S. patents existing on the use of continuously coiled spring wire for fencing, are owned by the

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

The man who

Will not Advertise

Will not

Meet with

Success

The man who

Advertises judiciously

Will

Succeed

Don't

Fritter away

Your money

In worthless mediums

Advertise

Only in

Successful papers

Advertise in

American Gardening

Publishers AMERICAN GARDENING:

Gentlemen—It may interest you to learn that my advertisement in your paper brought me customers from Mexico, New Zealand, Canada, New Brunswick and Manitoba, as well as from our own country.

F. L. WRIGHT, Mich.

November 19, 1897.

Our publishers will supply any book wanted. Send your orders.



We Call on every reader to secure us at least one new subscription now to **AMERICAN GARDENING** for 1898, so they will not miss any of the following offers and inducements:

Prospectus for 1898

All the Good Things Continued

Which have made **AMERICAN GARDENING** the standard publication of the Horticultural world, and given it more bona fide subscribers than all other Horticultural papers combined.

Cash Prizes Offered Every Week

For Photographs of Well-grown Specimens (flower, fruit, vegetable or plant), with description as to how the result depicted was attained—from start to finish.

Cash Prizes Offered Every Week

For Best Answers to Question Box. This department is absolutely free, and there is no necessity for any reader to remain in ignorance on any subject which may puzzle him.

Colored Art Supplement Every Month

Free to every subscriber.—Beauties all. Every one values a good picture. Ours will be more than good.

Cash Prize for Best Essay

On a Subject of General Interest. One Prize every month.—This feature we expect to prove a drawing card.

Literary Supplement Monthly

Special Feature for Advanced Readers, containing articles of more permanent and scientific interest.

New Writers on New Subjects

Which we know our readers will appreciate.

And with all this

**Array of
Attractions**

We Give Premiums

To those who obtain us a new subscription as well as to the new subscriber. See advertising columns.

Don't fritter away your time and money on worthless reading. Subscribe to a practical publication, admitted by all the standard authority of the age and country. Take our advice: Talk American Gardening to your friends, get their subscriptions, and they will bless you evermore.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION wanted, as gardener's assistant, has had 5 years' experience. Address: Assistant, care American Gardening.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

The address will be charged as part of the advt., and each initial, or a number, counts as one word. No cuts or display type allowed.

STRAWBERRIES, Potato Seeds. Wm. A. Olds, Okemos, Mich.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

A \$7.00 GIVEN FREE to each person interested in subscribing to the Eugene Field Monument Souvenir Fund. Subscriptions as low as \$1.00 will entitle the donor to this handsome volume (cloth bound, size 8 x 11) as a souvenir certificate of subscription to the fund toward building a monument to the Beloved Poet of Childhood. But for the noble contributions of the world's greatest artists this book could not have been manufactured for less than \$7.00.

A \$7.00 BOOK OF EUGENE FIELD'S POEMS

Address: **ROBERT FIELD MONUMENT SOUVENIR FUND**, 425 Port Dearborn Building, Chicago, Ill.

Mention this journal, as advertisement is inserted at our contribution.

DO YOU NEED WATCHING?



Or, to put it another way,

Do You Need a Watch?

We sell them, sell them at such an exceedingly low price that you can't afford to go watchless.

Got 'em all sizes and styles.

But we'll just mention two:

An Elgin or Waltham Watch, best movement made, hunting case, accurate time-keeper, handsomely engraved, Dueser Case, heavily gold-plated—last for all time. Ladies' or gentleman's size.

We'll send it to your address with privilege of examination. If it's not entirely as represented, send it back—costs you nothing. If you like it, pay the agent express charges and \$6.50. That's fair. Or this—



A Hunting Case Watch—beautifully engraved case. First-class movement, any size, heavily plated (14k)—looks just like a \$40.00 gold watch—keeps as good time as any of them. Sent to your express agent with privilege of examination—same conditions as all our watches sent out—and if you like it, pay him \$6.45 and express charges.

If you take our word for it, and send money with order, a handsome chain goes with either, and express charges are paid by us, for the prices named above.

Royal Manufacturing Co.

334 Dearborn St., CHICAGO

Mention American Gardening when you write

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send sc. stamp for our new catalogue.

The Bee Keeper.

Location of the Apiary.

If possible the apiary should be so located that we have the hives in plain view from the house or workshop so we can watch them during the swarming season without extra trouble. A properly arranged apiary is a pleasing sight, in fact, an ornament on the lawn.

Select a plot of good solid well under drained sod and arrange the hives systematically thereon. It makes little difference which way the hives face, though if convenient I prefer to have the entrances face southeast.

The rows of hives can be arranged to conform with the surroundings, or the hives can be scattered irregularly among larger shrubbery and trees, but the semi-circular arrangement generally makes the finest appearance. The hives should then be about five feet apart in the row and the rows about ten feet apart, with three passages running across the rows. This arrangement with nice white hives on a green lawn gives a fine effect.

So much for beauty; now for utility. It is well to have a wind-break on the north and west sides. In the early spring the rough winds are very hard on the bees, and I have frequently noticed that hives sheltered from the north and west wind build up faster in the spring than those not so sheltered. Evergreens appropriately arranged make a splendid and slightly wind-break.

If you are compelled to locate the bees close to the street or public road that is much used, the bees are a nuisance to the passers-by, and the passers-by to the bees. The best plan then is to have a tight fence seven or eight feet high between the street and apiary. Bees are of such a disposition that they will not tolerate any one to stumble around in front of their door when they are busy rushing out and in after their work. If they fly against some one or notice quick motions in front of the entrance, they will often resent it and generally trouble will follow. For that reason I recommend a screen between them and the street. In the crowded city lovers of the bee sometimes make a success of a small apiary on top of a house.

The foregoing hints are of course for the readers who desire to add bee-keeping to their other pursuits as a matter of recreation and incidentally profit. If a person desire to make apiculture his sole calling, then the choice of a location becomes quite a different question which I will not discuss now.

High trees close to the hives are not to be recommended unless the queens are clipped, as it is almost impossible to hive a swarm if they cluster on a tall tree. As a rule, they prefer low shrubbery if it is at hand.

Dense shade is not desirable, as it causes dampness in the early spring when the bees are benefited by the sunshine; a little shade during the hottest season is desirable though. I use a shade board on the hive and when I desire the heat of the sunshine for the bees' benefit I remove the shade board. Properly managed, grape vines make a very good shade, look ornamental and bear luscious fruit. L. W. LIGHTY, Adams Co., Pa.

The Manhattan (Kas.) Horticultural Society held its November meeting at the college and listened to a practical and interesting paper from Miss Bertha Kimball on "Winter Collection of Insects." Miss Kimball told how to collect and destroy some insects that are injurious to the fruit grower.

Mrs. Joshua Hendricks, N. Y., begs to state that she was very much pleased with your 1898 Art Calendar and hopes you will be able to dispose of a large supply.

I received the beautiful Calendar for 1898. It is very fine and an adornment for any home or place where they love those things which remind them of the beauties of the Creator. I would not part with it for many times its cost.—THOMAS HANDLEY, Ontario.

The Poultry Yard.

Fertile Eggs from Yarded Birds.

A wall of woe comes to one of our best poultry papers—it is not a new thing, but is voiced with more than the usual discouragement—concerning infertile eggs. The writer says that he has never had an egg from a pen of yarded fowls to hatch. There certainly is no reason for such failure as this, except such as may be found in the ignorance of the inquirer. It is true that there is often some trouble in getting hatchable eggs from close-housed fowls, very early, but this is the most that has to be admitted along this line. We have known of repeated instances during the past season in which whole clutches have hatched, the eggs being wholly from yarded fowls. Vigor, meat, green food, and exercise are the specifics.

Keeping Bantams.

The idea is prevalent that Bantams are useless, except as pets for children, and as money-makers for the fancier. There is a light in which these pigmies may appear quite profitable, however. Where space is scanty, one may keep Bantams where there is not enough room for Leghorns, even, for small families, one of these would make just enough to cook, while a larger bird would be quite too much. Invalids, too, might enjoy a small bird of this sort, especially as the proportion of breast meat is large. There are many varieties of Bantams besides the tiny Sebrights so commonly seen. The buff Pekins are quite sizeable, and lay eggs rather closely approaching those of some of the Mediterranean breeds in size.

Crowding on the Roosts.

One of the greatest problems among poultry growers is to find means to keep the young chicks, the ducklings, the feeding birds, the roosting birds, from crowding. It is foreign to their nature to go in such large flocks as are seen under artificial conditions, and one of the first effects is a tendency to active crowding. More than one breeder has come to the conclusion that crowding at night, with consequent sweating during the earlier hours, and chilling towards morning is a most prolific cause of roup. Firmly-built roosts, all on the same level, are a help, but often not a sufficient one. A simple and very shrewd idea along this line is to make the roosts several inches wide, set them on edge, and saw out three-inch notches in the roost between each two birds. The birds roost on the "teeth" which are six inches wide, and of course straight along the top edge. M. V. NORYS.

MEEHAN'S MONTHLY

Of Interest not only to the amateur gardener, the botanist and the scientist, but also to every lover of horticulture and nature. The name alone is sufficient guarantee of the high standard of this horticultural magazine, its editor, Thomas Meehan, formerly having edited the famous "Flowers and Ferns of the U. S." and the well and favorably known "Gardener's Monthly." The concise, instructive, and practical articles made it popular from the first, and few of its class have been so universally well received and so widely quoted.

The Leading Feature the colored plate of some native flower or fern, executed in Prang's finest style, and the chapter relating thereto, is by itself well worth the subscription price. Two dollars a year. Sample free.

THOS. MEEHAN & SONS

Publishers . . .

BOX L, GERMANTOWN, PHILA.

Meehan's Monthly and American Gardening.
One Year for \$2.75.

Mention American Gardening when you write.



Christmas... Decorations

For Home and Church.

WE supply beautiful Christmas decorations in **Holly, Southern Smilax, Palm Leaves, Magnolia Foliage**, and many other beautiful Southern Evergreens.

For a lovely Mantel decoration at \$1.00, see page 825 of this issue.

Our catalogue tells you all about it and shows many other beautiful illustrations for home weddings. It also tells how, by clubbing, each member of your church can get a pretty decoration for the home and a beautiful decoration for the church, **FREE**.

We are only thirty-six hours ride from New York, so there is plenty of time to place your orders with

Caldwell The Woodsman Company,

Send for Catalogue.

EVERGREEN, Alabama.

Mention American Gardening when you write

PEACH TREES, \$3 PER 100.

All kinds of Trees and Plants **CHEAP**. Cat. **FREE**.
RELIANCE NURSERY CO., Box 1410, Geneva, N. Y.

Mention American Gardening when you write.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodora B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California
Mention American Gardening when you write.



Lane's Steel Car Jack
Ask your hardware dealer.

Makers **LANE BROS.**
Poughkeepsie, N. Y.

Mention American Gardening when you write.



Mention American Gardening when you write.

A BARGAIN

We have made arrangements to furnish **THE OHIO FARMER** of Cleveland, O., and **AMERICAN GARDENING**, both papers, one year, making a total of 104 great papers, for only \$1.60.

ONLY \$1.60

THE OHIO FARMER is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the **LEADER** of the Agricultural Press of America. A 20-page, 80-column paper **EVERY WEEK** in the year; employs **THE VERY BEST WRITERS** that money can produce; a strong, fearless defender of the agricultural interest of this country, and **CLEAN** in both reading and advertising columns. **IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE.**

Present subscribers can order this combination at once and have their present term of subscription to **AMERICAN GARDENING** extended for one year. New subscribers to **THE OHIO FARMER** will receive the rest of this year free. Address all orders,

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

POULTRY RAISERS AND ALL \$6.00 for \$2.50.

Christian Herald, printed in colors, largest and best relig. weekly in the world, \$1.50
American Agriculturist, best 28 page illustrated farm and market weekly, . . . 1.00
American Agriculturist Year Book and Almanac, over 600 pages, worth, . . . 1.00
New York Weekly Tribune, best 20 page newspaper in the United States, . . . 2.00
Poultry Keeper, twenty pages, printed in colors. It leads, others follow,50
P. K. Illustrator No. 1, 100 illustrations, poultry houses, incubators, brooders, etc., . .25
P. K. Illustrator No. 2, 75 illustrations, artificial incubation, care of chicks, etc., . .25
P. K. Illustrator No. 3, Poultry Diseases, Gapes, Roup, Cholera, Moulting, etc., . .25
P. K. Illustrator No. 4, Judging Fowls, description of breeds, Mating, Points, etc., . .25

For only \$2.50 we send these 4 great papers 1 year and the 5 books, grand total \$6.00

Sample P. K. with other offers **FREE**.

POULTRY KEEPER CO. Box 39, Parkesburg, Pa.

Mention American Gardening when you write.

WHOLESALE MARKET REPORT.

New York.

Social events of importance are now taking place with great frequency in this city. Consequently, there has been a general advance in values in the cut flower market since our last report. There has also been a falling off in supply which has still further helped to bring the market over to favor the grower, a circumstance which has not happened for many months before.

In Roses other than American Beauty there has been an advance of more than 200 per cent. Bride, Bridesmaid, and Meteor, No. 2 grade, have advanced from \$1 to \$8 per 100; No. 1 grade to \$5 and \$6 per \$100; specials and fancy make \$8 to \$12 per 100. The top figure for Beauty is \$35 per 100.

Violets did rise to \$2 and a few to \$2.50 and \$3 per 100, but are now weakening so much that \$1.50 is frequently the taking price.

Carnations are meeting with good demand at \$1.50 to \$2.25 for standard varieties and \$3 to \$5 per 100 for fancies and novelties.

Lily of the Valley is firm at \$3 and \$4 per 100. Lillium Harrisii is meeting with slow sales with \$8 per 100 as top figures.

Thanksgiving business proved most beneficial to the grower and producer. The market cleaned out well in all lines of stock. Poultry proved better than was expected; apples did well, and all

kinds of hothouse stock cleared to advantage. Since then there has been the usual decline which follows a holiday, but in no way can there be said to be a slump.

Hothouse grapes (Gros Colmar, imported) realized \$1 per pound; Alicante found no favor and remains unsold.

Tomatoes sold out clean at prices varying from 20 to 30c.

Mushrooms make 50c. to 60c. per pound, if of fancy quality, inferior grade 40c. per pound.

Cucumbers 60c. to 75c. per dozen, demand only medium.

Lettuce 50c. per dozen for No. 1 quality; lower grades sell low as \$1 per barrel.

Radishes \$2.50 to \$3 per 100 bunches. Apples—Albamarie Pippin, Va., poor to fair, \$2@2.50; good to fancy, \$3.50@5; Wine Sap, Va., poor to fair, \$2@2.50; good to fancy, \$3@4; Johnson's Winter, Va., poor to fair, \$2@2.50; good to fancy, \$3@4; King, State, poor to fair, \$2@2.50; good to fancy, \$3@4; Ben Davis, Western, poor to fair, \$2@2.25; good to fancy, \$2.50@3.25; Greening, State, poor to fair, \$1.75@2.25; good to fancy, \$2.50@3.50; Baldwin, State, poor to fair, \$1.75@2.25; good to fancy, \$2.50@3; N. Spy, State, poor to fair, \$1.75@2.25; good to fancy, \$2.50@4; mixed lots, poor to fair, \$1.50@2; good to fancy, \$2.25@3.

Pears—Seckel, State, per bushel box, \$1@2; Beurré Bosc, per barrel, \$2@3.50; Lawrence, per barrel, \$1.50@2.50;

Beurré Clairgeau, per barrel, \$2@3; Beurré d'Anjou, per barrel, \$1.75@2.50; Vicar, per barrel, \$1.25@1.75.

Grapes—Catawba, fancy, per small basket, 9@11c.; ordinary, per small basket, 7@8c.; Concord, fancy, per small basket, 8@8½c.; ordinary, per small basket, 7@7½c.; white kinds, in trays, per 100 pounds, \$1@1.25; Catawba and Concord, in trays, per 100 pounds, 80c. @ \$1.15; very inferior, per 100 pounds, 50@75c.

Nuts—Hickory, steady at \$1.50@1.75 per bushel; chestnuts, the market is given over all most entirely to imported (Spanish.) These are for the most part wormy and arrived heated, consequently the price is low. They are being sold off wagons in the street and by fakirs at 8c. per pound.

Brussels sprouts—Per quart, 4@8c. Cauliflowers—Fancy, per barrel, \$2.50@3; fair to prime, per barrel, \$1.50@2; cull, per barrel, \$1.

Celery—Choice to fancy, large, per dozen, 25@30c.; fair to prime, per dozen, 20@25c.; small, per dozen, 10@15c.

Cabbages—Jersey and Long Island, per 100, \$3@3.50; State, per 100, \$2.50@3.

Cucumbers—Florida, per crate, \$1@1.25.

Carrots—Unwashed, per barrel, 75@90c.

Onions—Orange Co., red, prime, per bag, \$1.75@2.25; Orange Co., yellow, per bag, \$1.50@2; Orange Co., white, per bag, \$1.50@3.75; Orange Co., inferior, per bag, \$1@1.25; State and west, yellow, flat hoops, \$1.25@1.75; State and western, yellow, bulk, per barrel, \$1.75@2; eastern, white, per barrel, \$2.50@5; eastern, red, per barrel, \$2.75@3; eastern, yellow, per barrel, \$2@2.25.

String beans—Charleston wax, prime, bushel basket, 75c. @ \$1.50; Charleston, green, per bushel basket, 60c. @ \$1.25; Florida, wax, per basket, 50c. @ \$1.25; Florida, green, per basket, 50@75c.

Squash—Hubbard, per barrel, \$1.25@1.50; Marrow, per barrel, \$1@1.25.

Spinach, Balt., per barrel, \$1@1.25.

Tomatoes—Florida, per carrier, \$2@3.50.

Turnips—Russia, Can., car lots, per barrel, 50@75c.

Potatoes—Long Island, in bulk, per barrel, \$2.25@2.75; Jersey, choice, round, in bulk, per barrel, \$2.12@2.25; fair to good, in bulk, per barrel, \$1.75@2; fair to prime, per sack, \$1.75@2.12; State and western, choice, in bulk, per 180 pounds, \$2.25@2.35; western, fair to good, per 180 pounds, \$2@2.12; fair to prime, per sack, \$2@2.25.

Turkeys—Jersey and up-river, fancy, per pound, 13@14c.; Maryland and Delaware, fancy, 13@14c.; Maryland and Delaware, good to prime, 11@12c.; State and Penn., fancy, per pound 12@13c.; western, good to prime, pound 10½@11½c.

Ducks—Western, fancy, per pound, 8@9c.

Geese—Maryland, prime, per pound, 9@10c.; western, prime, 8@9c.; western, fair to good, per pound, 6@8c.

Boston.

Boston market celery remains unchanged at \$1.50@1.75 a dozen; other grades such as Parish, Golden and Arlington find a slow sale about 50c.

More call for all kinds of squash. Marrow \$1.50 a barrel; Hubbard \$1.50@1.75 a barrel; Turban \$1.50; Bay States cook well, but don't seem to please, find a fair demand at \$1.25 a barrel.

Onions hold their own at \$2.25 a barrel. White, French or yellow turnips \$1 a barrel; flat purple top 75c. @ \$1.

Radishes 25c. a dozen; mint 50c. a dozen; oyster plant 75c. dozen bunches.

Duchess pears limited in quantity, \$2 a bushel. Beurré Bosc a wide range, \$3@5 a bushel; Clairgeau \$2.50@3.50; Beurré d'Anjou \$1.50@2.50.

Brussels sprouts 10@15c. a quart. Okra \$2 for a six-basket carrier.

String beans \$2 a bushel.

Lettuces generally light headed, fancy, well headed; would likely bring 50c. a dozen quick; the general arrivals varying in quality, sell from 25@50c.

Mushrooms 60@75c. a pound, broilers

NERVOUS BREAKDOWN

It Comes to the Preacher from Over Study and Brain Tire—It Comes to Any Person, too, who Worries and Frets.

From the Huron Tribune, Bad Axe, Mich.

A "breaking down of the nervous system" is a modern expression—a modern complaint. It is induced by prolonged strain and the overtaxing of the nervous system, and is a product of over hurry and hustle. It affects the preacher and the lawyer—the direct result of brain tire. It affects people in any walk of life, too, who worry and fret. It means a depletion of the nerve forces.

It is curable by complete rest and change of scene, also by the use of nerve restoratives and nerve foods. As the first method is not within the reach of all, the latter offers the most universal and practical method of treating the complaint. When it is determined that medicine is to be used, select that one which contains the most nerve-nourishing properties. Do not take nerve tonics. They only stimulate, and the reaction leaves you worse than you were before. Select the medicine that is to the nerves what meat is to the body—one that as it builds up the nerves, also increases your weight. The best thing for the purpose is Dr. Williams' Pink Pills for Pale People, the reputation of which is built up by solid and indisputable proof and which is known in every hamlet in the country.

As a proof of its merits in such cases, read the following letter of a clergyman:

DR. WILLIAMS' MED. CO.,

Schenectady, N. Y.

Dear Sirs:—In April, 1896, I was a hopeless case, owing to a complete breaking down of my nervous system and to a persistent stomach trouble. I had been treated by a great many physicians but received no permanent benefit. I had been down four times with nervous prostration and twice with gastritis. These attacks would come with such violence as to throw me into spasms. The time came when physicians said I must stop preaching or die. I would be so exhausted after the last service on Sunday that I could scarcely get from the pulpit. Many a time I have had to sit down and rest before I could leave the church in order to gain a little strength.

I could eat neither meat nor vegetables. I dared not allow my bare feet to as much as touch the cold carpet or floor, to say nothing of taking a cold foot bath. If I did I was immediately seized with cramps. In this condition I commenced to take Dr. Williams' Pink Pills for Pale People. I took one box and felt no better—in fact worse. I said I would take no more, but my wife urged the matter, feeling my life depended upon the result, as everything else had failed, and I was "used up." I therefore continued to take them. Since then, and it has been several months, I have had but one slight attack and have enjoyed life. Have preached all summer and held revival meetings for fifteen weeks. During that time my wife was sick seven weeks, so that my rest was much broken. Some nights I did not sleep at all. I have had no muscular exercise for years until recently, when I have done some work in my garden, and my muscles stand the test remarkably well. I can eat anything I desire, and can now enjoy a cold bath daily. Every Sabbath I preach three times, and now think I am good for another twenty years if the Lord wills. I am surprised at myself and sometimes think it cannot be possible that I have accomplished what I have.

(Signed) "REV. J. N. MCCREADY,"

Elkton, Mich."

Find attached, the affidavit of Mr. McCready, made before a notary public. STATE OF MICHIGAN, ss. COUNTY OF TUSCOLA.

J. N. McCready being duly sworn, says that the above and foregoing statements made by him are true. Subscribed and sworn to before me this 23d day of July, 1897.

J. D. BROOKES, Notary Public.

All the elements necessary to give new life and richness to the blood and restore shattered nerves are contained in Dr. Williams' Pink Pills for Pale People. They are for sale by all druggists, or may be had by mail from Dr. Williams' Medicine Company, Schenectady, N. Y., for 50c. a box, or six boxes for \$2.50.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.

	A.	B.
American Agriculturist.....	\$1 00	\$1 85
Breeders' Gazette.....	2 00	2 40
Country Gentleman.....	2 00	2 75
Farmers' Advocate (Canada)....	1 00	1 75
Farmers' Magazine.....	1 00	1 75
Farmers' Review.....	1 00	1 90
Farm, Field and Fireside.....	1 00	1 50
Farm and Fireside.....	50	1 40
Farm and Home.....	50	1 40
Farm Journal.....	50	1 25
Farm News.....	50	1 20
Gleanings in Bee Culture.....	1 00	1 85
Home and Farm.....	50	1 45
Indiana Farmer.....	1 00	1 85
Mass. Ploughman, new.....	2 60	2 60
Renewals.....	2 60	2 90
Michigan Farmer.....	1 00	1 60
National Stockman and Farmer....	1 00	1 85
Nebraska Farmer.....	1 25	1 85
New England Farmer.....	2 00	2 50
Ohio Farmer.....	1 00	1 60
Orange Judd Farmer.....	1 00	1 85
Pacific Rural Press.....	2 40	3 00
Practical Dairymen.....	50	1 35
Practical Farmer.....	1 00	1 85
Prairie Farmer.....	1 00	1 85
Rural New Yorker.....	1 00	1 80
Southern Cultivator.....	1 00	1 85
Southern Farm.....	1 00	1 85
Southern Florist and Gardener....	1 00	1 75
Strawberry Cultivist.....	50	1 35
Strawberry Specialist, new.....	50	1 00
Renewals.....	50	1 25
Texas Farmer.....	1 00	1 75
Texas Farm and Ranch.....	1 00	1 85

Horticultural, etc.

	A.	B.
Canadian Horticulturist.....	1 00	1 90
Garden and Forest.....	4 00	4 25
Gardening (Chicago).....	2 00	2 50
Meehan's Monthly.....	2 00	2 85
Vicks.....	50	1 35

Poultry.

	A.	B.
American Poultry Advocate.....	25	1 15
Fancier's Review.....	50	1 35
Farm Poultry.....	1 00	1 50
Ohio Poultry Journal.....	65	1 50
Poultry Herald.....	50	1 40
Poultry Keeper.....	50	1 35
Poultry Monthly.....	1 00	1 25
Reliable Poultry Journal.....	50	1 40

General.

	A.	B.
Advance (Cong'l) new.....	2 00	2 60
renewals.....	2 00	2 90
American Field, new.....	4 00	4 25
renewals.....	4 00	4 50
American Kitchen Magazine.....	1 00	1 75
American Machinist.....	3 00	3 20
Aquarium.....	1 00	1 75
Arena.....	3 00	3 60
Art Amateur.....	4 00	4 85
Art Interchange (with plates)....	4 00	4 85
Atlantic Monthly.....	4 00	4 30
Ave Maria.....	2 00	2 70
Babyhood.....	1 00	1 90
Baptist Missionary Magazine.....	1 00	1 90
Carpentry and Building.....	1 00	1 85
Century.....	4 00	4 60
Chicago Herald (Weekly).....	1 50	2 35
Chicago Inter-Ocean.....	1 00	1 80
Chicago Weekly Times.....	50	1 40
Christian Herald.....	1 50	2 15
Christian Register.....	3 00	3 85
Churchman.....	3 50	4 10
Colman's Rural World.....	1 00	1 65
Cosmopolitan.....	1 00	1 90
Delineator (Butterick's).....	1 00	1 90
Demorest's Monthly Magazine.....	2 00	2 60
Detroit Free Press (Weekly).....	1 00	1 90
Domestic Monthly.....	1 50	2 15

General—Con.

	A.	B.
Donahoe's Magazine.....	\$2 00	\$2 60
Eclectic Magazine.....	5 00	5 25
Electrical Review.....	3 00	3 20
Engineering Magazine.....	3 60	4 00
Forest and Stream (new only)....	4 00	4 20
Forum, The.....	3 00	3 60
Frank Harrison's Magazine.....	50	1 40
Frank Leslie's Popular Monthly....	3 00	3 50
Godey's Magazine.....	1 00	1 90
Golden Days.....	3 00	3 35
Good Housekeeping.....	2 00	2 70
Harper's Bazaar.....	4 00	4 25
Harper's Magazine.....	4 00	4 25
Harper's Weekly.....	4 00	4 25
Harper's Round Table.....	2 00	2 50
Home Queen.....	50	1 35
Illustrated American.....	4 00	4 30
Independent.....	3 00	3 60
Jennett Miller's Illus. Mag.....	1 00	1 75
Judge.....	5 00	5 20
Judge's Library.....	1 00	1 85
Ladies' Home Journal, The.....	1 00	1 90
Ladies' Home Companion.....	50	1 45
Ladies' World.....	35	1 30
Leslie's Illustrated.....	4 00	4 40
Life.....	5 00	5 40
Lippincott's.....	3 00	3 25
Macmillan's.....	3 00	3 60
McClure's Magazine.....	1 00	1 90
Munsey's Magazine.....	1 00	1 90
Nation, The.....	3 00	3 80
New England Magazine.....	3 00	3 50
New York Ledger.....	2 00	2 50
Tribune (Weekly)....	1 00	1 90
World (Tri-Weekly)....	1 00	1 75
North American Review, The.....	5 00	5 50
Notes and Queries.....	5 00	5 50
Observer, new only.....	3 00	3 25
Renewal.....	3 00	4 00
Outing.....	3 00	3 35
Park and Cemetery.....	1 00	1 35
Peterson's Magazine.....	1 00	1 85
Philadelphia Press (Weekly).....	1 00	1 85
Phrenological Journal.....	1 50	2 25
Popular Science Monthly.....	5 00	5 65
Popular Science News.....	1 40	2 50
Puck.....	5 00	5 10
Puck's Library.....	1 20	1 95
Puritan.....	1 00	1 90
Review of Reviews.....	2 50	3 25
Scientific American.....	3 00	3 60
Supplement.....	5 00	5 25
" with.....	7 00	7 25
" Builders' edition.....	3 50	3 10
" inc. B's edit.....	5 50	5 75
All 3 editions.....	9 00	9 25
Scribner's.....	3 00	3 60
St. Nicholas.....	3 00	3 60
Sunday School Times.....	1 50	2 10
Texas Sittings.....	4 00	4 25
The Etude, new only.....	1 50	2 15
renewals.....	1 50	2 35
The Outlook.....	3 00	3 85
Toledo Blade.....	1 00	1 85
Turf, Field and Farm, new.....	4 00	4 25
Renewal.....	4 00	4 60
Womankind.....	50	1 20
Young Ladies' Journal.....	4 00	4 60
Youth's Companion, new only.....	1 75	2 35
Renewals.....	1 75	2 75

Foreign.

	A.	B.
Farm and Home.....	2 25	3 25
Field.....	10 50	11 00
Garden.....	4 50	5 25
Garden Work.....	2 50	3 25
Gardener's Chronicle.....	4 50	5 25
Gardener's Magazine.....	4 50	5 25
Gardening, Illustrated.....	2 25	3 00
Gardening World.....	2 50	3 25
Journal of Botany.....	4 75	5 25
Journal of Horticulture.....	4 00	4 85
Kew Gardens Bulletin.....	1 50	2 25
Revue Horticole.....	5 50	6 10

75c. a pound. Tomatoes, hothouse, 25 @30c. a pound.

Gros Colmar grapes bring 30@50c. a pound, largely on account of their showiness. Hamburgs, better eating, but not quite so fine looking, sell 30@50c.

Potatoes firmer 30@85c. for Green Mountains, 75@80c. for Hebrons, White Stars 75@78c.; Red stock ranging from 60@75c. Cloth-head sweet potatoes generally lower, Virginia stock, \$1.25@1.75. Jersey double-headed barrels \$2.25.

Spinach 25@40c. a bushel. Beets 50@75c. a bushel. Carrots 75c.@\$1. Parsnips 50@75c. Parsley 75c. Artichokes \$1.50. Leeks have lost none of their strength since Thanksgiving and are steady 40@50c. a dozen bunches. Cabbage firmer and easily bring 4c. a head.

Cauliflower scarce and in quick demand, \$2 a dozen. Cucumbers slower prices inclined downward at present taking a range of 4@6c. each.

Cranberries steady \$5@7 a barrel; crates \$1.75@2.25, with occasionally some fancy bringing \$2.50. Egg plants \$3 a dozen.

Apples firmer all around. Greenings taking a range of \$2.75@3.25. Readers must remember that the quality of Baldwins and Greenings this year is not what it usually is. Baldwins selling \$3@3.50. Some fancy Maine Spies bringing \$4. Missouri Jonathans \$4@4.25; Ben Davis \$2.75@3.25. Lady apples in half-barrel kegs, \$2.50. Maine Kings selected stock \$4. Tallman Sweets \$3; Pound Sweets about gone by, what few coming easily bring \$3@4.

Philadelphia.

There has been a larger demand for foreign grapes this past week, owing to the holiday trade, but prices have not advanced. One dollar per pound for European and from 60 to 80c. for local-grown have been the ruling figures.

There has been a good demand for choice apples, and consignments have been closely sold up; the medium and low grades of stock are in the majority. Choice fruit is not being offered freely. Prices have been: Kings, choice and fancy, per barrel, \$3.25@3.50. Wine-saps, choice, per barrel, \$3@3.25; fair to good, \$2.25@2.75. Ben Davis, choice, per barrel, \$2.75@3; fair to good, \$1.80@2.25. Rome Beauty, choice and fancy, per barrel, \$3@3.25; fair to good, \$2@2.75. Greenings, choice, per barrel, \$2.75@3; fair to good, \$2@2.50. Baldwins and Spies, choice, \$2.75@3; fair to good, \$2@2.50. Mixed varieties, per barrel, \$2@2.50.

Grapes are yet plentiful, but sales have fallen off very much. N. Y. Concord, per 5-pound basket, realizes 8@9c.; per 10-pound basket, 12@13c. Niagara, per 5-pound basket, 9@11c. Catawba, per 5-pound basket, 7@8c.

Cranberries, Cape Cod, choice, per barrel, \$8@9; medium, \$6@7; per crate, \$1.75@2.50; Jersey, per crate, \$1.25@1.75.

Florida oranges, per box, \$3@3.50. Brussels sprouts, per quart, 5@6c. Cauliflowers, choice, per barrel, \$2@2.25; fair to good, per barrel, \$1.50@1.75. Cabbages, Jersey, per 100, averaging 6 to 8 pounds per head, \$2@2.25, averaging 4 to 6 pounds, \$1.50@2; lighter heads \$1@1.25.

Celery, choice, large, per dozen, 25@35c.; fair to good, per dozen, 15@20c.

Egg plant, Florida, per one-half barrel box, \$2.50@3.

Onions, choice stock, in better demand and firmer, but most of the stock offered is of inferior grade. Yellow, per barrel, \$1.75@2.25; per bushel 65@70c.; fair to good, per bushel, 50@55c. White, per barrel, \$2.50@3.25.

String beans, Charleston, green, per basket, 75c.@\$1.50; do. wax, per basket, \$1@1.75. Florida, green, per box, 50c. to 75c.; do. wax, per box, 75c.@\$1.

Potatoes remain quiet and prices are unchanged from last week's quotations.

Sweet potatoes, Jersey, quiet and firm, per basket, 50@55c. Southern are in large supply and being worked off at low prices, the highest being 30@40c. per basket.

Address all
Orders to

AMERICAN GARDENING, P. O. Box 1897, New York.

The Henry Strawberry!

To Meet The extraordinary demand for this unequalled Strawberry we are preparing 100,000 Henry plants for delivery through next Spring to

Premium Earners

Henry Strawberry Plants can be obtained solely through a subscription to AMERICAN GARDENING; as the publishers will not sell plants under any consideration;

Neither will Mr. Jerolaman who has signed a contract with us to that effect.

Who is Entitled to Plants

NEW SUBS. AND RENEWALS

Five plants of the Henry will be mailed, postpaid, as a premium to every Renewal or New Subscriber sending us \$1.00 a year's subscription. When renewing be sure to state if you want this premium.

TO AGENTS AND WORKERS

For every \$1.00 received from agents and present subscribers for New Subscriptions, we mail, postpaid, Ten Henry plants, Five to the New Subscriber and Five to the Agent.

Special to Club Raisers!

CLUBS OF TEN

To every agent sending us in a club of Ten New Names and \$10.00 we will forward in payment therefor One Hundred (100) Henry Strawberry Plants, by express, as well as send Five plants, postpaid, to each person in the club.

All orders are now held for Spring Delivery....

The series of articles on "Big Berries for All," written by Mr. H. Jerolaman for AMERICAN GARDENING, with additions, will soon be in pamphlet form; and agents and friends will be supplied with copies on receipt of stamp. It will be the most unique pamphlet on the Strawberry ever issued.

Address Your Letters to
AMERICAN GARDENING, NEW YORK.
P. O. Box 1697.

Success With House Plants Assured

By growing **JADOO FIDRE** Or watering them in.... them with... **JADOO LIQUID**

PLANT YOUR SPRING BULBS IN JADOO FIBRE

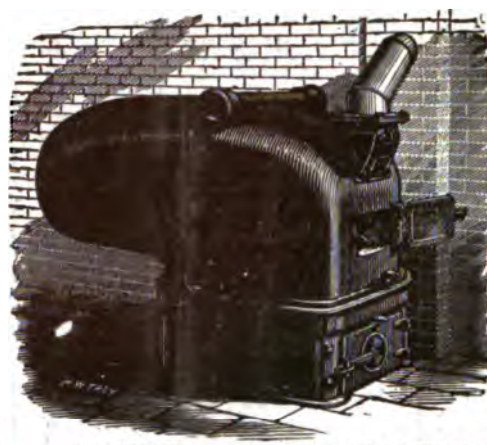
Send for PRICES and list of PRIZE WINNERS

THE AMERICAN JADOO CO., 813 Fairmount Avenue, Philadelphia, Pa.

Mention American Gardening when you write.

GREENHOUSE HEATING AND VENTILATING,

Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK

**FIVE PATTERNS OF BOILERS
NINETEEN SIZES**

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

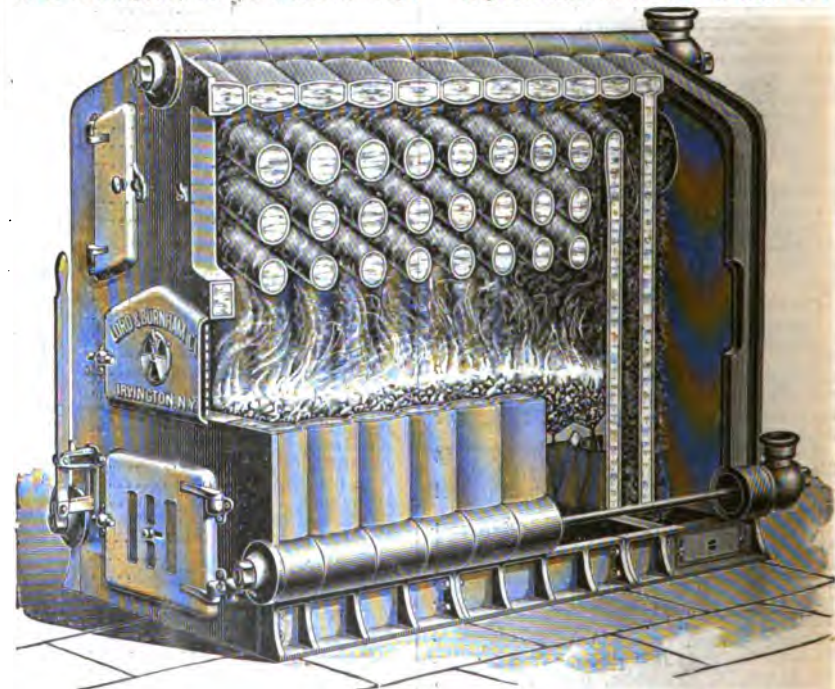
Iron Frame Benches with the "Perfect Drainage Bench Tile" or Slate Tops

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.

ORD & BURNHAM CO.,
Architects and Builders and Manufacturers of Heating and Ventilating Apparatus.
(Established 1856.)

Plans and estimates furnished on application for Heating and Ventilating Apparatus erected complete, or for material only. Highest Awards at the World's Fair



NEW SECTIONAL HOT WATER HEATER.

Specially adapted to large ranges. Will heat up to 16,500 feet of glass. Highest economy. Moderate cost. Also heaters for smaller work. Send six cents postage to New York office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

1846.

1898.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 155.
COMBINED SERIES VOL. LI.

NEW YORK, DECEMBER 11, 1897.

5 CENTS A COPY
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Beekeeper, The..... 851	Flowering Shrubs, List of..... 852	Night Soil as Fertilizer. 848	Rhubarb in Cellars..... 841	Window Garden, The.. 852
Caladiums, Wintering 841	Fruit Crates, Improved. 840	Opposition, Illegitimate 844	Scurfy Bark Louse..... 843	Wistaria, Pruning..... 843
Cannas, Wintering.. 841-841	Fruit Garden..... 840	Peaches and Nectarines Under Glass..... 838	Small Fruits, Propagation..... 841	Illustrations.
Chrysanthemums, certified..... 850	Gladiolus for Forcing.. 842	Pomegranate, management of..... 843	Strawberry Culture, 846	Aquatic Pond in Boston Gardens..... 843
Cinerarias, Growing... 841	Gladiolus Gandavensis. 840	Poultry Yard, The..... 843	Taxation..... 844	Copper Beech at Boston..... 837
Cow Manure, How to use..... 843	Implements, Some New 839	Primroses from Seed... 842	Turnips, Bitter..... 841	Fruit Crate Improved.. 840
Egg Plants, Disease of. 841	Lettuce, Forcing..... 838	Private Gardeners..... 840	Vegetable Garden..... 840	Grey, the late W..... 853
Foreign Correspondence... 840	Market Reports, New York, Boston, Philadelphia..... 854-855	Question Box..... 845	Vines for Piazza..... 842	Implements, New... 839-840
		Readers' Club..... 841	Violet Diseases..... 847	
			Violet Runners..... 845	

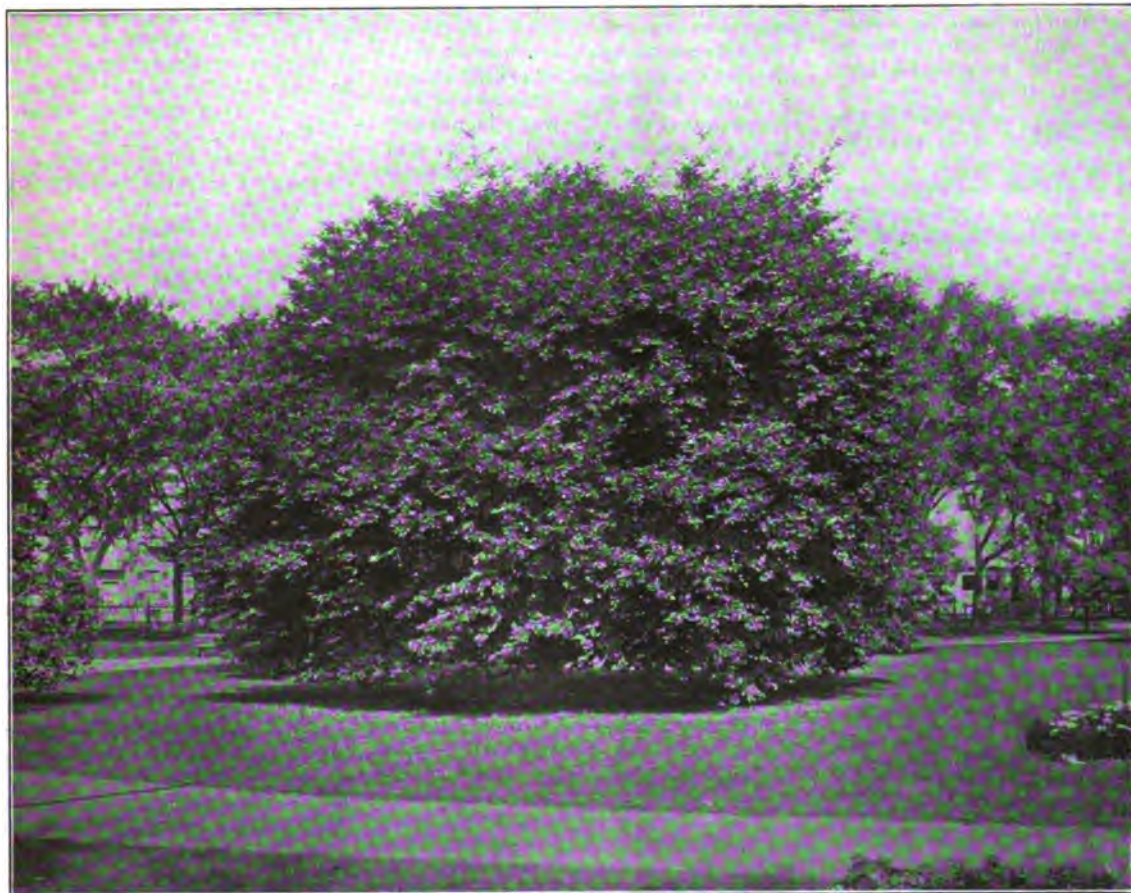


FIG. 228.—COPPER BEECH TREE IN THE BOSTON PUBLIC GARDENS.

To obtain the form shown, it is necessary to induce branches by pinching out the leader.

Peaches and Nectarines Under Glass.*

(Concluded from last week.)

The principal secret in starting an early peach house is "start easy." Supposing we start a house the middle of December: we have some dreary weather to go through, can give our trees lots of time, and have ripe peaches the first week in May with such varieties as Hale's Early and Rivers' Early. And in starting a fruit house give a thorough watering, making sure that the border gets a soaking from top to bottom, with a wet surface and a dry bottom, the results will be anything but satisfactory.

When starting a peach house in, say, the middle of December, I consider a night temperature of 40 degrees, with a rise from 5 to 10 degrees during the day, is sufficient for the first two weeks; then rise to 45 degrees at night with the day temperature 50 or 55 degrees with sun. This should carry them until the fruit is well set, when a temperature of 50 degrees at night will do no harm, raising the day temperature accordingly.

In forcing early peaches and nectarines, we should always avoid coddling, or in other words, give air at every available chance, the trees will be benefited, and give stronger blossoms, which means finer fruits. At the same time use judgment in airing an early fruit house. We may sometimes go into a fruit house and find it warmer than it should be, but in such a case it would be poor policy to rush on lots of air; sudden changes must be avoided or we may expect to find our fruit lying on the borders during the stoning period, instead of on the trees where they belong.

It is well to go over the trees when they are in bloom, using a camel's-hair brush to distribute the pollen, especially if there be no bees around, and bees are somewhat scarce at the end of January, which would be about the time a peach tree would be in bloom, if started the middle of December.

Fruit forcing demands the closest attention if we are to have satisfactory results, but having a good houseful of peaches and nectarines, the grower is well repaid for a little extra trouble earlier in the season. I never tire of looking at a good house of fruit, and on the other hand, if the showing is poor, I feel like locking the door. Fruit trees are interesting objects from the time they are started until the fruit is ripe. What a glorious sight is a peach house in flower in midwinter. 'Tis a picture anyone can admire!

When the trees are in flower it is necessary to keep a dryer atmosphere, but a damping done once during the day in bright weather will do no harm, providing there is plenty of air on.

When the fruit is set, syringe twice a day in bright weather. Of course I don't believe in syringing anything in cloudy weather. The plants are happier with a dry coat.

In presenting a paper on this subject, it is not necessary to go into every little detail, they are so numerous, but I will just mention a few as I go on. One important point is disbudding, which requires attention from time to time: there

are just two ways for this operation, the right and wrong, so set the best man on the place at this work; it needs time and patience with good judgment. Disbudding and thinning of the shoots should be done by degrees; it is better than taking off a large quantity at once. A tree well cared for during the summer months as regards thinning the wood, cutting away rank growth, etc., needs very little pruning in winter.

Peach trees have a tendency to make rank wood. We can control that somewhat when the shoots are selected. For instance, a shoot is selected from the upper part of the fruiting wood and another from below, and nine times out of ten the shoot on top will make a rank growth, while that from the under side will be just right for fruiting wood. I select wood for the following season as much as possible from the under side of the fruiting wood. When going over the trees disbudding, a large number of shoots will be found that can't be rubbed off on account of fruit, but all those that are not needed for the growth, can be plucked, say three or four leaves from the fruit, which will induce the formation of spurs; those spurs we can safely rely on for some of our finest fruit, both for flavor and appearance.

My advice is when there is fruit on the spur wood to leave it to mature, but of course, should there be a cluster on a spur—and there often is—thin down to one.

Thinning is probably the hardest task of all for the gardener. It is difficult not to leave on too many. Peaches and nectarines are deceiving, when in a small state, and one is easily led astray, and leaves on too big a crop. If the trees carry a very heavy crop, the quality is poor, and the trees are also damaged. I have heard it is not safe to thin too much until the fruit is stoned, but my practice is to do all the thinning at the first swelling. I maintain that when a peach has done stoning, the work is nearly complete, and to have extra fine fruit thinning should be done in the early stage.

There cannot be any set rule as regards the number of fruits a tree shall carry; it depends to a certain extent on the condition of the tree. Trees that are inclined to make rank growth, crop the heavier. Experience and close observation should soon teach one what the trees are capable of maturing. Peaches in tubs, you have them more under control than when planted out, and I usually crop them more heavily. Having the roots confined, one can feed them heavily, and it is remarkable what results can be had from a tub tree, and with good care they will last for years. We have tub trees six and seven years old, capable of carrying a hundred fruits or more. The wood is perfect and they are probably good for years. The method I have read of, fruiting trees for three years then dump them, I cannot agree with. I can safely say, when I have had a tree in a pot or tub three years, it is just getting into good shape; however, if we all thought alike, our progress would be slow.

The next point to be considered and an important one, is foliage. It is impossible to have fine fruit without good foliage, and the question as to how to get it can be answered in a few words. Green fly and red spider are two of the

greatest enemies, but my advice is to apply the remedy before there is much damage done; there is an excuse for the presence of a little fly when the trees are in flower, but after that period, none! The force pump should be used once or twice a week from the time it is safe to syringe after the fruit is set, until it begins to get ripe, syringing with enough whale-oil soap in the water to just color it. With such treatment there will be fine healthy, leathery foliage. Green fly, spider, and all insects will give the peach house a wide berth, if the whale-oil soap is used: it is a simple remedy, but effective.

In bringing my few notes to a close, I would say if there is any re-planting to be done in a peach house, there is no better time than just as the trees are dropping their leaves. I always find it handy to have a few trees on hand, in case of an accident; half a dozen trees can be planted in the garden, trained fan-shaped, and then should anything go wrong with any of the trees in the house they can be replaced with trees ready for cropping.

Peaches and nectarines should be on the plum stock for forcing.

As to Forcing Lettuce.

To the Editor of American Gardening.

On page 774 Mr. Thompson tells how he grows first-class lettuce, and says the temperature should be between 50 and 60 degrees. I would like to know, if that is for night or day or both. And he says water should be given freely on all bright days overhead with a moderate sprinkler, and "after dark weather, when the sun shines brightly," the lettuce should be sprinkled lightly overhead two or three times daily.

What does he mean by "dark weather when the sun shines brightly?" What is the use of watering two or three times daily? Would not one good watering underneath be better, that is, by sub-irrigation? The Ohio Experiment Station says that is the right way to water lettuce.

I am a beginner and would like to know the best way to grow lettuce. I have a house 20x40, planted it the first week in October, and it is not yet ready for market. I water by sub-irrigation about once a week; the soil seems wet enough, but the crop does not grow very fast. I am using manure water out of the barnyard; do you think the water too cold, or is my house too cold? I have let it run as low as 40 degrees at night; is that too cold for best results?

Would nitrate of soda be better than the manure water? If so, how much should I use at each watering?

Now, Mr. Editor, I know this is a long letter, and a great many questions are asked, but I would like to be able to grow six successful crops in one winter as Mr. Thompson does.

ED. SCHRICKEL, O.

[The temperature should not go below 40 degrees.—Ed.]

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere

*Paper by W. Turner before the Dutchess Co. Horticultural Society, Dec. 1, 1897.

Some New Implements.

We illustrate a few of the novelties in implements as used in Great Britain, including a motor van, for which we are indebted to the Agricultural Engineer, of London, and which may be interesting to our readers.

Lawn mowers are operated by steam, the illustration being of the "Sumner" patent. The engine and boiler are fitted on the machine so that the bulk of the weight is on the main roller and the machine being nearly balanced is easy to turn. The boiler is multitubular, containing 60 copper tubes, and a copper fire-box, the shell being made of mild steel and the whole tested by hydraulic pressure to 30 pounds. The safety-valve is set to work at 150 pounds. Water is fed to the boiler by a brass force pump, and is first passed through a heater and delivered to the boiler at a temperature of about 180. Steam is generated in the boiler by the use of ordinary lamp oil as fuel, which is burned in the fire-box of the boiler by a burner similar to the burner of a naphtha lamp. Oil is forced to the burner by compressed air at a pressure of about 15 pounds. By this means, it is claimed, perfect combustion is obtained without smell or smoke, and steam is generated quickly. The oil and water are carried in the cylinder immediately in front of the engine. The engine and boiler are well proportioned, apparently well made, and suitable for the work they have to do. Among the advantages claimed for this steam lawn mower are, first of all, cheapness; one man can always work it, whereas two are often required to work a machine with a pony or horse; then, it is said, the machine can be turned quicker, and go in and out among the beds and borders better than with a horse or man pulling at the front; the mowing can be done in much less time; consequently lawns can be mown oftener and kept in better order; no damage to borders, no marks left by horses' boots; the additional weight on the machine rolls the ground at the same time that it is mown, so that mowing and rolling are done at one operation, and the ground is rolled every time it is mown; there is no slipping of the rollers. It is also available as a small portable engine for driving any kind of light machinery, such as shaft cut-

machine and horses. The seat is readily detached so that now one pattern machine only is necessary, as the seat can be on or off at the pleasure of the user.

The "Ransom" potato digger is made so that, instead of the digging tines being rigidly fixed in the rotary wheel, they are at the right moment made to turn partially round. This is accomplished by governing the tines by a cam, giving them a feathering or self-clearing action. The



FIG. 231.—"SUMNER" STEAM LAWN MOWER

advantage of this is that the tines can be made well hooked to go under and raise the potatoes with the least possible power, and that on coming out of the soil, the feathering action, which then turns the hooked point of the tines downwards and backwards, delivers the potatoes on the top of the soil and frees the tines of the tops and haulms. This action which is absolutely new, gets over the great difficulty there has always been before that, if the tines were made the right shape for lifting the potatoes they were the wrong shape for dropping and clearing the potato haulms and weeds.

The Lancashire prize motor van is a rear driven, four-wheel vehicle built upon a steel frame. It is fitted with a vertical compound engine of the marine type supplied with steam from multitubular boiler. The boiler, which is oil fired, is of steel, and has 108 copper tubes of a special make and a copper fire-box having a total heating surface of 50 square feet. The connection to the engine is by steam dome which is so placed that the steam is thoroughly dried, therefore priming is absolutely prevented. The crank shaft which revolves in one direction only, is connected with the second motion shaft on which suitable clutch gearing is fixed by four changes of speed, viz., "high," "intermediate," "slow," and "reverse." The second motion shaft transmits the power to the third motion shaft on which the driving chain pinions are fixed, and also the compensating gear. The gearing being of tough gun metal with machine-cut teeth is exceedingly powerful. The power is applied to the road wheels by means of powerful pitch chains, being kept taut by means of radius rods. The whole arrangement of boiler, engine, and gearing is so placed that the weight on the driving wheels when empty is about half the weight of the van, and as all the additional weight when loaded comes on to the drivers a proportionately better grip

is obtained. By this means the weight on the steering wheels is kept constant and the van, it is claimed, can be easily managed by one man. The body of the van, which is of great capacity, and occupies the rear portion, is separated from the boiler by a partition which does not obstruct the rear view of the driver. The van is roofed with sheet metal. The condenser, which consists of a number of brass tubes of special make, is supported above it. The metal roof is arranged so that any rain-fall may be carried to the storage tank and used as feed water. Both cylinders of the engine may be worked high pressure when necessary. The regulating lever after shutting off steam also applies the brake. The clutch levers, etc., are all within easy reach of the driver.

Weevils in Seed Beans.

A reader sends specimens of seed beans together with some insects he has found on them, and asks: "Do you think it will impair the vitality of the bean? At first only a discolored spot shows on the bean, in a few days the full-grown bug emerges. Is there any way to overcome it?"

The seed beans sent are infested with the common bean weevil (*Bruchus obtectus*). Such beans are injured for seed purposes. Part of the infested beans will grow fairly well, but many of them

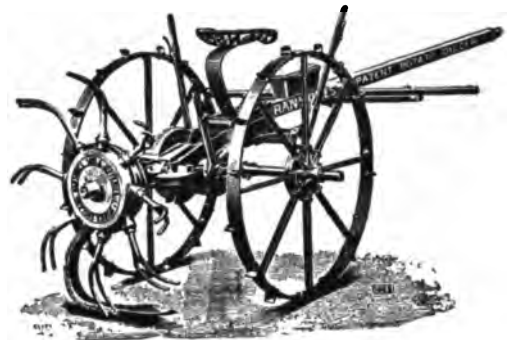


FIG. 232.—"RANSOME" POTATO DIGGER.

will simply germinate and then die. Furthermore, if left to themselves the beetles will continue to breed upon the dry beans and soon change the beans to a worthless mass of meal. At one time it was thought that the bean weevil deposited its eggs only in the green beans while in the pod. It is now known that the beetles will deposit their eggs upon dry beans and that they will feed upon these throughout the whole season. The number of broods produced each year is variable, as is also the time required for a brood to develop from the egg to the adult beetle. Under favorable conditions the time has been found to be 21 days, while under adverse conditions the time required to complete the life cycle is often 80 days.

The simplest and most inexpensive method of getting rid of this pest is to use bisulphide of carbon. This is a colorless fluid with a disagreeable smell. It is frequently sold by seedsmen and dealers in insecticides under the name of "Fuma carbon bisulphide." One and a half pounds of this substance should be used to every ton of seed, or if a whole building is fumigated use about two pounds



FIG. 230.—"CALEDONIAN" POTATO DIGGER.

ters, churning, pumping, small lathes, dynamos, etc.

The "Caledonian" potato digger is somewhat different from those in this country. It has a seat which is supported by an arm fixed to the end of the main frame, conveniently placed on the left side of the machine and is very handy for the driver to exercise control of both

to every 1,000 cubic feet of space. If the beans are in bags the latter may be placed in a tight box and covered with canvas or oil cloth. The bisulphide of carbon should be poured into shallow dishes and the latter set on top of the seed. Exposed to the open air this fluid changes to a gas that is heavier than air, hence it penetrates throughout the mass of seed and suffocates the insects.

Remember that carbon bisulphide is explosive, so do not attempt to smoke while using it, nor carry a lighted lamp into a room filled with the fumes, nor use it in a room where there is a fire. Also remember that it will suffocate human beings as well as it will insects, so avoid breathing the fumes as much as possible while using it.

F. A. SIRRINE.

The Fruit Garden.

Gaining Time.

On sunny days when the frost is not severe, work over the fruits in rotation, beginning on the pears, currants, etc., and finishing last in spring on the stone fruits, plums, and peaches, preferring to push the season now rather than to have it crowd you in the spring, when lots of unlooked for detail work turns up.

Pruning Currants.

Overhaul the bushes and cut out some of the oldest wood where too thick and cut about one-third from the extra strong growths of the past summer, not forgetting there is some individuality even in currants.

In cutting upright growers as Victoria, Cherry, or Versailles, let the top bud be pointing outward and on the under side, but in Fay's make the cut so that the bud is on the upper side.

Thinning the Gooseberry Bushes.

These, if grown in bush form, should have some thinning out of the oldest wood, cutting back one-third of the strongest summer growth and cutting

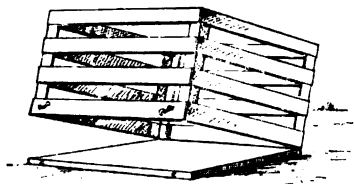


FIG. 232.—IMPROVED FRUIT CRATES

out entirely the weak or small wood, so that there will be no crowding in summer.

When grown in this way, it is easy to obtain a supply of young plants; it also calls for a good mulch in summer as well to keep the fruit clean.

The tree form or single stem is more in vogue on the "other side" and some elaborately shaped heads are worked out by retaining leading shoots and pinching the side growths in summer, or pruning back to spurs in winter. This style seems to be more successful there than it is here, where the stem often gets dry and suddenly breaks off at the surface after a few years; on the other hand, I have come across a few patches where there seems to be no difficulty whatever.

The soil most suitable here is a strong moist loam, mulching in summer and lots of manure once a year.

Raspberries.

The weak and all surplus canes should be cut out, and the covering of tender kinds seen to, if not already done. Clean up all brush and make ashes of it.

J. HOLLOWAY, L. I.

Improved Fruit Crates.

Some time ago AMERICAN GARDENING illustrated an excellent set of fruitcrates, which were low and broad and capable of being piled one upon another. They were, in fact, the crates shown in the accompanying illustration, with this exception: These have one end piece pinned at the top, so that the bottom of this end piece can swing out when it is desired to empty the crate. It is easy to see that this will cause less bruising than when the crate is upset in the usual way. The end is held in place when closed by a bottom, or by a curved bit of iron, having a screw thread where it enters the wood. It could also be closed by a pin through the side of the crate into the end of the swinging piece.

The Vegetable Garden.

Time for Reflection.

For all practical purposes there is little that can be accomplished in the garden at this season; the crops are gathered in and stored for the winter, the ground is all cleared of rubbish and either plowed or dug, to be left to the purifying influences of frost and snow. In moist weather such ground should not be walked upon, as this will counteract this sweetening process.

When our garden is covered with snow, we know how well it protects vegetation and adds nitrogen to the soil. Let us aid bounteous Nature all we can, and when the wintry winds do blow, take things easy, and do what reflection we can.

In this rush and tumble and hurried method of our present mode of living, we are apt to think we are a smart and progressive people. Each year we are confronted with new varieties of vegetables and flowers, etc. And we are assured they are superior to those cultivated before. We have reason to think, however, that the onion of to-day is practically the same that was enjoyed by our ancestors of 4,000 years ago, that was eaten by the great nabobs of old, and there is hardly a home in this land where this old quaint vegetable is not used and esteemed.

The same may be said of the cabbage, beans, cucumbers, egg plants. These were known and cultivated long before the days of Julius Cæsar, Romulus, or Homer. Could the history of these simple vegetables be written, that were used at the tables of the great and the humble of unrealized ages, what countless revolutions and changes in our methods of living could we learn from them.

Garden vegetables are no doubt in a large degree the best foods of man. Let us, therefore, keep on improving our varieties, methods of growing, try new kinds, take more interest in this, the natural vocation of man, and grow more, eat more, that we may become better

men socially, intellectually, and industrially.

W. M. EDWARDS.

Foreign Correspondence.

Origin of the Gandavensis Gladiolus.

To the Editor of American Gardening.

You are right in supposing the term *Gladiolus gandavensis* to be derived from Gand (Ghent). It was the late Mr. Louis van Houtte, the well-known Ghent nurseryman, who gave this name to a hybrid *Gladiolus* offered for the first

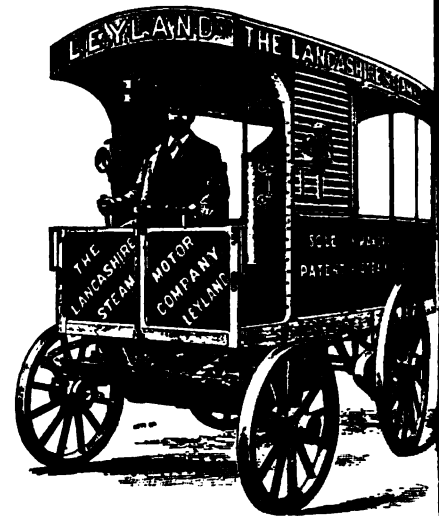


FIG. 233.—"LANCASHIRE" MOTOR CAR.
(See page 839).

time to the trade by him in the year 1841. I have before me Mr. Van Houtte's catalogue No. 6 (autumn, 1841) in which he offers *Gladiolus gandavensis* as the novelty of the year, at 25 francs (\$5) for medium sized, and at 70 francs (\$14) for very strong bulbs. The first colored plate with elaborate description appeared in the *Flore des Serres*, March, 1846, where the hybrid is stated to have originated from a cross between the Cape species *Gladiolus palitacinus* and *G. cardinalis*, in the gardens of the Duke of Aremberg at Ghent.

This *Gladiolus gandavensis* created a sensation but was soon surpassed by numbers of seedlings which have since been offered under fancy names. A complete collection of *gandavensis* hybrids from 1841 to the present day would embrace many thousands of named varieties, some fifty and more new names being annually added by various raisers. The old varieties, with a few exceptions are entirely abandoned now, and the standard of the whole section is still improving from time to time. The old type of 1841 is still used as a cheap bedding variety, although it is rather poor, compared with the majority of other cheap varieties.

The term "*gandavensis*" nowadays refers to the whole section; but when no varietal name is added, the old type is meant.

More recent sections of late flowering garden *Gladioli* have been termed: *Lemoinei*, *nanclanus*, *Childs*, etc., which all have their distinct characters relative to their origin.

ERNST H. KRELAGE,

Haarlem, Holland.

THE READERS' CLUB

REPLIES TO THE PROBLEMS IN THE
QUESTION BOX.

Turnips Are Bitter.

(To C. B. W., page 811).—Growing these in close proximity to horse radish will not make them bitter; that is caused through lack of sufficient potash in the soil. An application of wood ashes for growing turnips improves their taste. I have known some cooks to soak such turnips in water containing a little lye, before boiling, and to add a little pinch of lye to the water while boiling. It was said this improved their taste.—W. M. E.

Growing Cinerarias.

Cinerarias will not drop their foliage unless the treatment has been wrong, which may be defined as lack of drainage, too much liquid manure before pots are filled with roots, too much water will also have the same effect, or they may be infested with red spider.

There are no plants so sensitive to or requiring more care in watering than these. They should never be allowed to become too dry, for they will rarely recover. They should be potted in one part leaf mould, two parts turfy loam, and one part each of sand and decomposed cow dung, a sprinkling of powdered charcoal is also an advantage, particularly when the plants are small with few roots. Give plenty of drainage, at least one-third pot full of broken pots or similar material; pot firmly. Water sparingly until active growth sets in. The first potting should be into 2½-inch pots, as soon as these are filled with roots, shift them to 3½ or 4 inch, and again into 5 and 6-inch pots, in which size they may be allowed to flower.

When the pots are full of roots with plenty of foliage, give a little liquid manure, weak at first, after watering them first with clear water. Never give liquid manure when the plants are dry at the roots. Keep enough moisture in the house to prevent red spider, keep down aphids, ventilate freely, do not allow them to be crowded, keep temperature 45 to 65 degrees.—W. M. EDWARDS.

Growing Cinerarias in a temperature of 80 degrees is something new to me (see page 811); then dropping from 80 degrees to 40 degrees would be unsatisfactory to any growing plant. With such a temperature I should judge the plants would grow up spindly and weak.

To grow Cinerarias satisfactorily, a temperature of 40 degrees at night with a rise of 10 degrees during the day would be nearer the mark. The Cineraria being a "cold-blooded" plant should be grown in a house with plenty of fresh air to keep it robust. With such treatment I think the leaves will cease to damp off.—WM. TURNER.

Why Cinerarias Drop Foliage.

Replying to G. Schretzmeir, page 811, would say that if his Cinerarias are in the vigorous condition he says they are, he need not worry about their losing a few of their under leaves, as they are very apt to do so, especially if kept in a close

atmosphere, and set too close together.

If G. S. will try to keep a temperature of say 45 to 50 degrees at night with 10 higher during the daytime, a good circulation of air when possible, and keep the plants shifted on as they need it, he will, I think, have no trouble with dropping of leaves.—J. M.

Rhubarb in the Home.

The plant itself is not raised in cellars, but in the open ground. Any one having good strong roots growing in the garden, can very easily enjoy his pie plant during the winter months. In the fall before the ground freezes, dig up all the roots required, leaving them exposed or covered very lightly with leaves, until needed for forcing. Place a few roots in any structure where the temperature does not fall below 50 degrees.

I have seen it grown in the cottages of the lowly as well as in the middle class in Europe for Christmas pie. It grows nicely if roots are put in the bottom of a barrel, as close together as it can be put without crushing, just covering the roots with enough light sandy soil to keep in the moisture. The barrel is then placed in any out-of-the-way corner, in the house or cellar where above temperature is maintained, and in two or three weeks rhubarb pie can be enjoyed; I have seen such a barrel in the bay window of well-to-do people; it is sometimes covered with any odd drapery that may always be found in a cottage, a board placed on top and Geraniums and Fuchsias placed there to flower all winter to lend a cheerfulness, while nice rhubarb for the palate is growing underneath. Such combinations are cheerful to the housewife while outside the winds and snow make things desolate and uncomfortable.—W. M. EDWARDS.

Rhubarb in Cellars.

Rhubarb forces readily in a temperature of from 60 to 70 degrees. All that is needed is to keep the crowns dark and supply some moisture to the roots. The stool or crowns should be lifted and stored away under an open shed or covered with boards. Retain a portion of the soil if possible to keep the roots plump. When placed in position for forcing cover lightly with soil up to the crown, sprinkle with water and afterwards maintain a moderate degree of moisture.

Darken with sacks or shutters and so continue until the rhubarb is ready for pulling. As the spring of the year advances less artificial heat is required. The cellars referred to on page 811 were heated with hot water pipes placed for the purpose. Bins or divisions are constructed to make covering easy and also to enable one to force in batches.—Ed. A. G.

Gladiolus for Forcing.

Shakespeare is the variety most generally forced for the New York market.—Ed. A. G.

Medicinal Properties of Native Plants.

The Medical Botany of United States, by Laurence Johnson, published by Wm. Wood & Co., is the best thing of the kind, though far from complete. Mirsch's Ma-

teria Medica (Lea Bros. & Co.), Sayre's Materia Medica, and Culbreth's Materia Medica are also excellent, but they include those of other countries.—H. H. RUSBY.

Propagating Small Fruits.

One of the easiest ways to increase blackberry plants is to allow them to sucker or throw up their shoots naturally, but one of the best ways if only a few hundred are wanted is to take a common spade, sharpen with a cross-cut file, and when the sucker plants are six to ten inches high, force the spade down on each side of shoot so that a cross root six inches long will be left on the plant. This "severed" root will throw out a nice lot of fibrous roots in the latter part of the growing season which will make fine plants. Another method is to grow the plants from root cuttings, which appeared in AMERICAN GARDENING last week.

Increase red raspberries in the same manner as blackberries, but if you have had no experience in growing red raspberry root cuttings, it will pay you best to grow "severed" root plants. The purple and blackcaps can be increased by layering the tips in the month of August to September 15, by taking the hoe or trowel and burying the tip three inches deep in the soil.

Propagate currants by taking cuttings from vigorous shoots of the present season's growth, cutting in lengths of from six to ten inches, place in sharp sand during winter where there is no frost (a cellar or pit will be a good place). Plant in well-prepared ground, in April, against the land side of a furrow six inches deep which is marked out with a one-horse garden plow; the soil should be well firmed against the cuttings, especially the lower half of them.—C. C. N.

Disease of Egg Plants.

Replying to William on page 811, would say that for the past few seasons in this locality (Delaware Co., Pa.), we have had just such experiences, in fact, not a few of the growers here are about to give up trying to raise egg plants. My own experience the past season has been very similar to William's. Not only the leaves but also full-sized fruits instead of getting black, would turn brown and finally rot in spots until they became unfit for use.

While I cannot explain the cause or offer a remedy for the trouble I am fully convinced that good egg plant cannot be raised on worn-out land without applying some good fertilizer, such as bone or some of the good brands of phosphate now in use, in addition to the ordinary application of stable manure, and also if possible plant on new ground.

If any of the readers of AMERICAN GARDENING have had the same trouble and found a remedy they will confer a great favor to many by making it known through their valuable paper.—J. M.

Wintering Cannas and Caladiums.

These should be kept dry in a warm cellar, or under greenhouse benches, away from any drip. If the position where they are kept is very dry, cover the roots with sand. They will keep best in a temperature of 40 to 45 degrees.—W. M. E.

Cannas and Caladiums can be wintered in a dry cellar, providing it can be kept warm enough.

When once Caladium bulbs start to rot it is a difficult matter to keep them, as the decay is rapid. There should be no trouble in storing them in a cellar, especially where there is a heater, which is generally the case.

The Cannas can be stored just as dug up in clumps, and if some soil is attached it will do no harm, in fact, I think it is beneficial. In the spring the clumps can be divided and planted on the lawn, or if preferred started in the greenhouse, then planted.—W. T.

Wintering Cannas.

Canna roots may be wintered in the cellar or any moderately cool, dry room where the temperature does not fall below 50 degrees Fahrenheit, or in paper bags in any room free from frost, or under the benches in the greenhouse.

They should be examined frequently, especially if stored in the cellar, to ascertain their condition, and if too dry, moistened slightly. If too damp, place in a dryer position. They are intended to remain dormant, and should not be allowed to sprout; therefore, if kept near the ground, place boards between them and the soil. If the place where they are kept is warmer than 50 degrees, they will need a little moisture to prevent them from shrivelling up. They should be well dried and wiped off well before storing.—W. B. LONGSTRETH, Ohio.

Primroses and Violets from Seed.

Procure fresh seeds (old seeds are not reliable), mix a sufficiency of soil, of leaf mould, turfy loam, and sand, in about equal proportions, chopped fine; procure a shallow box, about 18 inches square, making holes for drainage. Upon the bottom of this box place a layer of any coarse material, then fill to within half an inch of the top with the above compost, press solid with a brick, then water.

Upon this the seeds may be thinly scattered. Cover lightly with same compost sifted; then cover with a little chopped moss. Place in average heat of about 50 degrees. Keep the moss moist, when the seedlings appear the box should be carefully removed, placing it away from the direct sunshine. As soon as large enough, transplant. The plants just sown will not bloom next spring.—W. M. EDWARDS.

Gladiolus for Forcing.

Out of several varieties we tried for this purpose, the Lemoine Gladiolus proved to be the best.

In forcing these great care should be taken to use only thoroughly refined large bulbs. Ordinary bulbs grown all summer and fall should not be planted before February 1. They should be kept dormant to rest at least ten weeks after they have been dug up and thoroughly dried.

By carefully growing and ripening the bulbs that were grown after the forcing, the new bulbs will be fit to plant by December 1, as if planted February 1, next year, the new bulbs should be ripe by August 1. By the same process of early maturing, the bulbs could be ripened by

June 1 and these could be depended upon to plant in time to flower from Christmas to Easter the following year, when they are certainly an acquisition.

It is better to start them in 4-inch pots, by filling the pot first with good potting soil, then pressing one good bulb in each pot, the upper half of bulb should be exposed, if planted too deep they will rot; water thoroughly to settle, place pots in shady corner or along the walk; do not water again until fairly dry, or made good growth; at first keep from 50 to 60; after the pots are filled with roots, gradually inure to the light, and plant out in bench and treat similar to Roses. By this method they should throw from three to four spikes each, and as they can be planted close, will give a good crop of flowers.—W. M. EDWARDS.

List of Flowering Shrubs.

For hardy shrubs to bloom from April to October, suitable for cutting. H. S. M. has a large list to select from—I would recommend the following:

April—Amelanchier canadensis, flowers white, height 6 to 8 feet. Azalea americana, red, 1 foot. Amygdalis incana, red, 2 feet. More or less all the Berberis, yellow, average height 8 feet. Caragana jubata, white and red, 1 to 2 feet. Ceanothus azureus, blue, 8 to 10 feet. Cotoneaster buxifolia, white, 8 to 4 feet. Crataegus oxyacantha, white and red, 10 to 15 feet. Cydonia Maulei, red, 2 to 5 feet. All the Daphnes, white and red, 1 to 3 feet. Deutzia gracilis, white, 1 to 2 feet. Diervilla rosea and alba, 2 to 5 feet. Kalmia latifolia, pink, 2 to 6 feet. Kerria japonica, yellow, 3 to 4 feet. Various Magnolias, white and purple, 2 to 10 feet. Prunus pissardi, white, 10 feet. Rhododendrons, and all the Ribes more or less.

May—Nearly all the foregoing to which may be added: All the Azaleas more or less of our native kinds. Calycanthus floridus, Celastrus scandens, many kinds of Cotoneasters as also of Crataegus, Exochorda grandiflora, the Laburnums and Viburnums, Syringas, Philadelphus coronarius, etc.

June—Many of the foregoing, as also Clematis, Cornus sanguinea, Euonymus atro-purpureus, Hydrangeas, Hypericums, Jasminum officinale, Lonicera, Rhus, Robinia hispida, Yucca filamentosa (not strictly a shrub but indispensable among shrubs) and of course hardy Roses, more or less.

July—Again many of the foregoing, to which may be added Bignonia, and many more Clematis.

August—All the Spiraeas, Osmanthus fragrans, and Tamarix parviflora.

September—Calycanthus occidentalis, Clethra alnifolia, Eleagnus macrophylla, Ligustrum lucidum, and many of those mentioned as suitable for July and August.

October—There are not many more to add to flowers in the month of October; frosts, sufficiently severe, generally destroy those which are out in bloom. Hamamelis virginica, Hydrangea paniculata grandiflora, Kerria japonica, and others, usually hold their own for a short time longer, and as there are more or less annuals in flower yet in October, such as Cosmos, Ten-Weeks' Stock, Reseda, and

others, there need be no scarcity for cut flowers to decorate mantel or table.

Many of the above-mentioned shrubs will in October and nearly all through the winter months furnish us, if not with fragrant buds and flowers, something nearly as good, that is, their splendid scarlet berries which are ever refreshing and pleasing to the eye; what is, for instance, more effective than a large bush of Euonymus americana covered with berries with a background of freshly fallen snow?—MAX.

In my list of hardy summer flowering shrubs on page 824 of last issue, I, by an oversight, omitted the Japanese Viburnum, V. plicatum, which is one of the best, and flowers in June.—R. McL.

Vines for Piazza.

H. I. M., N. Y., wants a list of hardy vines to cover piazza posts 15 feet high.

The following is a list of hardy deciduous climbers, all good ones for his purpose:

Ampelopsis quinquefolia, foliage turns red in fall. A. tricuspidata, foliage turns red and yellow. Aristolochia siphon, Celastrus scandens, Jasminum nudiflorum, Lonicera Caprifolium, Wistaria sinensis. Hardy evergreen climbers: Hedera Helix, Jasminum officinale and revolutum, Rosa sempervirens, Smilax rotundifolia.—M.

Night Soil as a Fertilizer.

For anything inside night soil does not smell very good. Wm. E. Wheelock inquires how to best use it. In the first place I will answer him that he should get Harris' "Talk on Manures," which I am confident he can procure from the publishers of AMERICAN GARDENING for a small sum. I will nevertheless give him a few pointers from experience.

Down South we used to employ night soil considerably in shape of what is called "poudrette," meaning that the soil had had the moisture evaporated and so dried. Night soil is more nutritive than the dung of domestic animals, but the offensiveness in handling makes it somewhat difficult to deal with.

According to Lawes and Gilbert, an adult male voids in the course of a year, faeces, ninety-five pounds; urine, one thousand and forty-nine pounds, or one thousand one hundred and forty-four pounds of excrement in the pure state. One ton of 2,000 pounds of night soil in comparison with animal dung contains:

HUMAN MANURE.	SOLIDS.	URINE.
Nitrogen.....	20.0 lbs.	12.0 lbs.
Phosphoric Acid.....	21.8 lbs.	3.7 lbs.
Potash.....	5.0 lbs.	4.0 lbs.
HORSE, COW, SHEEP MANURE.	SOLIDS.	URINE.
Nitrogen.....	9.4 lbs.	22.5 lbs.
Phosphoric Acid.....	6.2 lbs.	0.4 lbs.
Potash.....	4.8 lbs.	25.4 lbs.

So we find that a ton of fresh human excrement contains more than twice as much nitrogen as a ton of fresh mixed animal dung. The urine of man contains nine times as much phosphoric acid as that of horses, etc., and very nearly all the nitrogen is in available condition. One hundred pounds of the dry substance of the faeces contain five pounds of nitrogen and five and one-half pounds of phosphates. One hundred pounds of the dry matter of urine contains twenty-seven pounds of nitrogen and ten and three-fourths pounds of phosphates.

Night soil should be promptly incorporated with stable manure or be mixed with dry, fine muck, or woods earth by which the ammonia will be absorbed and its offensiveness avoided. Night soil in its various forms is especially adapted to the growing of early vegetables, owing to its great solubility, and may easily be rated in comparison with cow dung as 4 to 1.—M.

When to Prune Wistaria.

If there is any pruning to be done on Wistaria vine, just after the blooming period would be a good time, but I could not recommend a free use of the knife on this most beautiful of all hardy climbers. To prune a Wistaria severely robs the vine to a certain extent of its grace and beauty. Spare the knife and give a liberal dressing of manure in the spring, then you will get large flowers and lots of them.—WM. TURNER.

Management of Pomegranate.

The Pomegranate (*Punica granatum*) of which G. L. and M. E. Campbell in-

you have a safe fertilizer. Cow dung is especially well adapted to sandy land on account of its non-heating character, and why it should not be suitable for strawberry growing may be the great quantity of nitrogen it contains, causing the plants to run too much; not so, however, on sandy soil.—M.

Leaves for Manure.

Nothing but time will convert leaves into leaf mold but the process may be accelerated by keeping them in as compact a heap as possible. Thoroughly wet them and try to get them in heat.—M.

Should the Runners Be Cut Off?

The Marie Louise Violets in cold frames, mentioned on page 811, should have some of the runners removed if the plants are crowding each other, to allow light and air around the plants. Judgment must be exercised during these short days not to remove too many from the plants to cause a check.—W. T.

main plant, they had better be shortened. It is better to pinch back the shoots before they grow too much above the plant.—W. M. EDWARDS.

The Scurfy Bark Louse.

The scale insect sent by J. M. Fox is the common "scurfy bark louse" (*Chionaspis furfurus*). This insect resembles the San Jose scale only in its method of feeding and in secreting a waxy covering. In other respects it is entirely different. It probably causes as much damage as does the San Jose scale, but it has been with us so long that we rarely notice the damage done by it. If the writer has a few choice dwarf trees infected by them he will soon discover how much damage they can do.

The "scurfy bark louse" is nearly as bad to get rid of as the San Jose scale. The best time to attack it is in the spring at the time the eggs are hatching. First wash the trees with a solution of fish-oil soap, one pound of soap to one gallon of water. This should be followed with two applications of kerosene emulsion. The soap solution should be applied as soon as the buds begin to swell. The applications of the emulsion should be made between the 20th of May and the 10th of June. In the vicinity of Leesburg, Va., probably most of the eggs of this scale are hatched by the first of June. Washing the bodies of the trees with the soap solution as late as the 10th of June will destroy large numbers of this scale insect. F. A. SIRRINE.

Some Clover Seed Insects in Ohio.

Complaints are coming to the Ohio Experiment Station regarding the appearance of insects in clover seed the present autumn, in such numbers as to occasion much concern among the farmers. In southern Ohio, this insect has been determined as probably the same one that has attacked clover seed in West Virginia, although it has never before been reported from Ohio. At the present time this is a very small, robust, whitish worm, that is found inside the seed. This will in time develop into a small, black, four-winged fly, but entirely different from the clover-seed midge, which is red in the maggot stage and yellow and white in the adult stage.

Several months ago two men were fined by Justice Miller at Uniontown, Pa., for malicious mischief in mutilating shade trees which they slashed while employed by the town council to trim the fire-alarm wires. They appealed from the justice's decision, and were found guilty on two counts of malicious mischief and for having repeated the offense after the first conviction. The case is of interest to other property owners whose trees have been damaged in this way.

The strawberry plants arrived in fine order due to skillful packing and were exceptionally strong and good plants.—W. H. COWING, Mass.

I am very much pleased with the paper; it is just what I had been looking for. I am very much interested in its vegetable gardening department.—F. A. B., Conn.



FIG. 234.—ACQUATIC POND IN THE BOSTON PUBLIC GARDENS.

quire in issues of November 20, is a deciduous plant, therefore will lose its leaves sooner or later; it is a native of Persia; it is even mentioned in the Bible in connection with the vine, olive, and fig tree. As old as the plant is, it is very seldom that fruits, if they do set, will ripen in this country, north or south. As an ornamental tree it is "O. K.", and there are any amount of double varieties in existence which have no earthly influence over the single varieties planted near them.—M.

How to Use Cow Manure.

Cow manure should be used dry. Take the droppings and pile them or lay them out not more than six inches thick, turn from time to time, till mellow enough to pulverize. Then apply to anything growing, and no one can give an overdose of that kind of manure.

If wanted for liquid fertilizer, take a three-gallon can, fill up with dry manure, fill with water, let stand 24 hours, and

Should Violet Runners Be Cut Off?

The Violet runners had better be cut off if fine flowers are wanted. If carefully cut off and the strongest pricked out in a shallow box in loam, leaf-mould, and sand, in about equal parts, they will make the best plants for flowering the following year. The old plants had better be burned. The cuttings should be put in the soil compactly, and as soon as rooted, to be transplanted or potted into three-inch pots, and to be planted outside in good soil in the spring. During the winter the cuttings should be kept at a temperature of 45 to 55 degrees.—W. M. E.

Begonia Rubra.

We always cut away any long stems that may grow on these plants, if the latter are small in size, or they will become top heavy and unshapely. If the plants are large the stems may be left to grow, but should they overbalance the

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 15, 1894.

PUBLISHED BY
A. T. DE LA MAR PTO. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 2154 Cortlandt. P. O. Box 1697.
REGISTERED CABLE ADDRESS
Commercial Cable) Flerex, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Illegitimate Opposition. It is a delicate matter for an agricultural or horticultural publication to criticize the work of the National Department of Agriculture, and especially as regards the free seed distribution or the practically free document distribution. The natural answer to such criticisms is the general statement that such publications are jealous of the work of the government officials which results in the documents, and that they do not like the seed distribution because it interferes with their advertising patronage.

These statements are supplemented with the truism that agriculture and horticulture are getting but an insignificant share of the money which is expended annually by the government.

The motives of the editors of agricultural papers do not affect the question of the ethics, the unrighteousness of the free distribution of seeds and documents relating to farming, at the public expense. It is generally conceded that unasked government aid tends to pauperize any industry and injures rather than benefits it. The free distribution of seeds and bulletins, carries the implication that farmers and gardeners are unable or unwilling to purchase their own seeds or pay for such reading matter as they may require. We have, however, fully discussed these questions from time to time as they were suggested by current events. It must be confessed that the opposi-

tion of the government, both through the Agricultural Department, and through local experiment stations has worked serious injury to the agricultural and horticultural press. The average farmer or gardener now gets free, or at a nominal cost, books and documents, filled in some cases, we are happy to say, with timely and valuable information; but why should our readers get this information free when merchants or professional men have to get similar information relating to their business through legitimate and successful trade publications? Why should the funds of the government be used to compete with the publishers of agricultural books or papers, rather than the publishers of other kinds of literature or other trade papers?

It may be said that the books and bulletins issued by the Agricultural Department and experiment stations furnish an immense amount of copy for the agricultural press; unfortunately this is true, but it does not affect the ethics of the case. There is no more reason why the government should furnish free copy for impecunious publications than ink for their presses or the paper on which to print. A deplorable feature of the free distribution of copy which we may mention in passing is the political bias of the matter furnished. One year it is the development of the foreign market for the American producer, the next it is the protection of the home market and reciprocity.

We believe that industries are best developed by the men who are engaged in them, and especially through the special publications which presumably contain the combined wisdom, the best experience of the ablest and most successful men who are actively engaged in the particular trade or industry concerned. The government very properly allows trade publications in common with other papers special mailing facilities at low rates; ought not this to be the limit of its favoritism?

The free seed distribution and the practically free distribution of books and documents should be stopped at once and the business permitted to revert to the publishers and seedsmen, who are trying to do a legitimate business to pay their postage bills and who have to bear their share of the taxes.

And now the latest is that the Government enters into the purchase of MSS as witness the following lately issued circular:

"The Secretary of Agriculture proposes to issue a series of Farmers' Bulletins on tobacco, covering the different types and phases of the industry. In the preparation of the material for a number of the subjects the Secretary desires to secure full competition. He therefore authorizes the announcement that for the best article upon each of the subjects hereafter named, he will pay at the rate of \$15 per 1,000 words.

The papers are not to exceed 10,000 words in length, and are to be submitted to the Secretary of Agriculture not later than March 31, 1898.

Three subjects are given. If the plan is successful other subjects may be announced from time to time.

(1) Methods of cultivation; (2) Export tobaccos of Kentucky and Tennessee; (3) The marketing of tobacco, a Cigar leaf, b Manufacturing—smoking, plug, cigarettes; c Export. This should include particularly the grading and packing of the different types, with suggestions as to improvements in existing methods."

Personal Property Tax. "THE net result of all the comparisons made by the Ohio commissioners between city and farming districts finally goes to prove that the tax upon personal property makes farmers pay from four dollars to seven dollars where it makes the residents of large cities pay one dollar.

"Speaking generally of the effect of this Ohio scheme of taxation the Commission further says:

"The system as it is actually administered results in debauching the moral sense. It is a school of perjury. It sends large amounts of property into hiding. It drives capital in large quantities from the state. Worst of all, it imposes unjust burdens upon various classes in the community; upon the farmer in the country, all of whose property is taxed because it is tangible; upon the man who is scrupulously honest; and upon the guardian, executor, and trustee, whose accounts are matters of public record. These burdens are unjust because by the system as administered, these people pay the taxes which should be paid by their neighbors. And the commissioners finally add that 'these conclusions are in accord with all current authorities on the subject.'"

The above remarks are extracted from the last issue of Appleton's Popular Science Monthly, in which Hon. D. A. Wells has lately given a most valuable series of papers on the Principles of Taxation. Just as soon as the farmer realizes that he is made to bear in almost all cases more than his share of the national expense, just so soon will he be roused to action to secure his due recognition and rights.

First Monthly Competition.

A cash prize of \$5 per column is offered for the most instructive practical essay on

LETTUCE FORCING.

Manuscripts must be received at this office by January 1 and should be of about two columns in length. All MSS. submitted in this or any competition become the property of AMERICAN GARDENING.

Answers Prize.

It is with pleasure that we announce the first award of the prize offered for the best set of answers to the letters published in one week's Question Box. For a very interesting and valuable set from Max Munte, Cambridge City, Ind., the prize of \$5.00 has been awarded.

The Improved Appearance.

We trust all our readers will appreciate the improvements made in the present issue.

Botany and Parks.—A suggestion is before the authorities of the city of London, Eng., to devote a small area of each park to the purposes of a miniature botanic garden so as to assist the teaching of botany in the elementary schools.

THE QUESTION BOX

He that questioneth much shall learn much.—BACON.

Readers are invited to forward particulars of any difficulty or perplexity that they have encountered. If the question be one of general interest it will be inserted in this column, so that other readers who may have information to impart can assist their brethren by recounting their own experiences. Questions of a purely individual interest will be replied to by the Editor under the head of "Short Answers."

Questions submitted in this department will receive the full attention of the staff of AMERICAN GARDENING and when desirable will be answered editorially.

All communications for insertion should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of AMERICAN GARDENING, P. O. Box 1697, New York City. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query or answer are sent, each should be on a separate piece of paper.

Answers should always bear the title of the query replied to and the page on which it appeared, and our readers will greatly oblige us by advising, as far as their knowledge and observations permit, the correspondents who seek assistance. Conditions, soils, and means vary so infinitely that several answers to the same question may often be very useful, and those who reply would do well to mention the localities in which the experience was gained.

Important to Querists.—Correspondents must look through the whole of the paper for replies to their queries. Answers cannot always be given the week after the queries are received, but there is as little delay as possible in dealing with them.

Cash Prizes will be given for the best set of answers each week. Payment to be made monthly.

Wants to Grow Strawberries.

We want to prepare an acre of corn stubble in the best shape for best results, with strawberries to be set next fall or a year from next spring, or part in fall and the remainder the following spring. This ground was an old clover field plowed this spring for the corn ground. Soil, sandy loam. Corn, a good crop. Some one, two, or three, or more; please inform how we should proceed from now, continue and conclude. If not enough space for the whole story, tell it in parts, commencing with this winter's treatment.

We have a team and a hired man; fine lake muck, ashes free, or 75 cents a load double box, at saw mill, and stable manure free, but to draw 4½ miles from village. We do not want to buy fertilizers unless at a less cost for the certainly as good or better results and profit in the end, as we are not prepared to pay any expense incurred for experiment "regardless of cost," style, or "just for the fun of the thing."—J. M. CUSHMAN, Mich.

Hardiness of Hale Plum.

Is the Hale plum hardy in the latitude of Boston?—W. H. W.

Is Fruit Growing in Del. Profitable?

What are the inducements offered by Delaware in the vicinity of Dover, for small fruit culture? What about markets, shipping facilities, and freight rates? If all right, what varieties of blackberries, raspberries, and currants, also of plums, pears, and quinces, should be selected? Part of the land is corn stubble and part seeded to wheat; how would you proceed to get it in the best possible condition in the shortest time; stable manure is out of the question. Undoubtedly, the tree form of currants are the easiest cultivated and kept clean, but are they as profitable otherwise?—F. C. S., New Jersey.

Queen Chrysanthemum.

Does the Queen Chrysanthemum have an open center when fully grown? I have bought from two parties and the flowers have open centers from both sets of plants.—E. EASTERDAY.

Fertilizers on Prairie Land.

I would like if some of your Western subscribers would tell their experience with commercial fertilizer on onion and early cabbage on prairie land, what kind of fertilizer, and how and when did they apply it.—EDGAR EASTERDAY, Ill.

Liquid Manure for Clematis.

I have a number of Clematis plants well established—Jackmanni, Henryi, and others—and want to increase the size, number and duration of their blooms next year. With this end in view, I have this fall mulched each plant with two or three inches of cow manure. Please suggest a formula for a good liquid fertilizer to be used next summer after the plants begin to bud.

I can buy sheep manure, and by leaching it get a liquid which is doubtless good, but probably deficient in potash and some other elements. What substances should be added and how much of each? The soil is very heavy black loam.—S.

Pruning Clematis.

Can Clematis in early spring be pruned to advantage? Would it tend to increase the number of blooming points and dwarf the upward growth if the ends of the shoots were pinched out early?—S.

Gladiolus for Forcing.

Can Gladiolus be forced in pots in early spring? If so please name best varieties and color of bloom for this purpose.—H. M., Colo.

Pansies for Spring Flower.

Have just transplanted a lot of Pansy plants into two-inch pots; how shall I keep them over winter, so they may bloom profusely next spring? What stimulant is best for large Pansy flowers?—H. M., Colo.

Fenster Pappé.

Does Fenster Pappé do all that is claimed for it, as a substitute for glass? What does it weigh to the roll.—H. M., Colo.

Double Portulacas.

Last summer I had a beautiful bed of double Portulaca. I am told that they will bloom single next season. Will some one inform me through your paper if so and why?—T. J. B.

The Direction of the Rows.

In all directions for planting Sweet Peas, we are told the rows must run north and south. Why will not east and west answer as well? Does it make any difference in the blooming or quality of the flower?—"WADAN."

Sowing Scillas.

What is the proper time, also the method of sowing seed of Scilla Siberica?—D. U. X.

Japan Plums Not Fruiting.

Please tell a subscriber how to get fruit from Japan plums, Burbank and others if they are not fertile.—G. H., N. Y.

Shading for Greenhouse.

What is the best paint or mixture to use to coat conservatory roofs where Palms are kept—something that will stand the storms well.—C. C. W.

Weak Stem in Roses.

What is the cause of so many of my Roses having weak stems? The buds hang over, but are of good size. I keep the temperature 56 to 58 degrees at night, and not over 76 to 80 degrees through the day. The plants look very healthy.—H. W. C., Pa.

Lettuce Dies Off.

I have had a great deal of trouble with my lettuce under glass this last two years. It dies after it is two-thirds grown, also often on first planting to finish growth, the plants fail to strike root and those that do start and attain two-thirds growth and seem to be doing all right, will in 24 hours become entirely worthless, having wilted and are tough. On pulling up the plant I find the roots are all dead to within an inch of the main root. I have lost my entire crop within two weeks in parts of my houses. Have tried all kinds of fungicides, changed my soil, and thoroughly dried my houses in summer, and still have only obtained partial relief from the trouble. Have tried common garden soil with manure, and also clear sand and manure, always with the same results.

Can the trouble be caused by some foreign substance in the soil, in the watering, ventilation, or too low or too high temperature? The wilting and dying is worse on bright sunny days than in cloudy weather.—M. L. R., Ill.

The Availability of Liquid Manure.

How long after watering a plant with liquid cow or sheep manure, is it before said manure is in a condition to be assimilated by the plant.—JIM.

Keeping Tuberoses.

What is the best way to keep Tuberose bulbs through the winter? I have heard that the bulb that bloomed last summer will not bloom any more. Is that correct, and if so, is the bulb of any account for future use in any way?—W. B. L.

The Best Chrysanthemums.

Please name best four varieties of Chrysanthemums for pot culture—red, white, pink, yellow; also best time for starting cuttings.—L. S.

Stored Celery.

Should celery, when stored in trenches, be set on top of the ground in the bottom of the trenches, or should it be heeled in? Is it necessary to cover to shed off the rain, as soon as stored, or will a shower of rain on the celery do no harm? Our celery failed to bleach. The bottom of the trench was, I think, too dry.—L. S.

Wants the Strawberries to Do Better.

I have been reading diligently what has been said regarding strawberry cultivation, but do not seem to strike on to the points about which I wish to learn. I can buy good plants either potted or otherwise; I can set them out so that they grow, bear fruit, make runners, etc., all right, but I have not as yet got as large berries or as many as I ought to have had. Three years ago I set out some plants and they increased until I have a patch that is about 8x100 feet. This season was its second year. I kept the ground clean, cut off the runners all the fore part of the season, the runners have now been allowed to grow until the whole is a matted bed. Both winters I have put on a good coat of strawy manure, and this spring a littlering of Swift and Sure bone meal around each plant; but I did not get as good a crop as I did the year before.

Now this bed I intend to root up after next year's crop, but would like to know what is best to do to it for best returns in 1898.

I have the six Henry plants sent in October, but it was a dry time then, but they were watered diligently and all were alive when they were covered; all the original leaves had dried up, but new very small ones grew. Later when it was still dryer, I procured about 50 more plants assorted. I did not dare put these into the ground, so set them each in an 8-inch pot with good potting soil and watered them carefully so as not to drown them or parch them. They have all put out new tops. These plants had not got strong enough to set out when a snow storm set in and the ground froze up. I hustled them into the cellar. Part being placed before the windows and

some below, none in the dark, and they look so far all right.

The cellar will average about 50 degrees. I have known it to be about 81 degrees for a few hours. I intend to set out these plants in the spring to have a part of them fruit just as much and as large as possible, and the other to make as many and as fine runners as possible.

How had I best proceed? What manures had I best apply? The piece of ground that I intend to use is where I, in '97 had potatoes which were cleared early. Mitchell's Potato Mixture was used on them. This ground has been under cultivation for some six years past. I followed with rutabaga, and while they were growing, seeded between the rows crimson clover.—W. S., R. I.

Short Answers.

(To E. Easterday).—There are two good books on Chrysanthemums; the first is Morton's "Chrysanthemum Culture for America," price \$1 (or in paper, 60c.); the other is an English work by E. Molyneux, "Chrysanthemums and their Culture," (cloth, 50c.). Both to be had at this office.

(To R. W. S.).—Chrysanthemum plants should be not less than nine inches apart in row to get really good results. Running two flowers to a plant 14 inches apart will utilize the space pretty well.

(To J. Vry).—No insects were found on the Rose leaves sent. Kindly forward fresh material packed differently.

(T. W. A.).—The formula for making kerosene emulsion is as given in our Spraying Calendar in the issue for April 17 last, page 276.

Our Strawberry Pamphlet.

Owing to an expressed desire by the writer to thoroughly revise his series of articles on "Big Berries for All," it may be early in December before we will be able to issue the booklet. It will be well worth waiting for, however, as we confidently anticipate that it will prove the best treatise on the subject ever written, and practical to the core.

The Henry Strawberry.

Arrangements have been made whereby a bountiful supply of these plants will be ready for spring delivery to subscribers and agents, and in this connection we beg to call the attention of our readers to our generous offer of these plants in another column. We do not think that a more liberal offer has ever been made than the one now advertised, whereby the agent or worker sending us in a club of ten new names, at \$1 each, becomes entitled to 100 Henry Strawberry plants, while five plants will be sent postpaid to each person in his club. This offer will not apply to a club of less than ten. It may be a very long time before such an offer of such a plant can be made again. The wonderful success which has accompanied our premium offer this fall, in the short time at our disposal to advertise it, leads us to believe that the orders for the Henry Strawberry next spring may exceed all anticipations; however, we have planned for a large supply for delivery and trust to be able to meet all demands upon us. Mr. Jerolaman's series of articles is now being placed in pamphlet form, and copies will be mailed free to all who desire to use same in the canvas for new subscriptions.

All the premium Henry Strawberry plants due to date, have been shipped, except where a request has been made to hold them till spring, and judging by the unsolicited acknowledgments received, they are giving immense satisfaction. In order to reduce weight and hinder excessive transpiration some of the leaves are cut off before shipping, this is especially beneficial during a hot spell, and readers can rest assured all is done for the best.

Our 1898 Art Calendar.

I thank you very kindly for the beautiful Art Calendar which I received yesterday.—Mrs. A. B. BROMWELL, Washington.

Received your magnificent Rose and Girl, 1898 six sheet Art Calendar, and it is far beyond my expectations. It is a perfect gem of art, and I for one, am entirely satisfied, and thank you very much for it.—JAMES E. WEIL, Pa.

We consider your 1898 Art Calendar a real beauty, which, together with its marvelous cheapness should give it a place in many homes.—THOS. T. NEWBY & FAMILY, Ind.

Your beautiful Art Calendar received, and I assure you it is much finer than I thought it would be. It is in my opinion the handsomest of its kind this year.—W. P. MARKLE, Mo.

Your beautiful calendar for 1898 was duly received, and has been much admired by all who have examined it. I consider it by far the finest among many that I have received.—JNO. E. CHAPMAN, N. J.

Thanks for your beautiful 1898 Art Calendar. It is fully up to your representations, and its receipt was a pleasure to me and my family. It is an adornment to any home and is the finest Calendar we have ever received.—J. S. BECK, Ia.

I am in receipt of your handsome Calendar for 1898 and consider it one of the most complete and artistic calendars I have ever seen, and all you claim for it. It is a great source of pleasure to myself and family, and we wish your calendar the success it deserves.—WM. SYER, Ont.

I received your Art Calendar for 1898 and it gave me great pleasure as I am a lover of Roses. I think it is grand, and one of the finest I have ever seen.—ROBERT WILLEY, Ia.

I received a few days ago a copy of your 1898 Calendar, and I consider it very handsome and ornamental, and every lover of flowers should obtain a copy.—HENRY H. SAMPSON, Mass.

Your Art Calendar received, and I must say it is truly beautiful, an adornment wherever placed and far superior to anything I have seen of its kind.—CHR. JENSEN, Conn.

I found your Art Calendar which you recently forwarded me to be just as you represented it. It has given pleasure to both me and my family, and I consider it an adornment to any home.—STEPHEN BADDLEY, N. Y.

Art Calendar for 1898 received. Please accept thanks. Am very well pleased with it, consider it a work of art and a superior addition to the already excellent list of calendars.—J. W. WORCESTER, M. D., N. Y.

I am very much pleased with your Art Calendar; it more than comes up to your representation. It is a beautiful piece of work, and I thank you very much for sending it. Others to whom I have shown it agree with me that it is superb.—C. R. HEXT, Ont.

A Bulletin for the Children.

A recent bulletin of the Ohio Station, "Story of the Lives of a Butterfly and a Moth," was prepared more especially for the young, and as a supplement to "Nature Studies" in the Public Schools. It treats, in a simple, non-technical manner, of the life and development of one of our large, showy colored, and more common butterflies; and of the largest and prettiest of the moths. Teachers, both those in the city as well as those in the country, will be able to secure copies of this bulletin, by addressing the Experiment Station, Wooster, Ohio. The Station, by this means, hopes to reach the coming farmers, while they are yet young, and have more time to devote to securing a knowledge of the things around them than they are likely to have later on in life.

Strawberry Culture.

Concerning Mr. Jerolaman and His Methods.

To the Editor of American Gardening.

I presume that AMERICAN GARDENING is published principally for these two reasons: to instruct its readers as to the best methods of gardening and fruit culture, and to make money. We have all along been led to suppose that the only object to increase the latter was to give means for the enhancement of the former; in the great financial success it has seemed to have had of late in the large increase of its subscription list, this spirit seems to have been fully made manifest. In order to maintain its present high standard and great popularity among the American people, it fully recognizes the necessity of giving to its readers as correct and practical information as possible, and to this end invites the co-operation of its readers. In response to this I write this article; and if it may seem by some of the readers to be couched in rather too plain and sarcastic language, it should be excused on the ground "that the end justifies the means."

When Mr. Jerolaman's series of articles appeared in AMERICAN GARDENING under such a flashing head line as to proclaim him the "New Jersey Strawberry King," it was but natural that all eyes of the fruit growers should be turned toward this new-found king to watch him very closely to see if he were worthy of his throne; and I, as one of the humble subjects of the realm (for on page 667 he fully declares himself king of strawberry growers in the United States), freely admit, looked after him sharply.

I did not find anything very much amiss till I came to his methods of culture where he claims that by setting out plants (layer plants) in the fall for the next spring fruiting, he can grow a first-class crop of strawberries cheaper than any ordinary hoed crop, etc., and further along he says: "It is human nature for a man to think that his method is the best one; such an one I neither intend nor attempt to instruct, but I write this for the benefit of those that have never set out a plant or grown strawberries, and if I can benefit any one, I shall feel proud of it, and consider it as part pay for any trouble that I have taken."

When I came to this I said to myself: "This king needs looking after," for certainly this matter ought not to go before the readers of the AMERICAN GARDENING, apparently indorsed by the editor, without being followed with comment, for if this is the best advice to give to those who never set a plant or grew strawberries, then all my experience and experimenting for the last twelve years have gone for naught, and I am far more ignorant upon the subject than I had supposed (see page 763), and even Mr. Jerolaman has made a great mistake in supposing that my education was about complete. (See further along.) And while, after all my hard striving, my inability to comprehend and profit by the teachings of Nature are to be deplored; how much more lamentable is the fact that at least 99 per cent. of all prominent strawberry growers in the United States, many of them who have

grown strawberries for over a quarter of a century, alive to all the improved methods, and long rated as leading authorities upon the subject, should now be so put in the shade by this new monarch of New Jersey. (See July 24, page 525).

When Mr. Jerolaman, on page 699, wound up kind of short, he gave us to understand that there was some more coming right along in the next issue that would clear up the mystery about his great success by such methods as he described (as I never knew any other person to get paying results from such methods). But after waiting a few weeks, and understanding from an editorial note that Mr. Jerolaman was done for the time being writing for AMERICAN GARDENING, I could not refrain from writing a request to Mr. Jerolaman through the editor. This was given on November 6, page 768.

Concerning that article Mr. Jerolaman wrote me a letter, from which, feeling that he would have no objection, I take the liberty to quote:

"Dear Sir: I have been requested by the editor of AMERICAN GARDENING to answer your letter to them, having sent a copy of said letter to me which I received to-day. They have also requested that I should write one more article on my method of strawberry culture, which I have consented to do, and in that article answer all your wishes; will make it so plain that any one will understand.

"It is true there are no runners to cut with me. All will be made plain to you. It is also true it cost me less for one acre of strawberries ready to pick, than any acre of any other crop; this I will also make plain.

"I now give you a standing invitation to come out here in June next from June 7 to 14, 1898, and if you do not say that I have only stated truth and nothing but the truth (after seeing how little I spend in growing the largest crop of strawberries any one ever saw), I will take good care of you and pay all your expenses from Maine and back to your home. I, like you and many other growers, used to nurse strawberries, but that was done with me ten years ago or more, and I honestly believe that I have learned all that it is possible to know about strawberries, and I also, as I have heard of you before this, believe your education is about completed, and it is only imagination on your part to think otherwise."

Now I would like to ask all the readers of this paper, if from this letter from which the above quotations were taken, and from what Mr. Jerolaman says about keeping his word good, etc., in the second paragraph on page 688, I should not have expected to have seen a reply different from that which was given on page 811. If what he says in that article, following where he mentions my name, is making it so plain that any one will understand his methods of strawberry culture, then I must confess that I know even less about English diction than about strawberry culture. If Mr. Jerolaman cannot keep his word better than that, and offers no excuses or apologies for so doing, how can we place confidence in anything he may tell us? However, he may yet make this all plain to us as well as the other matter; so let us hold on to this forlorn hope a while longer.

While we are waiting for this pamphlet to come forth, I will just say a word to the beginners of strawberry growing: Go slow about setting layer plants in the fall, most especially where the ground

is liable to freeze six inches or more deep during the winter months; for if you do not you will be likely to find rocks ahead. of which I fear Mr. Jerolaman will not tell. I have had much experience in setting plants, both potted and layered, in all the months from April to December, and under all conditions which would be likely to exist in this locality; and have found from the middle of September to the last of October by far the most dangerous time of all to set out plants. I have also experimented largely to find out the most economical way to use manures on the strawberry patch, both barnyard and chemical, and will at some future time give results through the columns of AMERICAN GARDENING or elsewhere.

E. W. WOOSTER, Me.

Violet Diseases.

The Floricultural Society of New Jersey, at its meeting held in Orange, N. J., on Monday evening last, discussed the subject of disease of the Violet. The lecturer of the evening was Dr. Dodge, who in a most interesting and instructive manner detailed his method of making cultures of the common disease known as spot. By means of diagrams he showed the action of the pest on the epidermis of the leaf. His deductions from the results obtained in his cultures were to the effect that the growth of the disease corresponded closely to the descriptions of that of a fungus. It was not a bacterial growth, such as produced trouble in the human anatomy. The fungus was one, which, under different circumstances had different forms of growth. Dr. Dodge at the outset of his brief talk, intimated that the Violet spot was the only disease of this plant to which he had given any study.

Dr. Halsted, of the New Jersey Experiment Station, on being called upon, briefly described other diseases to which the Violet is heir, among them the bacterial disease that strikes in at the crown of the plant and tears down the tissue of the leaf. Another, a leaf spot, different from that described by the lecturer, coming from another kind of spore, its thread-like ramifications running in between the cells of the plant. The spores of this disease are carried by dripping water or the movements of the air. Another, the cercospora, or Violet leaf disease, enters the leaf by the stomata or breathing pores, branching and breaking down the tissues. Black spot, different from the pest of the same name affecting the Rose, only attacks the Violet when the plants are not kept up to "the high-water mark." One of the worst troubles below ground from which the Violet suffers is the root gall, caused by nematodes or eel-worms.

Chairman McRorie then called upon several members to take part in the discussion, which resulted in hosts of contradictory testimony as to the cause, effect, and remedy. It was advanced that a moist atmosphere was conducive to the development and spread of the disease. Its effects were most remarkable. Sometimes plants that up to a certain stage had been free would be seized suddenly, the old leaves being attacked and the younger growths enjoying immunity from the pest's ravages; again young

and old leaves would both suffer. Russian Violets as well as the less hardy Marie Louise and others of that type, were all liable to be more or less affected. It was suggested that not to wet the foliage might prove a preventive to the spread of the disease, to a more or less degree; while, from the experience of one successful grower who fed his soil liberally and mulched heavily, a good soaking with the hose had been the remedy applied to get rid of the trouble. Location, style of house, and other points were all touched upon. Mr. Herrington mentioned a case where Violets were raised most successfully at Highlands, New York State, in houses originally built for Rose growing, under conditions that were supposed to be dead against successful Violet growing. The plants were in steam-heated houses, on elevated benches. The houses were 200x23 feet. The soil in the benches was kept rather dry so as to have the plants dry at the roots. Practically no water was applied to the roots. The plants are only naturally fed, and a good spraying given every other day; and there was not a trace of spot on the place. Curiously enough, plants obtained from this place and grown in another locality, developed the disease. Mr. Manda believed the degeneration seen in the Violet was attributable to forcing and over-propagation. The stock might be restored to prime condition, if a certain portion were put in cold frames and left there when the plants were making their natural growth and then propagated from. The Violet, like the Carnation and Chrysanthemum, was more or less a hardy plant, and to force it, from year to year, like a tropical plant, weakened its constitution and opened up a way for these diseases to get in their work.

The discussion, as summarized by Dr. Kitchen, brought out the following points: That specific organisms are the primary cause of the diseases; that it pays to obtain healthy plants with vitality to ward off these diseases; that high altitudes, where the atmosphere was bright and clear, were favorable to successful Violet growing; that a certain amount of shading is beneficial, obstructing the burning action of the sun.

In answer to a question, Dr. Halsted said that preparatory to filling the houses, fumigating them with sulphur would act as a preventive; spraying diseased foliage with Bordeaux mixture and lime, and dusting with sulphur would check the disease, and although it had never been demonstrated, hydrocyanic acid gas might prove to be destructive to the lower organisms constituting the different diseases.

After all the vagaries of these troublesome pests had been deliberated upon, it was found that nothing of a novel character as to their origin and cure had been elucidated, when the meeting adjourned.

An Irish gardener once applied for a situation to Mrs. Loplitz in Irvington.

"Well, Mike," she says, "every man has his own bed to see to in the garden."

"Well, hold on," says Mike, "I swam when I left the sod but gob's I'd never slape outside."—COMMUNICATED.

The five Henry strawberry plants arrived in the best possible condition. They were very strong, and we expect to see quite a quantity of fruit on each of them next June.—H. & M., Colorado.

There is Not a Home in the Land

But calls for a yearly Calendar.

Every family tries to get one or more; generally more.

There are Calendars and Calendars

Some are good, some bad, most of them indifferent.

There Will Not be a Calendar Issued for 1898

To exceed in artistic elegance, finish, beauty of designs and effective coloring, the one we to-day offer as a premium to every subscription to AMERICAN GARDENING received before December 31, 1897.

EVERY SUBSCRIBER IS ENTITLED TO ONE

AND CAN EASILY EARN TWENTY.

OUR magnificent **Rose and Girl 1898** six sheet **Art Calendar**, two months to a sheet, each sheet $8\frac{1}{2} \times 11\frac{1}{2}$ inches, is superbly lithographed in eleven colors, and printed on hammered paper; the whole tastefully tied with silk bow—undoubtedly a work of art fit for the most elegant home, and as handsome a Calendar as was ever published. Each one of the six designs presents a distinct type of female loveliness and a fresh study in roses, the coloring on each sheet being rendered in harmony with the design. There is not a line of advertising on the Calendars to detract from their value. They will not be sold by us for less than \$1.00 each.

Who is Entitled to a Calendar?

EVERY SUBSCRIBER renewing before **December 31, 1897**, enclosing Five Cents additional to pay packing and postage.

EVERY NEW SUBSCRIPTION—To induce people to test the value of AMERICAN GARDENING we will send the Calendar absolutely free to every name received direct not previously on our mailing list. Remit \$1.00 for A. G. 12 months.

EVERY ONE sending us a club of Four 3-month trial subscriptions at twenty-five cents each, will get a Calendar, free as a premium, by return mail.

EVERY NEW name sent in by an agent.

NOTE.—We have ordered manufactured for us a large stock of these superb Calendars in the endeavor to have sufficient supply for all demands, but will not guarantee to fill orders after supply is exhausted. Therefore, order yours now.

Special to Agents

A copy of our Art Calendar to show people will clinch the argument and obtain the subscription. Bona fide Agents will be mailed one copy, securely wrapped, on receipt of only Twenty-five cents (one-fourth its value.) Armed with this superb Calendar we misjudge human nature greatly if any ordinary mortal cannot secure a big list of new subscriptions every day. Every new subscriber you send us gets a Calendar by return mail.

We Pay Agents

Every new subscription at \$1.00 entitles the agent to **Five of the Wonderful Henry Strawberry Plants**, to be delivered next Spring. Thus 100 new subscriptions would secure agents 500 plants; a possession worthy of your consideration. Every new subscriber taken by agent will receive one of our Art Calendars free by return mail.

Agents who do not want the Henry Strawberry Plants can retain as their payment **20 cents in cash** on each subscription they take, or will be credited **twenty-five cents** on any book, magazine or publication they wish to obtain through us.

Address all
correspondence

AMERICAN GARDENING, P. O. Box 1697, New York.

REMIT BY P. O. or EXPRESS MONEY ORDER—IT IS SAFEST.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Poughkeepsie, N. Y.

The Dutchess County Horticultural Society held a meeting on Wednesday, December 1, when officers were nominated for the ensuing year as follows: President, Mr. George Saltford; vice-president, Mr. Herman Asher, Mr. Harold Cottam; secretary, Mr. Harold Cottam, Mr. John C. Galvin, Mr. Arthur A. Loughren; assistant secretary, Mr. William G. Saltford; treasurer, Mr. James Sloan. The election is on January 5.

It was decided to hold a banquet on Wednesday, January 5, 1898, also that the New York Gardeners' Society and the New York Florists' Club be invited to attend. A committee to arrange the dinner is: Messrs. Wm. Saltford, William Schickel, Charles Mitchell, James Blair, and Frederick Gilman.

Six new members were elected: Mr. R. J. Barry, Saugerties, N. Y.; James Bell, Hyde Park, N. Y.; C. F. Bahret, Poughkeepsie; Arthur Saltford, Poughkeepsie; Captain Haubenesthe, Poughkeepsie; Charles Weatherhead, New York.

Mr. William Turner, of Tarrytown, read a paper on "Peaches and Nectarines Grown Under Glass," which is being published elsewhere in our columns.

Syracuse, N. Y.

I learn that Nathan Smith & Son's grand yellow seedling No. 189 scored before the Boston committee 92 points commercial and 94 exhibition, and they have named it Thornden after Major Alex. Davis' place in Syracuse. Major Davis was the first president of the Central New York Horticultural Society, and his place on University Heights is one of the finest in the state. The greenhouses contain many beautiful and rare varieties of stove plants and many rare orchids, etc. Mr. Campbell, the manager of the place, and secretary of Central New York Horticultural Society, is one of our foremost growers as well as a genial and whole-souled gentleman who has a host of friends. There will certainly be some big money prizes offered for this variety at our show next fall and also for Mr. Grove Rawson's Yellow Fellow.—C. A. PHILLIPS.

New Jersey Floricultural Society.

This association, at its regular meeting held on Monday night, elected the following officers: Malcolm McRorie, president; John Hayes, vice-president; Peter Duff, secretary; George Smith, treasurer. This is a re-election of last year's officers. It was decided to hold the annual dinner at the time of installation, which will be the regular meeting in January.

New York.

The winter session of the American Institute Farmers' Club opens on Tuesday, December 14, and as heretofore meetings will be held the second Tuesday in each month at 2 P. M., at 111 West Thirty-eighth street. The Horticultural section

will meet at 7:30 P. M., on the same day as the Farmers' Club. This new section promises to be one of the leading features in a horti-floricultural sense. It is expected that an instructive course of lectures will be delivered during the winter. The meeting next Tuesday evening will be the first regular meeting of the section. The future course of the section will be discussed and a program beginning in January and ending in June arranged for. A course of lectures on Botany is suggested.

All meetings are open and membership to either section free.

Cycads and Palms.

To the Editor of American Gardening.

With reference to a communication under the above heading, from Gustave X. Amrhyn, superintendent to James W. Quintard, which appeared in your issue of the 27th ult., I would like to ask Mr. Amrhyn, seeing that he has such profound botanical knowledge, if a Zamia is a Cycas? At the show in question (Port Chester, N. Y.), the schedule called distinctly for "best Cycas" and not for a plant of any kind whatever of the order Cycadaceae as Mr. Amrhyn would have it appear in his statement of the case.—R. W.

Orchids at Philadelphia Show.

I notice in your issue of November 20, that you doubt whether "such a unique and valuable collection of orchids" has ever been exhibited in any American floral show as that of Mr. Roebing's at the recent New York show. I therefore enclose you the list of orchids exhibited by me at the Philadelphia flower show. It is a small part of the most noted collection in America, and is as well known in Europe as it is here; it is the collection of the late Mr. Erastus Corning, and I am surprised that your paper has not even given it a passing notice.—ALPHONSE PERICAT, gardener to Mrs. Geo. B. Wilson, Philadelphia.

[We much regret that any important feature of the recent exhibition at Philadelphia should have been omitted from our notes. The list of orchids shown in the collection of our correspondent is a most comprehensive one, and contains the names of many varieties. Yet for all that we do not see any reason to modify our expression of opinion upon the New York display; both exhibitors deserve full credit for what they have done.—ED.]

Newport, R. I.

A tank 68x22 has just been completed on the Mrs. H. M. Brooks estate, principally for Nelumbiums. Mr. James Hill, the gardener, is most successful with this class of plants.

At the Breakers greenhouses, at the present time Begonias make a fine show, B. socotrana is extra well done; one of the most valuable characteristics of this species is the lasting quality of the blooms, and having long stems, they are also excellent for cutting. B. semperflorens gigantea rosea is also grown in quantity and is useful both as a pot plant and for cutting from.

One bench is occupied with an improved form of B. incarnata; has smaller foliage and the flowers are of a lighter

W. and D's. "Sure Crop"

MUSHROOM SPAWN

8 LBS. FOR \$1.00.

Hyacinth, Tulips, Narcissus, Lily of the Valley, Spireas.

SPECIAL PRICES TO CLEAR.

WEEBER AND DON,

Seed Merchants and Growers,
114 Chambers Street, NEW YORK.

Mention American Gardening when you write

MacDONALD & McMANUS, Wholesale Florists and
dealers in Cut Flowers

50 West 36th St., NEW YORK CITY.

Solicit Shipments of Cut Flowers on Commission. Best market prices guaranteed.

Mention American Gardening when you write.

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist
Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

A \$1.00 Raisin Seeder for 50c.



POSTPAID.

We are tired of selling dealers and waiting 90 days for our money, so we will sell housekeepers at Jobbers prices.

Send 50 cents, and we will mail you postpaid one of our best

BAY STATE RAISIN SEEDERS

Guaranteed to seed 1 lb. of raisins in 5 minutes. Simple to operate and easy to clean.

EASTON MFG. CO. D. 10, 64 Federal Street,
BOSTON.

Mention American Gardening when you write.

KNOWN WORTH

You judge a man by his reputation. His reputation is formed by what he does. So in selecting a musical instrument—study its reputation. That represents what it does. Look into the merits of the

"Bay State" { Guitars
Mandoline
Banjos
Zithers
Flutes

Their superiority invites the closest scrutiny. Their reputation is their warranty, for it tells what it does. In choosing a "Bay State" you purchase known worth. Twenty-seven awards. Only winners of American gold medals.

Send for Catalogue and Prices

JOHN C. HAYNES & CO.

453-463 Washington St.
BOSTON.

Mention American Gardening when you write.

Oak-tanned leather Harness

Send your address with 2-cent stamp for Illustrated Catalogue, all kinds of Single and Double Custom-Made Harness, sold direct to the consumer at wholesale prices. WE CAN SAVE YOU MONEY.
KING HARNESS CO., No. 3 Church St., Oregon, N. Y.

Mention American Gardening when you write.

shade than the last named. Mr. Laurie, the gardener, and Mr. Pow, his foreman, take especial interest in this class of plants.

For summer bedding, large quantities of Begonia Erfordii and the improved forms of B. Vernon are being propagated. But of this class I have seen nothing to equal those raised by Mr. Arthur Griffen of this city, and for which he was awarded a silver medal by the Newport Horticultural Society on November 10, the improvement noted being in the extra size of the blooms and the purity of the colors; these are of the semperflorens type, consequently are dwarf.

Gardenias are now being propagated in quantity for next summer's work.

ALEXANDER MACLELLAN.



FIG. 235.—THE LATE WILLIAM GREY.
Born 1828—Died 1897.
(See ante page 829.)

Chrysanthemum Society of America.

Secretary's Official Report.

Since last report, seedlings have been examined and reported as follows:

CHICAGO, November 20, 1897.

Mrs. C. H. Peirce, exhibited by F. Dorner & Sons Co.; La Fayette, Ind.; Japanese, deep yellow, scored, commercial scale, 90 points.

Stellata, exhibited by Nathan Smith & Son, Adrian, Mich.; Japanese reflexed, yellow, scored, commercial scale, 83 points.

Rustique, by same exhibitors; Japanese incurved, light bronze, scored, commercial scale, 85 points.

Morza, by same exhibitors; Japanese incurved, white, scored, commercial scale, 85 points.

Madison, exhibited by E. G. Hill & Co., Richmond, Ind.; Japanese incurved, bronze, scored, commercial scale, 79 points.

November 27.

Wm. H. Chadwick, exhibited by Grove P. Rawson, Elmira, N. Y.; Japanese incurved, bluish white, scored, commercial scale, 93 points.

Mr. W. B. Brown, exhibited by Theo. Bock, Hamilton, O.; incurved, white, scored, commercial scale, 78 points.

BOSTON, November 20.

Arline, exhibited by Nathan Smith & Son, Adrian, Mich.; incurved, white, scored, commercial scale, 87 points; exhibition scale, 90 points.

Thornden, by same exhibitors; Japanese, deep chrome-yellow, scored, commercial scale, 92 points; exhibition scale, 94 points.

Mrs. C. H. Peirce, exhibited by F. Dorner & Sons Co.; Japanese, bright yellow, scored, commercial scale, 91 points.

November 27.

Wm. H. Chadwick, exhibited by G. P. Rawson; Japanese incurved, white, scored, commercial scale, 92 points; exhibition scale, 98 points.

PHILADELPHIA, November 20.

Spottswood, exhibited by Robert G. Carey, Chestnut Hill, Pa.; incurved, light yellow, scored, commercial scale, 91 points; exhibition scale, 88 points.

Minnewaska, exhibited by John N. May, Summit, N. J.; Japanese pink, scored, commercial scale, 81 points; exhibition scale, 77 points.

Dolores, by same exhibitor; scored, commercial scale, 84 points; exhibition scale, 83 points.

Mrs. C. H. Peirce, exhibited by Fred. Dorner & Sons Co., La Fayette, Ind.; incurved, yellow, scored, commercial scale, 90 points; exhibition scale, 87 points.

November 27.

W. H. Chadwick, exhibited by Grove P. Rawson, Elmira, N. Y.; Japanese incurved, bluish white, scored, commercial scale, 89 points; exhibition scale, 89 points.

Sport from Mrs. Jerome Jones, exhibited by Ferdinand Heck, Reading Pa.; Japanese incurved, light yellow, scored, commercial scale, 90 points; exhibition scale, 90 points.

Our Old Friend, exhibited by W. K. Harris, Philadelphia, Pa.; Japanese incurved, canary-yellow, scored, commercial scale, 89 points; exhibition scale, 88 points.

NEW YORK, November 27.

Wm. H. Chadwick, exhibited by Grove P. Rawson, Elmira, N. Y.; Japanese incurved, bluish white, scored, commercial scale, 86 points.

CINCINNATI, November 20.

Arline, exhibited by Nathan Smith & Son, Adrian, Mich.; incurved, white, scored, commercial scale, 84 points.

Rustique, by same exhibitors; Japanese incurved, bronzy yellow, scored, commercial scale, 73 points.

Mrs. C. H. Peirce, exhibited by F. Dorner & Sons Co.; Japanese reflexed, yellow, scored, commercial scale, 87 points.

No. 169, exhibited by E. G. Hill & Co., Richmond, Ind.; Japanese incurved, white, scored, commercial scale, 81 points.

Mrs. Wm. B. Brown, exhibited by Theo. Bock, Hamilton, O.; Japanese incurved, white, scored, commercial scale, 84 points.

NOTE.—Stellata was exhibited as Kilo, and the change was made to avoid a clash with Clio, exhibited this season.

Thornden was shown as Golden Gem; the change made was necessary, as the latter name has been applied already to a chrysanthemum. In last report No. 111 (Bessie Hollis), shown at Chicago, should have read 83 instead of 87 points.

ELMER D. SMITH, Sec'y.

How's This!

We offer One Hundred Dollars reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.

WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

SITUATION wanted, as gardener's assistant, has had 5 years' experience. Address: Assistant, care American Gardening.

YOUNG man, 8 years' experience in all branches of gardening, desires assistant's situation on large private place; first-class references from present and former employers; wages moderate. M. W. Merkel, 5 E. 3rd St., New York.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

STRAWBERRIES, Potato Seeds. Wm. A. Olds, Okemos, Mich.

GLASS at wholesale, rock bottom prices. Also paint for greenhouse. The Reed Glass & Paint Co., 454 W. Broadway, New York.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

STRAWBERRY plants, 25c. each, of Clyde, Glen Mary, Wm. Belt and Blenmark, sent prepaid for one dollar. Catalogue free. Enos W. Dunham, Stevensville, Mich.

DIRECT from the grower, duty free. Hulsebosch Brothers Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 713 Wharton St., Philadelphia. Three shipping points, can save you freight.

WANTED.

[Rates, etc., same as in "For Sale" column.]

ASSISTANT gardener.—A young, sober, practical man can get permanent position at once. State wages with board. R. B. Hayes, Gardener and Florist, Shelby, Ohio.

A Poultry Encyclopedia.

THE POULTRY KEEPER, edited by P. H. Jacobs, one of the best informed men of the age on poultry subjects, and who is aptly termed a walking poultry dictionary, has published four large pamphlets, covering every subject connected with the feathered tribe, which it entitles ILLUSTRATORS Nos. 1, 2, 3, and 4. The series constitute a veritable "POULTRY ENCYCLOPEDIA," covering the ground so completely that by the aid of the "Four Illustrators," and the regular monthly visits of the "POULTRY KEEPER," the reader can glean all the information necessary to become a successful poultry raiser.

You could not get any similar series in the whole world, even for \$50 each, for they do not exist. Were they given in regular book form with elaborate binding and colored cuts you would think them easily worth \$5 each, but what is wanted is not elegant printing, so much as valuable information that you can make use of. They have cost much in labor and cash, but we offer the set for almost nothing. A partial list of the subjects treated is as follows:

ILLUSTRATOR No. 1.—Poultry Houses, Incubators, Brooders, Coops, etc. 25 cents.

ILLUSTRATOR No. 2.—Artificial Incubation, Raising Chicks, Testing Eggs, etc. 25 cents.

ILLUSTRATOR No. 3.—Poultry Diseases, Lice, Gapes, Moulting, Egg Eating, etc. 25 cents.

ILLUSTRATOR No. 4.—Judging Fowls, Description of Breeds, Mating, etc. 25 cents.

\$1.50 Buys All This: \$1.50

For \$1.50 we will send American Gardening, (weekly) one year, The Poultry Keeper (monthly) one year, and the Four Illustrators, as above.

ORDER NOW.

AMERICAN GARDENING, P. O. Box New York.

The Bee Keeper.

Who Should Keep Bees?

The fruit growers first of all should give this matter their attention. Did you ever think of the amount of nectar that is wasted every year in the strawberry field, the raspberry plantation, or apple, peach, and pear orchard? Indeed, it is worse than wasted, as the bees perform a very important office while they gather the nectar, viz., fertilizing and cross-fertilizing the flowers, and the result is a larger crop of better fruit.

I am quite sure that it will pay a fruit grower to keep a score or so of colonies just for the work the bees do on the blossoms. Of course, where a locality is well stocked, this would not count, but I often see large territories devoted to fruit with very few bees indeed. There is not the least doubt but in such localities there would be a noticeable difference of productiveness if a few apiaries were established.

Mr. A. I. Root mentions a case where by injunction the beekeepers were compelled to remove all their bees from a certain fruit locality as the fruit growers claimed the bees ruined their fruit. When the bees were gone the trees would not set, though they would blossom ever so abundantly. Sometime afterward the fruit growers learned their lesson and invited the beekeeper to bring back the bees and soon the abundance of fruit showed plainly that the bee is of infinite value to the fruit grower. Sir John Lubbock, in his "Fruits, Leaves, and Flowers" and "Ants, Bees, and Wasps," gives some very apt illustrations of this law.

The Suburbanite.

The suburban resident who does professional work in the city, generally of a sedentary nature, will find amateur bee culture a most delightful exercise and quite a fascinating study. The careful observation and study of the habits of these orderly, intelligent and self-sacrificing little insects not only give one pleasure, but appeal to the better side of one's nature and so encourage virtues that few other avocations do.

Invalids.

To invalids, it is not a cure-all, as are the electric appliances and patent medicines, but it works wonders. Just now I recall a case of a neighbor of mine whose health was all broken up and whose eyesight was so bad that the doctor thought there was no hope.

He purchased a small home and started beekeeping on a small scale and in five years was a well man with a pair of good eyes and a purse so well filled that he purchased a large farm. I could cite scores of instances just as remarkable.

The work entailed is as exhilarating as a summer of exercise in the Alps and not half as dangerous! The exercise is invaluable while the profits are valuable.

Who Can't Keep Bees

There are very few people who cannot keep bees and those few are the shiftless, lazy, indolent, and careless who fail in other vocations. The general requisites are promptitude, persistence, careful planning, and energetic execution.

L. W. LIGHTY, Pa.

The man who

Will not Advertise

Will not

Meet with

Success

The man who

Advertises judiciously

Will

Succeed

Don't

Fritter away

Your money

In worthless mediums

Advertise

Only in

Successful papers

Advertise in

American Gardening

Publishers AMERICAN GARDENING:

Gentlemen—It may interest you to learn that my advertisement in your paper brought me customers from Mexico, New Zealand, Canada, New Brunswick and Manitoba, as well as from our own country.

F. L. WRIGHT, Mich.

November 19, 1897.

Nitrate of Soda

is the best and cheapest form in which you can buy nitrogen (or ammonia). It is also the most soluble and available form in which nitrogen can be applied as food for plants. You can mix it yourself with other materials in just the correct proportion for the particular crop to which you wish to apply it. You cannot raise good crops without nitrogen in some form. Why not use the best—Nitrate?

Free A 40-page book, "Food for Plants." Tells all about mixing and using fertilizers. Please ask for it.

S. M. HARRIS, MORETON FARM (P. O.) N. Y.

Mention American Gardening when you write.

We are not enthusiastic
about the



Dietz
Lamp

simply earnest.

We do not claim much, only that it is the
Best Bicycle Lamp on Earth.

ITS SUPERIORITY is shown in three principal points:
IT GIVES THE MOST LIGHT
STAYS ALIGHT IN SPIKE OF WIND AND JAR
IS HANDSOME IN APPEARANCE

Send for circular or, better still, send \$2.50 which is the reasonable price at which we sell one, delivered anywhere.

R. E. DIETZ COMPANY
60 Laight Street
Established in 1840 in the Manufacture of Lamps and Lanterns. NEW YORK CITY

Mention American Gardening when you write

We PAY FREIGHT is only one of Stark 12 Challenge Points—the full 12 plainly show WHY Stark Bro's grow and sell the most trees. Then, we will not cut quality no matter how LOW our price. If interested in trees or fruits drop postal for **STARK FRUIT BOOK** new edition; finest, most complete yet issued sent free. **STARK BROS., Louisiana, Mo. Stark, Mo. Rockport, Ill. Dansville, N.Y.**

Mention American Gardening when you write

A BARGAIN

We have made arrangements to furnish **THE OHIO FARMER** of Cleveland, O., and **AMERICAN GARDENING**, both papers, one year, making a total of 104 great papers, for only \$1.60.

ONLY \$1.60

THE OHIO FARMER

is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the LEADER of the Agricultural Press of America. A 20-page, 80-column paper EVERY WEEK in the year; employs THE VERY BEST WRITERS that money can produce; a strong, fearless defender of the agricultural interest of this country, and CLEAN in both reading and advertising columns. IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE.

Present subscribers can order this combination at once and have their present term of subscription to AMERICAN GARDENING extended for one year. New subscribers to THE OHIO FARMER will receive the rest of this year free. Address all orders,

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

Fruit.

Trees and Vines become hardier, and their products better colored and better flavored when liberally treated with fertilizers containing at least 10% actual

Potash.

FREE An illustrated book which tells what Potash is, and how it should be used, is sent free to all applicants. Send your address.

GERMAN KALI WORKS,
93 Nassau St., New York.

Mention American Gardening when you write.



Mention American Gardening when you write.

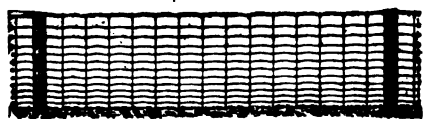
1840 OLD COLONY NURSERIES. 1897

Hardy Shrubs, Trees, Vines, Evergreens and Perennials.

A large and fine stock of well-rooted plants, grown in a sandy loam. Good plants, best sizes for planting; very cheap. Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.

Mention American Gardening when you write.



One Cow Did It,

the great Chicago fad. It requires but one to let down a few rails, or find the weak points in your "cheap" fence, and the whole herd follow. Why blame the cow? It were wiser to buy a steel proof fence.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

\$4 Worth of New Music

for the ladies and

"Scribner's Lumber and Log Book"

for the men are the premiums we are offering with one year's subscription to

"The Market Basket," at \$1.

Send the dollar, we will send you a long list of music from which you can select 10 pieces, which sells regularly for 40 cts. each.

"The Lumber and Log Book"

is a board bound book of 190 pages. No farmer, mechanic, saw mill man or business man should be without it. It is invaluable. It treats over a hundred different subjects. It's just what you ought to have. It's a perfect schoolmaster. We send the \$4 worth of music, the Lumber and Log Book and the Market Basket for one year, all for \$1. Send the \$1 now, and we will send the Market Basket free until January 1.

THE MARKET BASKET PUB. CO.,

120 So. 24 St., Philadelphia, Pa.

A. J. MERRILL, Manager.

Mention American Gardening when you write.

The Window Garden.

New Geraniums in New Color Combinations.

Inquiries received indicate considerable interest in certain of these described in the issue of September 25. We are sorry not to be able to refer inquirers to any firm selling all the varieties mentioned. The only firm known to us which offered them all has gone out of existence since the former note was written. The firm of Storrs & Harrison Co. and also the Cottage Gardens (C. W. Ward), are large handlers of Geraniums for the retail trade, and would be likely to have most of the sorts desired.

Freedom from Insects.

During no season do we remember to have experienced greater freedom from insect pests up to Thanksgiving than during the present. This is attributable to the fact that all plants known to be pleasing to aphids, etc., were sprayed with tobacco tea before the foe appeared. With this precaution, there has been no need of continual fighting, as none of the foe have been in evidence. Not even Roses and Carnations have been infested.

Rubber Bulb Sprinklers.

The word "bulb" as used above, refers to the little tool, and not to any plant. There are several makes of these handy sprinklers, and they are an exceeding comfort to any plant raiser who is not strong enough to handle the pots often. Nor is the saving of strength more than a beginning of merit. The spray is very fine, and more effectual than much of the ordinary sprinkling over a sink. The plants receive the attention oftener, when it is easy to give it, and show, almost at once, decided improvement. It is by no means economi-

cal, however, to buy the cheaper sprinkler, the one without the angle neck, as such will not throw the spray from below, where one desires most to be able to get it.

Cobaea in the Window.

Cobaea macrostemma, mentioned lately as budding in the window, from seed summer-sown there, is now in full bloom. It is not showy enough, however, to count for much more than its pretty vinery. The blossom colors are almost exactly those of the admired *Cypripediums*, dull brown, combined with pale green. The red stamens, which were supposed to give a fair amount of color to the general effect, are, in these house-grown plants, so pale and dull as to be scarcely noticeable; certainly, not charming.

Easy Work Among the Plants.

The aid to be had from a good, fine sprayer has been noted. The use of moss as a bed for the house bulbs, as advised in a recent issue of AMERICAN GARDENING, is a relief in the direction of weight not appreciated fully until tried; while the new fibre potting stuff, Jadoo, has enough to recommend it on this score, if it had no other merit to its account. We find that the delicate Little Gem Callas and stunted Primulas potted in it are already looking up; and we certainly hope that it will prove all that is so freely claimed, and, in some quarters, so freely accorded.

Early Narcissus.

Double Roman Narcissus, placed in water October 21, are now, 38 days later, just ready to bloom. Others of the same lot, potted in earth, are about two weeks behind the first-named. All have been grown without fire heat except such as is furnished by a chimney passing through the plant room. Nor have they had but the briefest sunshine at any time.

The Epiphyllums.

It is at this time of the year that the plant lover is almost ready to affirm that there is, after all, nothing more satisfactory than these smaller Cacti, so easily amenable to ordinary culture. How gorgeous they are, and how delightfully their brilliant blooms droop over the brackets!

Cypripedium Insigne.

Doubtless most people would be shocked if an expert should say to them that Orchids were no more difficult to grow than Geraniums! For has not the Geranium been for unnumbered years a synonym for ease of culture? Still, some Orchid growers are making just this statement, and if there is one Orchid, which, more than another, will bear it out, doubtless it is *Cypripedium Insigne*. Free flowering and vigorous, it may be a long time in bloom with no great amount of effort or worry. It is not particular as to soil. It may be potted exactly like an ordinary greenhouse plant, and will do about as well as if in peat and moss as *la* Orchid. It needs plenty of water, and shade from the most fervid sunshine. Re-potting is best done just after the flowering period. The neutral colorings of most of the *Cypripediums* do not appeal to the great mass of the people. They see in them nothing to rave over. It is, therefore, best always to see the plant in bloom before buying, if unfamiliar with them. M. V. N.

You Want Books!

A little energy will earn you a Library.

Do You Know

That AMERICAN GARDENING issues the most comprehensive Catalogue of Books on all subjects connected with the Home in the Country?

Also That We Allow

A credit of Forty Cents in Books for every New subscription sent us at \$1.00.

Just Think of It

Only Five New Subscriptions to earn any Two Dollar Book in our List.

If you have not received one of our Book Catalogues send stamp for a copy at once. Now is the accepted time. . .

AMERICAN GARDENING, NEW YORK.

P. O. Box 1697.

The Poultry Yard.

The White Wonder.

At the present time, perhaps there is no other breed exciting so much interest in many quarters, as the one named in our title-head. Certainly this is true if we limit our consideration to the breeds fairly well-known, but not yet admitted to the Standard of Perfection.

The lovers of this breed have been up in arms for some time past, because they feel that they have been hardly treated by the preliminary committee which lately met to consider Standard revision. This revision, which now takes place every five years, offers the desired opportunity for the newer breeds to apply for admission, that they may be placed on a fair footing with other breeds.

At the meeting referred to, it is said that the petition for the desired admission of the White Wonder was the longest ever presented for a new breed. Yet the committee, nominally on account of the resemblance between the White Wonder and the White Wyandotte, refused to recommend the admission of the former.

The two strongly opposing ideas which rule the decisions on new breeds are these: *a*, it is the part of good sense to admit no new breed which so strongly resembles any breed already standard as to be likely to injure the older breed; *b*, it is the part of wise foresight to admit any new candidate that can furnish indisputable evidence that it now breeds true and is therefore entitled both to be called thoroughbred, and to be described by the leading authority on thorough-breeds.

As the matter now stands, the literature which we are obliged to consult for our ideas concerning the breed, comes from its own club or from its individual admirers, and not from a source both authoritative and unbiased. It is this which must hamper the breed; it is this which must be kept in mind in reading what is said of it, wherever we find it described.

It is now, I think, getting on toward eight years since public notice was given of the formation of this new breed. In April, 1891, a leading poultry monthly spoke of it as the very newest thing in the line of new breeds. It was a Vermont output, supposed to be a combination of the best qualities of the White Wyandotte and the Light Brahma. The weight is between the two and were it not for the feathered legs, there is little doubt that the breed would have a tendency to push the White Wyandotte "off the earth." And it is quite evident that the Wyandotte breeders are afraid of so similar a rival with such a taking name.

As a matter of course, everything is claimed for the breed. Few breeds, indeed, have missed this experience. One lover of this breed claims 432 eggs in January, from twenty June-hatched pullets. Also, that in three years, he never lost a fowl, or—more wonderful—a chick, of this breed, while raising them by many scores during some seasons.

They are claimed to be expressly valuable as a farm and market fowl. Seven to nine-pound hens must certainly be very nice to sell when the moult makes this necessary. For market, or the table

a big carcass takes the attention at once. But it must not be forgotten that a big hen takes more space than a little one in yard and house.

One enthusiast speaks of the White Wonder as an economical bird, not too greedy, not too broody, and liberal as to egg production. Indeed, the claim all around is that the bird is an extra layer. Those who want more good qualities in a single breed, must of course, look further. They may fare worse the while.

M. V. NORRIS.

LIFE PRODUCERS
THE SUCCESSFUL INCUBATOR.
LIFE PRESERVERS
THE SUCCESSFUL BROODERS.
All about them in our 128 page Catalogue. Sent for 5c, worth a 5c. **DES MOINES INCUBATOR CO., Box 55 DES MOINES, IA.**
Mention American Gardening when you write.

HATCH Chickens BY STEAM—
With the **MODEL EXCELSIOR Incubator**
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made. **Geo. H. STAHL, 114 to 122 S. 6th St. Quincy, Ill.**
Mention American Gardening when you write.

A GOLD DOLLAR
is about the actual worth of our new book on Incubation and Poultry. Contains a full and complete description of the Reliable Incubator & the Brooder of same name, together with cuts and instructions for building poultry houses and much of interest and great value to the poultryman. Sent on receipt of 10c. **RELIABLE INCUBATOR & BROODER CO.—QUINCY—ILL.**
Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

HOT HOUSE FRUITS A SPECIALTY.
Mention American Gardening when you write

CYPRESS
IS MUCH MORE DURABLE THAN PINE.
CYPRESS SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.
GREENHOUSE
AND OTHER BUILDING MATERIAL.
Send for our Illustrated Book "CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.
THE A. T. STEARNS Lumber Co.,
Neposens, Boston, Mass.

Mention American Gardening when you write

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 5c. stamp.

The Henry Strawberry!

To Meet The extraordinary demand for this unequalled Strawberry we are preparing 100,000 Henry plants for delivery through next Spring to

Premium Earners

Henry Strawberry Plants can be obtained solely through a subscription to **AMERICAN GARDENING**; as the publishers will not sell plants under any consideration;

Neither will Mr. Jerolaman who has signed a contract with us to that effect.

Who is Entitled to Plants

NEW SUBS. AND RENEWALS

Five plants of the Henry will be mailed, postpaid, as a premium to every Renewal or New Subscriber sending us \$1.00 for a year's subscription. When remitting be sure to state if you want this premium.

TO AGENTS AND WORKERS

For every \$1.00 received from agents and present subscribers for New Subscriptions, we mail, postpaid, Ten Henry plants, Five to the New Subscriber and Five to the Agent.

Special to Club Raisers!

CLUBS OF TEN

To every agent sending us in a club of Ten New Names and \$10.00 we will forward in payment therefor One Hundred (100) Henry Strawberry Plants, by express, as well as send Five plants, postpaid, to each person in the club.

All orders are now held for Spring Delivery.....

The series of articles on "Big Berries for All," written by Mr. H. Jerolaman for **AMERICAN GARDENING**, with additions, will soon be in pamphlet form; and agents and friends will be supplied with copies on receipt of stamp. It will be the most unique pamphlet on the Strawberry ever issued.

Address Your Letters to

AMERICAN GARDENING, NEW YORK.
P. O. Box 1697.

MEEHAN'S MONTHLY WHOLESALE MARKET REPORT.

Of Interest not only to the amateur gardener, the botanist and the scientist, but also to every lover of horticulture and nature. The name alone is sufficient guarantee of the high standard of this horticultural magazine, its editor, Thomas Meehan, formerly having edited the famous "Flowers and Ferns of the U. S.," and the well and favorably known "Gardener's Monthly." The concise, instructive, and practical articles made it popular from the first, and few of its class have been so universally well received and so widely quoted.

The Leading Feature the colored plate of some native flower or fern, executed in Prang's finest style, and the chapter relating thereto, is by itself well worth the subscription price. Two dollars a year. Sample free.

THOS. MEEHAN & SONS

Publishers...

BOX L, GERMANTOWN, PHILA.

Meehan's Monthly and American Gardening, One Year for \$2.75.

Mention American Gardening when you write.

\$5 Hand Bone, Shell, and Corn Mills for Poultrymen.
Daisy Bone Cutter. Power Mills. Circular and testimonials free.
WILSON BROS., Easton, Pa.
Mention American Gardening when you write.

DO YOU NEED WATCHING?



Or, to put it another way,

Do You Need a Watch?

We sell them, sell them at such an exceedingly low price that you can't afford to go watchless.

Got 'em all sizes and styles.

But we'll just mention two:

An Eagle or Waltham Watch, best movement made, hunting case, accurate time-keeper, handsomely engraved, Dueser Case, heavily gold-plated—last for all time. Ladies' or gentleman's size.

We'll send it to your address with privilege of examination. If it's not entirely as represented, send it back—costs you nothing. If you like it, pay the agent express charges and \$5.50. That's fair. Or this—

A Hunting Case Watch—beautifully engraved case, first-class movement, any size, heavily plated (14k)—looks just like a \$40.00 gold watch—keeps as good time as any of them. Sent to your express agent with privilege of examination—same conditions as all our watches sent out—and if you like it, pay him \$5.45 and express charges.

If you take our word for it, and send money with order, a handsome chain goes with either, and express charges are paid by us, for the prices named above.

Royal Manufacturing Co.

334 Dearborn St., CHICAGO.

Mention American Gardening when you write.

BETTER THAN KLONDIKE GOLD, \$3.60 for \$1.00

New York Weekly Tribune, greatest 20 page newspaper in the United States, \$1.00
Young People's Weekly, religious, colors, 12 pages, size Youth's Companion, .60
Farm Journal, best 24 page farm paper, most popular in the United States, .50
Poultry Keeper, twenty pages, printed in colors. It leads, others follow, .50
P.K. Illustrator No. 1, 100 illustrations, poultry houses, incubators, brooders, etc., .25
P.K. Illustrator No. 2, 75 illustrations, artificial incubation, care of chicks, etc., .25
P.K. Illustrator No. 3, Poultry Diseases, Gapes, Roup, Cholera, Moulting, etc., .25
P.K. Illustrator No. 4, Judging Fowls, description of breeds, Mating, Points, etc., .25

For only \$1 we send these 4 papers 1 year and 4 books, postpaid, grand total, \$3.60

Sample P. I.K. with other offers FREE.

POULTRY KEEPER CO. Box 39, Parkesburg, Pa.

Mention American Gardening when you write.

New York.

The cut flower business is again moving slowly. The supply is light but there is little demand. Outside prices are only maintained upon a very limited quantity of high-grade stock. Bride, Bridesmaid, and Meteor Roses vary from 75c. to \$1.50 for cuttings and seconds. No. 1, \$3 to \$5 per 100, extras and specials, \$8 to \$12. American Beauty fails to realize more than \$4 per dozen for top grade.

Violets are moving slowly at 75c. to \$1.50 per 100, although shipments are light.

Carnations realize \$1.50 to \$2.25 per 100 for regular stock. Fancy and novelties make from \$3 to \$5 per 100. Flora Hill and Victor are classed with these. Valley maintains its price at \$3 and \$4 per 100.

Business is good in fruits and vegetables and the market clears well. Fancy and hothouse stock is in lightest demand of all at the present.

Hothouse Gros Colmar grapes, (English) make \$1 to \$1.25 per pound. American grown are hard to move at 60c.

Tomatoes are meeting stiffer competition from the South and move slowly at 20c. to 25c. per pound.

Cucumbers make 50c. to 75c. per dozen.

Lettuce is falling off in quality, prices vary from 40c. to 60c. per dozen for fancy. Lower grades \$1 to \$2 per barrel.

Radish \$2 to \$3 per 100 bunches.

Mushrooms are increasing in quantity and 40c. to 60c. are outside quotations.

Apples—Wine Sap, Va., poor to fair, \$2 @2.50; good to fancy, \$3@4; Johnson's Winter, Va., poor to fair, \$2@2.50; good to fancy, \$3@4; King, State, poor to fair, \$2@2.50; good to fancy, \$3@4; Ben Davis, western, poor to fair, \$2@2.25; good to fancy, \$2.50@3.25; Greening, State, poor to fair, \$1.75@2.25; good to fancy, \$2.50@3.50; Baldwin, state, poor to fair, \$1.75@2.25; good to fancy, \$2.50@3.25; N. Spy, State, poor to fair, \$1.75@2.25; good to fancy, \$2.50@4; mixed lots, poor to fair, \$1.50@2; good to fancy, \$2.25@3.

Pears—Beurré Bosc, per barrel, \$2@3; Lawrence, per barrel, \$1.50@2.25; Beurré Clairgeau, per barrel, \$2@2.50; Beurré d'Anjou, per barrel, \$1.75@2.50; Vicar, per barrel, \$1.25@1.75.

Grapes—Catawba, fancy, per small basket, 9@11c.; ordinary, per small basket, 7@8c.; Concord, fancy, per small basket, 8@9c.; ordinary, per small basket, 7@7½c.; white kinds, in trays, per 100 pounds, \$1@1.25; Catawba and Concord, in trays, per 100 pounds, \$1@1.25; very inferior, per 100 pounds, 50@75c.

Peanuts are in liberal supply and quiet, with most sales at \$1.25 per bushel of 50 pounds; some ordinary go at \$1. Bull nuts dull at 50@75c.

Brussels sprouts—Per quart, 5@8c. Cauliflowers—Choice to fancy, per barrel, \$2.50@4; fair to prime, per barrel, \$1.50@2; culls, per barrel, \$1.

Celery—Choice to fancy, large, per dozen, 25c.; fair to prime, per dozen, 15@20c.; small, per dozen, 8@12c.

Cabbages—Jersey and Long Island, per 100, \$3@3.50; State, per 100, \$2.50@3.

Cucumbers—Florida, per crate, \$1@1.75.

Egg plants—Florida, per barrel, \$5@6; Florida, per box, \$2.50@3.

Kale—Norfolk, per barrel, 50c.

Lettuce—New Orleans, per barrel, \$3@3.50; Florida, per basket, \$1.50@3.

Onions—Orange Co., red, prime, per bag, \$1.75@2.25; Orange Co., yellow, per bag, \$1.50@2; Orange Co., white, per bag, \$1.50@3.50; Orange Co., inferior, per bag, \$1@1.25; State and western yellow, flat hoops, \$1.25@1.75.

State and western, yellow, bulk, per barrel, \$1.75@2; eastern, white, per barrel, \$2.50@5; eastern, red, per barrel, \$2.25@2.75; eastern, yellow, per barrel, \$2@2.25.

Peppers—Florida, per carrier, \$1.50@2.50.

Radishes—Norfolk, per 100 bunches, \$1.

String beans—Charleston, choice, per bushel basket, \$1.75@2.25; Charleston, common, per bushel basket, \$1@1.25; Florida, round, wax, per basket, \$1.50@2.25; Florida, round, wax, per crate, \$1.50@2; Florida, flat wax, per basket, \$1@1.75; Florida, flat wax, per crate, \$1@1.50; Florida, green, per basket, \$1@2; Florida, green, per crate, \$1@1.75.

Spinach—Norfolk, per barrel, \$1.75@2; Baltimore, per barrel, \$1.25@1.50.

Tomatoes—Florida, per carrier, \$2@4.

Turnips, Russia, Can., car lots, per barrel, 50@75c.

Imports of potatoes from Great Britain, 200 sacks; from Bremen, 400 bags; from Hamburg, 1,400; market steady at the following prices: Long Island, in bulk, per barrel, \$2.50@2.75; Jersey, choice, round, in bulk, per barrel, \$2.12@2.25; fair to good, in bulk, per barrel, \$1.75@2; State and western, choice, in bulk, per 180 pounds, \$2.25@2.37; western, fair to good, per 180 pounds, \$2@2.12; fair to prime, per sack, \$2@2.15; sweet potatoes, Vineland, fancy, per barrel, \$3@3.50; Vineland, fair, per barrel, \$2.25@2.75; South Jersey, per d.h. barrel, \$2.25@2.75; Monmouth Co., per barrel, \$1.75@2.25; yellow sweets, Va., per barrel, \$1.50@2.

Boston.

Apples continue in healthy demand. While some very fancy Greenings would bring \$3.25, that quality is so rare that it might be better to name prices at \$2.75 @3; Baldwins are in better call at \$3@3.25 at wholesale, with retail prices 25@30c. higher. The market is almost bare of what are known as fancy table apples; Ben Davis pleases the eye, but is not satisfactory to the taste; fresh receipts of Ben Davis that means not from cold storage, are about over; Talman Sweeties are wanted. This must not be construed, however, to be in large quantities.

Cranberries unchanged \$5@7 a barrel; \$1.75@2.25 in crates; fancy stock is either bringing a little bit more money. Egg plants \$3 a dozen.

Sweet potatoes are higher, Virginias \$1.75@2; Jerseys \$2.75@3; very light supply of the latter.

Spinach steady 25@40c. a bushel; hothouse cucumbers rather quiet \$4@5 a hundred; some Florida stock offered finds little or no sale.

Cauliflower home-grown, nearly done, takes a range according to quality of \$2 @3 a dozen. Brussels sprouts 10@15c. a quart. Cabbage firm 4@5c. a head.

Leeks 40@50c. a dozen bunches. Parsley 75c. a bushel. Artichokes \$1.50. Carrots 75c. @ \$1. Parsnips 50@60c. Beets 50@60c. No Kora here, there is a continued demand for it, price showing but little change.

Florida string beans \$2.50 a basket; some very fancy \$3.

Lettuce in fair demand, generally so small heads that we are forced to give a range in price 25@50c. a dozen, with a quick demand for anything good enough to bring the latter price.

Mushrooms hold their own 40@60c. a pound.

Hothouse tomatoes have a fair sale 20 @30c. a pound; a few California tomatoes packed in the four basket carrier bring \$2, but only in a slow way.

Gros Colmar grapes wanted at about \$1 a pound; Hamburgs 50@75c.

Potatoes are very steady; white stock taking the preference at all times; (Green Mountains, Hebrons, Rurals or White Stars from 75@85c.; red stock being at a discount, is sold largely to the peddler trade at prices varying from 60@75c. This city at present time is receiving quite a good many potatoes from Michigan. We are pleased to say the stock gives satisfaction.

Fancy Hubbard squash, selected stock, hard-shelled, is bringing 2½c. per pound. Bay State being largely brought forward in barrels is a little bit firmer, \$1.25@1.50. Turbans unchanged at \$1.50.

Celery is being eaten everywhere; "Boston Market" takes the preference; this variety is pleasing our New England people; it brings \$1.50@1.75 a dozen. Other varieties not so popular, find a trade at about 50c. a dozen.

Onions can easily be quoted at \$2.25 a barrel.

White French turnips in little better demand at \$1@1.25; yellow, \$1 a barrel; Flat Purple, 75c.@\$1; while the Globe Purple, seeming to be of a finer grade, bringing \$1.25 a barrel.

Radishes make the tables look well, and move at 25@40c. a dozen. Mint 75c. a dozen. Oyster plant 75c. a dozen.

Duchess and Clairgeau pears are out of the market; Beurré Bosc easier \$3@4 a bushel; very little demand anyway; Anjou slips along, \$2@3 a bushel.

Philadelphia.

Sales have fallen off considerably in this market during the past week; stock has been scarcer and most prices have ruled firm. Receipts of apples have been lighter, and desirable fruit is held firm. Florida oranges are in moderate supply with a fair demand.

Potatoes are higher and receipts have been light, the demand has been for choice stock.

Prices as follows:

Apples—King, choice and fancy, per barrel, \$3.25@3.50; Winesap, choice and fancy, per barrel, \$3@3.25; do., fair to good, \$2.25@2.75; Ben Davis, choice and fancy, per barrel, \$2.75@3; do. fair to good, per barrel, \$1.80@2.25; Rome Beauty, choice and fancy, per barrel, \$3@3.25; do. fair to good, \$2@2.75; Greenings, choice, per barrel, \$2.75@3; do. fair to good, \$2@2.50; Baldwin and Spy, choice, per barrel, \$2.75@3; do. fair to good, \$2@2.50; mixed varieties, choice, per barrel, \$2.50@2.75; do. fair to good, \$2@2.25.

Florida oranges, per box \$3@3.50; grape fruit, per box, \$5@6.50.

Cranberries—Cape Cod, fancy, large, dark, per barrel, \$9@10; do. choice, sound, per barrel, \$7@8; do. medium, per barrel, \$5.50@7; do. per crate, \$1.75@2.50; Jersey, per crate, \$1.50@2.

Celery—Choice, large, per dozen, 40@50c.; fair to good, per dozen, 25@30c.

Brussels sprouts, per quart, 5@10c. Cauliflowers, choice, per barrel, \$2@3; fair to good, per barrel, \$1.25@1.75.

Receipts of cabbage have fallen off, and the market is firmer on choice stock, averaging 6-8 pounds per head, \$2.50@3.50 per 100; averaging 4-6 pounds per head, \$2@2.50; lighter heads, \$1.50@1.75 per 100.

Cucumbers—Florida, per crate, \$1.25@1.75.

Onions—White, per barrel, \$3@4; yellow, per barrel, \$1.50@2; per bushel 70 @75c. for choice, and 60@65c. for fair stock.

Potatoes—Choice, per bushel in car lots, 72@75c.; fair to good, 65@70c.

Jersey sweets, per basket, 50@55c.; do. seconds, 25@30c.; Southern sweets, per basket, 30@40c.

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.		General—Con.	
	A. B.		A. B.
American Agriculturist.....	\$1 00 \$1 85	Donahoe's Magazine.....	\$2 00 \$3 00
Breeders' Gazette.....	2 00 2 40	Eclectic Magazine.....	5 00 5 25
Country Gentleman.....	2 00 2 75	Electrical Review.....	3 00 3 20
Farmers' Advocate (Canada)....	1 00 1 75	Engineering Magazine.....	3 00 4 00
Farmers' Magazine.....	1 00 1 75	Forest and Stream (new only)...	4 00 4 25
Farmers' Review.....	1 00 1 90	Forum, The.....	3 00 3 00
Farm, Field and Fireside.....	1 00 1 50	Frank Harrison's Magazine.....	50 1 40
Farm and Fireside.....	50 1 40	Frank Leslie's Popular Monthly...	3 00 3 50
Farm and Home.....	50 1 40	Godey's Magazine.....	1 00 1 90
Farm Journal.....	50 1 25	Golden Days.....	3 00 3 35
Farm News.....	50 1 20	Good Housekeeping.....	2 00 2 70
Gleanings in Bee Culture.....	1 00 1 85	Harper's Bazaar.....	4 00 4 25
Home and Farm.....	50 1 45	Harper's Magazine.....	4 00 4 25
Indiana Farmer.....	1 00 1 85	Harper's Weekly.....	4 00 4 25
Mass. Ploughman, new.....	2 00 2 60	Harper's Round Table.....	2 00 2 50
Renewals.....	2 00 2 90	Home Queen.....	50 1 35
Michigan Farmer.....	1 00 1 60	Illustrated American.....	4 00 4 30
National Stockman and Farmer...	1 00 1 85	Independent.....	3 00 3 60
Nebraska Farmer.....	1 25 1 85	Jennett Miller's Illus. Mag.....	1 00 1 75
New England Farmer.....	2 00 2 50	Judge.....	5 00 5 20
Ohio Farmer.....	1 00 1 60	Judge's Library.....	1 00 1 85
Orange Judd Farmer.....	1 00 1 85	Ladies' Home Journal, The.....	1 00 1 90
Pacific Rural Press.....	2 40 3 00	Ladies' Home Companion.....	50 1 45
Practical Dairyman.....	50 1 35	Ladies' World.....	35 1 30
Practical Farmer.....	1 00 1 85	Leslie's Illustrated.....	4 00 4 40
Prairie Farmer.....	1 00 1 85	Life.....	5 00 5 40
Rural New Yorker.....	1 00 1 80	Lippincott's.....	3 00 3 25
Southern Cultivator.....	1 00 1 85	Macmillan's.....	3 00 3 60
Southern Farm.....	1 00 1 85	McClure's Magazine.....	1 00 1 90
Southern Florist and Gardener...	1 00 1 75	Munsey's Magazine.....	1 00 1 90
Strawberry Culturist.....	50 1 35	Nation, The.....	3 00 3 80
Strawberry Specialist, new.....	50 1 00	New England Magazine.....	3 00 3 50
Renewals.....	50 1 25	New York Ledger.....	2 00 2 50
Texas Farmer.....	1 00 1 75	" Tribune (Weekly).....	1 00 1 90
Texas Farm and Ranch.....	1 00 1 85	" World (Tri-Weekly).....	1 00 1 75
Horticultural, etc.		North American Review, The.....	5 00 5 50
Canadian Horticulturist.....	1 00 1 90	Notes and Queries.....	5 00 5 50
Garden and Forest.....	4 00 4 25	Observer, new only.....	3 00 3 25
Gardening (Chicago).....	2 00 2 50	Renewal.....	3 00 4 00
Meehan's Monthly.....	2 00 2 85	Outing.....	3 00 3 35
Vicks.....	50 1 35	Park and Cemetery.....	1 00 1 85
Poultry.		Peterson's Magazine.....	1 00 1 85
American Poultry Advocate.....	25 1 15	Philadelphia Press (Weekly)....	1 00 1 85
Fancier's Review.....	50 1 35	Phrenological Journal.....	1 50 2 25
Farm Poultry.....	1 00 1 50	Popular Science Monthly.....	5 00 5 65
Ohio Poultry Journal.....	65 1 50	Popular Science News.....	1 60 2 50
Poultry Herald.....	50 1 40	Puck.....	5 00 5 10
Poultry Keeper.....	50 1 35	Puck's Library.....	1 20 1 95
Poultry Monthly.....	1 00 1 25	Paritan.....	1 00 1 90
Reliable Poultry Journal.....	50 1 40	Review of Reviews.....	2 50 3 25
General.		Scientific American.....	3 00 3 60
Advance (Cong'l) new.....	2 00 2 60	" Supplement.....	5 00 5 25
Renewals.....	2 00 2 90	" with.....	7 00 7 25
American Field, new.....	4 00 4 25	" Builders' edition.....	2 50 3 10
Renewals.....	4 00 4 50	" Inc. B'l'ds' edit.....	5 50 5 75
American Kitchen Magazine.....	1 00 1 75	" All 8 editions.....	9 00 9 25
American Machinist.....	3 00 3 20	Scribner's.....	3 00 3 60
Aquarium.....	1 00 1 75	St. Nicholas.....	3 00 3 60
Arena.....	3 00 3 60	Sunday School Times.....	1 50 2 10
Art Amateur.....	4 00 4 35	Texas Siftings.....	4 00 4 25
Art Interchange (with plates)....	4 00 4 35	The Etude, new only.....	1 50 2 15
Atlantic Monthly.....	4 00 4 80	Renewals.....	1 50 2 35
Ave Maria.....	2 00 2 70	The Outlook.....	3 00 3 65
Babyhood.....	1 00 1 90	Toledo Blade.....	1 00 1 85
Baptist Missionary Magazine.....	1 00 1 90	Turf, Field and Farm, new.....	4 00 4 25
Carpentry and Building.....	1 00 1 85	Renewal.....	4 00 4 60
Century.....	4 00 4 60	Womankind.....	50 1 20
Chicago Herald (Weekly).....	1 50 2 35	Young Ladies' Journal.....	4 00 4 60
Chicago Inter-Ocean.....	1 00 1 80	Youth's Companion, new only.....	1 75 2 35
Chicago Weekly Times.....	50 1 40	Renewals.....	1 75 2 75
Christian Herald.....	1 50 2 15	Foreign.	
Christian Register.....	3 00 3 85	Farm and Home.....	2 25 3 25
Churchman.....	3 50 4 10	Field.....	10 50 11 00
Colman's Rural World.....	1 00 1 85	Garden.....	4 50 5 25
Cosmopolitan.....	1 00 1 90	Garden Work.....	2 50 3 25
Delineator (Butterick's).....	1 00 1 90	Gardener's Chronicle.....	4 50 5 25
Demorest's Monthly Magazine.....	2 00 2 60	Gardener's Magazine.....	4 50 5 25
Detroit Free Press (Weekly)....	1 00 1 90	Gardening, Illustrated.....	2 25 3 00
Domestic Monthly.....	1 50 2 15	Gardening World.....	2 50 3 25

Address all
Orders to

AMERICAN GARDENING, P. O. Box 1697, New York.



We Call on every reader to secure us at least one new subscription now to **AMERICAN GARDENING** for 1898, so they will not miss any of the following offers and inducements:

Prospectus for 1898

All the Good Things Continued

Which have made **AMERICAN GARDENING** the standard publication of the Horticultural world, and given it more bona fide subscribers than all other Horticultural papers combined.

Cash Prizes Offered Every Week

For Photographs of Well-grown Specimens (flower, fruit, vegetable or plant), with description as to how the result depicted was attained—from start to finish.

Cash Prizes Offered Every Week

For Best Answers to Question Box. This department is absolutely free, and there is no necessity for any reader to remain in ignorance on any subject which may puzzle him.

Colored Art Supplement Every Month

Free to every subscriber.—Beauties all. Every one values a good picture. Ours will be more than good.

Cash Prize for Best Essay

On a Subject of General Interest. One Prize every month.—This feature we expect to prove a drawing card.

Literary Supplement Monthly

Special Feature for Advanced Readers, containing articles of more permanent and scientific interest.

New Writers on New Subjects

Which we know our readers will appreciate.

And with all this

{ Array of
Attractions

We Give Premiums

To those who obtain us a new subscription as well as to the new subscriber. See advertising columns.

Don't fritter away your time and money on worthless reading. Subscribe to a practical publication, admitted by all the standard authority of the age and country. Take our advice: Talk American Gardening to your friends, get their subscriptions, and they will bless you evermore.

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All of our pots from 7 in. and upwards have our Patent Excelsior Bottom, which is a great advantage, as it secures perfect drainage. Full Line of Ball Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST. PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

GLASS FOR GREENHOUSES, GRAP- GLASS
ERIES, CONSERVATORIES,
HOTHOUSES AND HOTBEDS.
VANHORNE, GRIFFEN & CO.,
Importers of French Glass. 40 to 48 VESTRY STREET, NEW YORK.
Cor. GREENWICH ST.

Mention American Gardening when you write.

Success With House Plants Assured

By growing **JADOO FIBRE** Or watering **JADOO LIQUID**
them in.... them with...

PLANT YOUR SPRING BULBS IN JADOO FIBRE

Send for PRICES and list of PRIZE WINNERS

THE AMERICAN JADOO CO., 813 Fairmount Avenue, Philadelphia, Pa.

Mention American Gardening when you write.

LORD & BURNHAM CO.,

Horticultural Architects and Builders Steam and Hot Water Heating Engineers.

(Established 1856.)

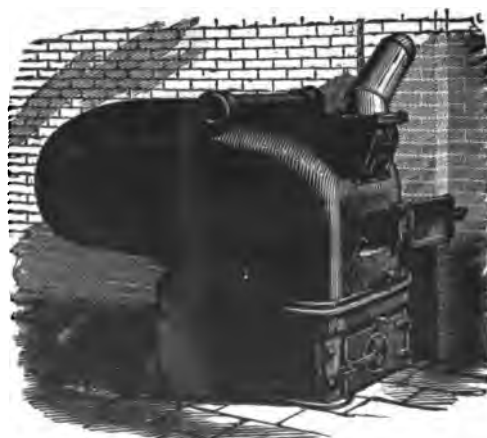
Plans and estimates furnished on application for Greenhouses, Conservatories, and all kinds of Horticultural Buildings, erected complete with our patent iron construction; or for material only, ready for erection.



B. M. Watson, Jr.
Bussey Inst. South St.
Jamaica Plains
Large latest improved structures. Plans and construction embrace highest awards at the World's Fair. . . .
Send four cents for latest catalogue. . . .
NEW YORK OFFICE: 160 FIFTH AVE., COR. 21ST ST.
GENERAL OFFICE AND WORKS: IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

GREENHOUSE HEATING AND VENTILATING, Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

**FIVE PATTERNS OF BOILERS
NINETEEN SIZES**

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

Iron Frame Benches with the "Perfect Drainage Bench Tile" or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.

1846.

1898.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

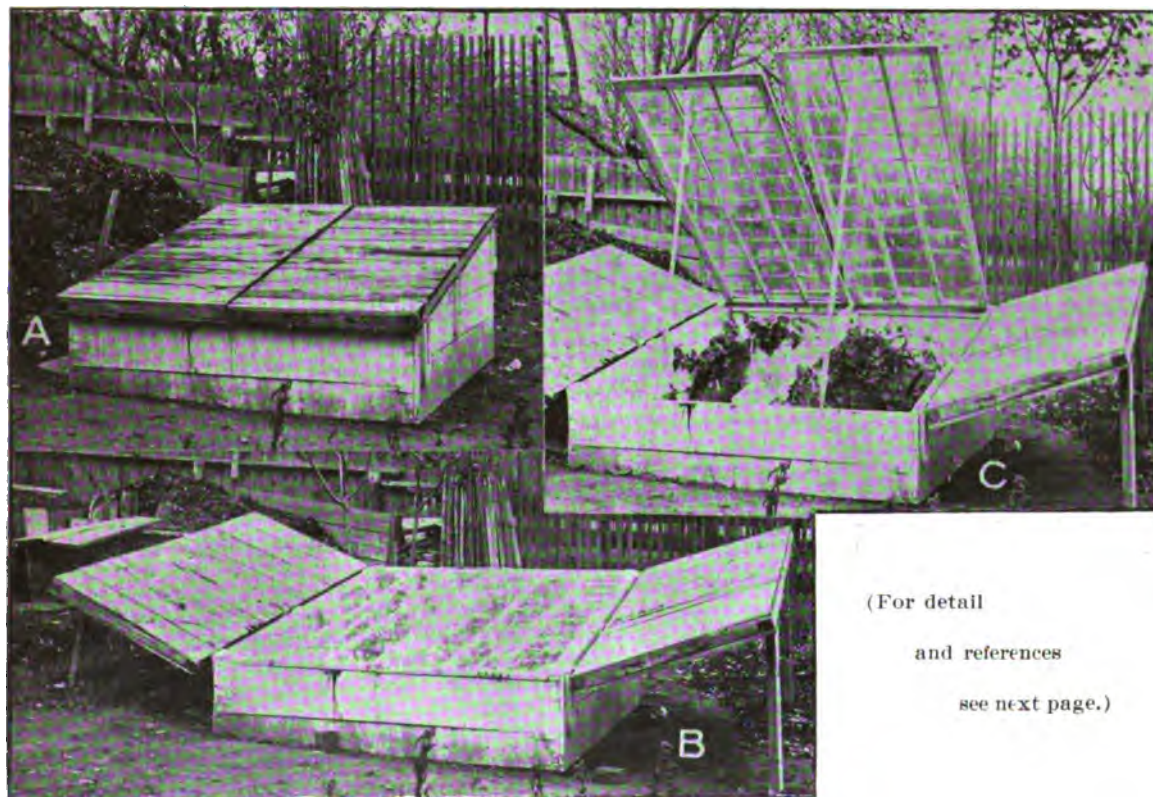
VOL. XVIII. No. 156.
COMBINED SERIES VOL. LI.

NEW YORK, DECEMBER 18, 1897.

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Beekeeper, The.....	867	Jerolaman's Berries and	866	Novelties.....	860	Rows, Direction of the..	863	Window Garden, The..	870
Begonia, Crested.....	861	Claims.....	866	Plant Window, Unique.	863	Shading for Green-		Illustrations.	
Canker Worm, Girdling		Lettuce Dies Off.....	863	Poultry Yard, The.....	860	houses.....	853	Begonia Crested.....	862
For the.....	861	Lettuce Forcing, Home.	860	Private Gardeners.....	872	Strawberry Culture,		Hotbed, Success With	
Celery Stored.....	863	Lettuce Forcing, Profit-		Question Box.....	865	Practical.....	859	A.....	857, 859
Chrysanthemum, The		able.....	859	Raspberries in the South	861	Strawberry Growing		Plant Window, Handy	
Queen.....	863	Market Reports, New		Readers' Club.....	863	Challenge, The.....	892	.....	863, 864
Fruit Garden.....	858	York, Boston, Phila-		Readers' Notes.....	871	Substitution.....	858	Petunia Snowball.....	862
Hot-bed, Success With		delphia.....	874	Roses Under Glass.....	872	Tennyson and Flowers.	857	Salpiglossis, New.....	871
A.....	858	Morning Glory Cult. A.	867	Roses, Weak Stem in...	863	Vegetables Under Glass	860		



(For detail
and references
see next page.)

FIG. 236.—"A LITTLE SUCCESS WITH A HOTBED."

A Little Success With a Hotbed.

The subject of this little sketch is a frame made of 2-inch chestnut plank 6x7 feet by 18 inches high in front, by 36 inches high at back, supporting two 3x7-foot sashes, hinged at the back to the frame, over which 4 inches thick, straw and board covers, hinged at the sides, are used in severe weather to keep out frost.

The frame was made in the spring of 1896 (in March) and set in its present sunny location with southern exposure, and moderate slope to the ground southward.

After leveling the frame, a pit was dug within 3 feet deep, extending back to within one foot of back wall of frame, this allowance of soil undisturbed, having been left for the purpose of planting in the natural soil three Marechal Niel Roses, one in each corner grafted on Manetti stock, and one in the center on its own roots, all of which were planted soon after the bed was made up.

As soon as the pit was dug and ready, it was filled up from the bottom for 2½ feet with good hot stable manure, and well trodden down, then covered with 6 inches of good loam, sand and well-rotted cow manure in about equal parts. After a week of rest, radishes and lettuce seed were planted in the bed, they came up with surprising quickness, and in four weeks the crops of each were ready for the table, and to be sure, were relished greatly for having come so early out of their season.

A succession of crops was kept in order with good success by simply placing the seed where plants were removed, until the regular garden product was ready to take its place.

During the summer the frame was used as a storehouse for such house plants as liked heat, and for striking cuttings in wet sand, which all proved themselves worthy in their modest tropical luxuriance after getting their root hold.

The Roses after cutting back to one bud, at planting, each made vigorous growths of 10 feet or more during the summer, and when the bed was made up (as previously) in the following November, the vines were cut back to within 5 feet of the stock or trunk, all laterals removed, and tied up for the winter. No blooms the first season.

Having prepared myself for a supply of lettuce plants for this second bed, in the early fall, by planting seed in the garden, I transplanted about five dozen four to six leaf plants in the bed rather closely, and by December some were well headed, and as fine as any Boston Market you could find in the stores.

I kept up a constant succession of this lettuce until March, through the winter of '96 and '97, by previously having set a large spadeful of the plants from the garden, (earth attached) under some old window sashes that laid over a crude frame of boards sunk in the ground, which served as a model cold frame in its way for storing this needed supply of lettuce.

Over 100 heads of fine lettuce were taken from the frame during the four winter months and a small crop of radishes was matured in January between the lettuce plants.

Whenever a head or more of lettuce was removed from the bed, the vacancies were filled in from the plants in the cold frame which were always easily removed. The coldest night of the winter, according to memory, was about 10 degrees below zero, but with the protection I had in covers and about a 10-inch wall of leaves boarded up around the frame, which was done in the early winter and not previously spoken of, the temperature could not have gone lower than freezing during the coldest nights, as evidenced by a small Otahelte Orange tree, a Palm, Palmetto, etc., having withstood the temperature without apparent harm; but some Pineapples rooted in pots were chilled beyond recovery. The Orange tree turned somewhat yellow and lost its winter blossoms, but is now in the house in fruit and in bloom.

In the spring of '97 the bed was left untouched as far as renewal of heat was concerned, and in April about the first of the month, the Rose vines began to show their first signs of new growth, which continued throughout the month with great rapidity, each lateral supporting a fine bud at its end.

By the first of May the first bloom was ready to be cut, which it certainly was, and with an immense amount of satisfaction; it was of such exquisite fragrance—well, you all know what the Marechal Niel is.

On the 8th of May the accompanying photograph fig. 287, made by myself, shows, actual count, 26 full blooms and 44 buds ready to burst, with numerous smaller ones, as well as some remaining lettuce plants, etc.

During the month of May, which ended the Rose season, 84 (actual count) blooms were cut from the three vines, and three blooms from a Marechal Niel in a pot, one of which was very large, beautifully colored and scented.

The vines have all made an enormous growth during the past summer and were well cut back at the renewal of heat this November, three or four 6 to 8-foot canes having been left for blooms next spring. The bed now contains young lettuce plants under good headway and some radishes well up from the seed.

The extra views (fig. 286) are of the bed and frame as at present; A shows it as it is closed, B with the straw and board covers laid back, and C with the sashes raised and held by their pole supports which are hinged to the sashes with brass screw eyes, and which afford a great convenience in keeping the sash raised, when needed.

The actual cost of this frame and sashes with covers, etc., was \$16, and it costs from \$2 to \$2.50 to renew the heat, including the labor of putting it in.

Any further attention must be given by the owner for the luxuries it contains under proper management, which is nothing but simplicity to say the least, and one will get considerable horticulture, floriculture, gardening, etc., or anything you choose to call it, in a modest but practical way, by being the fortunate owner of such a box.

J. W. WORCESTER, M. D.,
Middletown, N. Y.

Our publishers will supply any book wanted. Send your orders.

The Fruit Garden.

At this time of the year an observing man will compare the gathered notes of the year carried from exhibitions, visits, and visitors, personal thoughts and failures. These, the failures, are good lessons for many persons, and are seldom forgotten, and in the real workman produce a determination to learn the cause of them, if possible, so as to avoid them in future. If you keep such notes you will be surprised at the number of ideas noted, that your memory has failed to retain.

Plan for Next Year.

Plan exactly what you intend doing next year. If you set it down, more thoughts will likely be given to it, and some improvement made before the time comes to commence the work.

As regards any stock you expect to buy in the spring, get it down on paper, noting from whom you intend to order. Visit, and personally select it if you can; if you cannot, but know exactly what you want, always add to your order. "No substitution."

Substitution.

In this we have a real bugbear. The nurserymen, no doubt, act in good faith when they send some other variety of about the same season, and, as they generally put it, "just as good." Possibly it is, in their locality, in the line of being hardy; but the trouble is they do not know what you have, only what you ask for, and in substituting will more than likely send you something you already have, or that had not proved satisfactory with you in some particular. Most of us know there are certain varieties of fruits that are not adapted to some section. While a few will perhaps fruit first-rate in your locality, these can be planted in quantity. The majority are only to be experimented with, expecting to obtain something better. Therefore, it is not at times agreeable to pay for more of what is not wanted. But it may be your own fault in not reading carefully the condition of sale, or if you did, forgetting to add "no substitution." J. HOLLOWAY, L. I.

Beet Sugar Making at Home.

In reply to an inquiry addressed to him by the Agricultural Epitomist, Dr. H. W. Wiley, of the Department of Agriculture, writes:

"The production of a crude beet sugar in a small way is an extremely simple process. Any farmer who is equipped with a cider mill for rasping the beets, a cider press for expressing the juice, and an evaporator suitable for making sorghum molasses, can produce a crude beet sugar. As a rule, this sugar will not be very palatable, because it is not refined and contains the salts and bitter principles which make raw beet sugar and beet molasses, as a rule, unfit for table use. Farmers should not be deceived by the expectation of being able to make their sugar in a successful way commercially. The successful and profitable manufacture of sugar can only be accomplished in expensive factories, equipped with all the appliances necessary to make a pure refined sugar."

Profitable Lettuce Forcing.

To the Editor of American Gardening.

In answer to W. R. Meserole, who inquires on page 827 as to what is profitable lettuce growing, I will state for his information that the work done by me in the New York Experiment Station, Geneva, under the direction of the late Dr. Peter Collier, director, was the practical forcing of choice winter vegetables under glass, for the purpose of finding if the business would pay. It was a most interesting work to all those connected with the station, and the public watched closely. Correct accounts were kept of all produce.

The greenhouses are in three divided compartments, one of 60 feet and two of 44 feet in length, and in width 20 feet. There are four raised benches, each three feet wide and heated by hot water. The lettuce house was 44 feet long and heated to 50 degrees in coldest weather; the English cucumber house was 44 feet

tion of my third crop was planted the first week in January. Successional plantings from my stock potted plants were continued until the last week in March. There was good demand for lettuce all through the month of April.

I sowed my lettuce seeds thinly in flats every two weeks, several varieties each time, potting, as soon as fit to handle, into two-inch pots and plunging them to the rim in the stock bench where they remained until required for planting.

My first and second crops of lettuce were from the sowings made on September 6, and were kept back by a system of transplanting in flats, until those planted in the benches were sufficiently advanced, and then potted in 2-inch pots and plunged in stock bench.

From September 6 to April 24 I raised six crops of curled lettuce on the same benches and in the same soil, and the last crop was equal to the first in size and quality. After each crop half a pound of bone meal and two handfuls of

those from pots will be stocky and of better quality and of more even growth. I have proved satisfactorily that I was 15 days earlier with each crop of lettuce by pot cultivation; if transplanted in the ordinary way the plants are one week or more before getting established again.

There are good growers of lettuce in Geneva, N. Y., who make a business of it in winter, who, when the station commenced to sell lettuce to prove the experiment, were obliged to ship to Rochester.

Mr. W. E. Meserole acknowledges his limited experience and his difficulty in raising two crops in six months, and when he says 80 to 90 degrees is none too much for lettuce, he has much to learn before he becomes a successful or profitable grower.

In my former article, however, I did not say I had raised six crops in six months; but I said it can easily be done throughout the winter.

WILLIAM THOMPSON.

[The raising of lettuce and mushrooms on the above system forms the subject of Bulletin 88 of the Geneva (N. Y.) Station.]



FIG. 237.—SUCCESS WITH A HOTBED. (See page 858.)

long and heated to 70 degrees in coldest weather; while the tomato house, 60 feet long, was heated to 60 degrees in coldest weather.

At both ends of lettuce house each side of the doors, the benches were kept for growing successional crops of radishes all winter, thus shortening my lettuce benches by 12 feet, and one bench out of the four was kept for potted plants which left my full capacity of bench room for the production of lettuce, each crop, 39 dozen.

Mr. Meserole quotes from my original article that "the first sowing was made September 5, and 70 dozen heads were sold by the end of December." That is correct. My first shipment of lettuce was on November 1, and the space was immediately replanted with potted plants from my stock bench; these were more than half grown and received not the slightest check in planting.

The remainder of the 70 dozen sold by the end of December was taken from my second crop of lettuce, and a large por-

wood ashes to each square yard, were sprinkled on the soil and the surface loosened up with a trowel. The potted plants were taken from the stock bench and the pots plunged in the soil at equal distances apart, the rim of each pot being half an inch below the surface. The lettuce thus treated will receive no check whatever and will quickly put out roots into the surrounding soil, and rapidly advance to perfection. Lettuce grown in this way is large, stocky, and even in growth. The temperature in lettuce house never exceeded 65 degrees by day, and in cold spells at night it often lowered to 45 degrees.

The results of this house, 44x20, are given here: 224 dozen of lettuce, 198 pounds of mushrooms grown under lettuce benches 29 feet long by 5 feet wide; 14,000 radishes grown on 36 feet of benches, 3 feet wide. Lettuce planted in pots in one bench from the same lot of seeds and others transplanted in another bench in the ordinary way, will both arrive at maturity at the same time, but

Practical Strawberry Culture.

To the Editor of American Gardening.

Although I have an experience of thirty-five years in strawberry culture still I am satisfied since reading Mr. Jerolaman's recent letters that I have much to learn. No doubt plants from runners layered in July in fertile soil, transplanted in October would yield a full crop of fruit the following spring, but if Mr. Jerolaman can take an average size Henry strawberry plant sent out in October as a premium, set it out in open ground on his place and obtain from it as much fruit as would be yielded by a strawberry plant having a full season's growth, our understanding of a full crop, then of a truth his process producing this result is of far more value than any claim in Klondike.

While waiting for the unfolding of this secret I will, with your permission, give to your readers a brief statement of my method, by the following of which satisfactory results at least will be attained:

My ground is a light loam, southerly exposure, underlaid by a bed of gravel, thus naturally underdrained. My strawberry crop forms one of a rotation of three, covering two years.

In early spring I spread on the plot a coat of well-rotted stable manure at least an inch thick. As soon as the ground can be worked this is plowed or spaded in. As soon as seasonable an early crop—potatoes, corn, peas, etc.—is planted to be harvested in July. The ground is then again plowed or spaded up in preparation for the strawberry plants which are taken from the earliest runners of perfect flowered varieties which have not been allowed to fruit. In favorable seasons the planting can be finished by August 1, thus giving the plants at least three months for growth.

As but one crop is expected the plants may be set quite closely. For hand culture one foot apart in rows, first, second, and third rows 18 inches apart, next row two feet away for convenience in gathering fruit. For horse culture, rows

must be at such distance apart as will permit its passage between them.

About two weeks after setting or as soon as the plants are well established, apply around—not on—each plant a dessert-spoonful of bone meal. The culture thence through the season is to keep the ground mellow and free from weeds removing all runners as soon as formed.

When winter has set in, usually early in December, fill the spaces between the rows with well-rotted stable manure to a depth of at least two inches, also covering the plants to about half that depth.

About April 1 the new growth will commence forcing its way through the covering which may be raked from the crowns of the plants, but left closely around them to act as a mulch.

As soon as the crop is gathered the plants are plowed or spaded under in preparation for celery, potatoes, turnips, or any other late crop. This finishes the rotation, giving as stated, three satisfactory crops in two years.

MYRON H. KELSEY, Jersey City, N. J.

Vegetables Under Glass.

To have forced vegetables during the winter is quite a luxury. A well-managed vegetable house should have crops coming on all the time; it is then an easy matter to keep up a supply.

Asparagus.

In forcing this choice vegetable it is essential to have very strong roots; they should not be less than four years old, five or six would be better. The space under the benches of a cool forcing house is a good place to grow them. Place three or four inches of good soil under the benches; the clumps are then placed as close together as possible, and some good soil is filled between them. The crowns are covered with three or four inches of soil, of which about half is leaf mould; it holds the moisture better than common soil. The heat should be kept rather low for a few days; after that the temperature may rise from 50 to 55 degrees. For a succession, new roots should be planted every three or four weeks.

Roots should be dug up now, care being taken not to break the clumps, and retaining all the soil possible around the clumps; they may be piled in some shed so as to be had as wanted. Cover with some soil or litter so as to keep them from drying out. They will not hurt to freeze, indeed, it adds to their value for forcing.

Cauliflower.

Cauliflower that is intended for the holidays will need close attention; the plants should not suffer for the want of water; their capacity for water is more than that of the majority of vegetables, but be careful and not get the soil sour. The plants can be watered two or three times a week as the occasion may demand. The ground should be frequently stirred. Give abundance of air on all favorable occasions and don't forget to give them manure water once or twice a week.

Beans.

When sowing beans now one should be careful not to plant too deeply as they

are apt to rot, with a mere covering, germination will be quicker. It is a good plan to sow thickly, and when the plants are large enough, thin out. Ne Plus Ultra does very well with us.

Lettuce.

Lettuce is generally considered to be a necessary crop to grow, but judgment must be used as the short days are on us, for by carelessness a crop is easily ruined. Keep the plants vigorous by keeping the soil stirred with the weeder, and strict attention as to ventilating. In order to have a regular supply, plantings should be made every 10 or 15 days. Lettuce must have a low temperature—from 40 to 45 degrees at night suits



FIG. 238.—NEW TYPE OF SALPIGLOSSIS.

them best. Sometimes the green fly becomes troublesome, but don't let it get a foothold; fumigate every week.

JOHN J. FARRELL, Conn.

Some Continental Novelties.

Herewith we present some illustrations and notes upon a few novelties introduced by F. C. Heinemann, Erfurt, Germany. They will likely be offered by our seedmen this next season.

Salpiglossis variabilis superbissima.

The Salpiglossis is one of the greatest favorites among our annuals. It has now this high place partly by its easy culture, but principally by its beautiful, and in their design almost orchid-like flowers, which it produces during the whole summer. My novelty shows a very marked and striking distinction in habit as well as in its flowers, if seen in the dis-

tance or closely examined. It forms only one single leading stem, which often grows as thick as a finger, and bears on its end a bouquet of the most beautiful flowers. Every one of them is richly veined with gold and considerably larger than those of the old "grandiflora" type. There is about as much difference between these two varieties, as is between a *Petunia superbissima* and a common *Petunia*. The throat is wide open and short. The edge of the flower is not so deeply incurved as with the old variety, which gives it a more round shape.

Petunia hybrida "Snowball."

A new, very dwarf variety that comes quite true from seed. Its beautiful, satiny white flowers are well shaped and cover the whole plant with one mass of blooms. Admirably adapted for bedding and pot culture. It stands heat and drought equally well.

Begonia hybrid gigantea cristata.

The surprising characteristic of this startling novelty is, that attached to the petals is an irregularly fringed appendage, closely resembling a beard, which gives the flower a most elegant appearance. It has been awarded by the French National Horticultural Society a first-class certificate, and all connoisseurs shower their warmest praise on this grand variety, which will cause a sensation wherever it may be met with. To the mixture of the rich shades of terra cotta I have been able to add a brilliant red, pale pink, and pure yellow.

Home Forcing of Lettuce.

To the Editor of American Gardening.

I have noticed several communications with regard to the growing of lettuce under glass, have read articles by Mr. Thompson and others who seem to be making something difficult out of what is really very easy.

In the first place we should have good benches near the glass, good rich fibrous soil. Then keep the foliage dry; give plenty of air and maintain a temperature of from 45 degrees at night to 60 degrees on bright days, and use good judgment in watering. At times we do not water once in two weeks and never until we know the bench requires it, and then we make sure that every inch of soil is wet without wetting the foliage.

I grow no lettuce for market, therefore am not posted as to sorts that sell best. I grow for a private place and my people are epicures. The varieties I like best are Golden Queen and Black Seeded Tennis Ball.

For the family use I plant a bench 15 feet in length by 2½ feet wide, setting at 6 inches apart both ways; as soon as the plants begin to crowd I take out every other one, which are fairly good. At the last cutting every one has a perfect head like a little cabbage. As soon as we make our last cutting I replace with plants which have been potted from seed flat into 2-inch pots, so that we have a succession all winter.

J. E. A., N. Y.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

Girdling for the Canker Worm.

At the present time in most sections of the country war may be waged against the spring canker worm if the spraying with Bordeaux and Paris green is not a general practice. There are two species of canker worm. The fall canker worm begins to issue from the ground after the

that will remain soft above the freezing point. This treatment does not prevent the wingless female moths depositing their eggs below the band, hence in the spring the portion of the tree below the band should be washed with soft soap, or fish-oil soap to which a strong solution of potash has been added.

F. A. SIERINE.



FIG. 239.—PETUNIA SNOWBALL. (See Page 860.)

first frosts in October. The spring canker worm is just commencing to appear in this section. I was out riding last evening and noticed good many of the males of the spring canker worm flying. The freezing weather followed by a thaw is bringing them out. Of course the eggs of both species do not hatch until the leaves start in the spring. Men who make a practice of using Bordeaux mixture and Paris green in the spring at the proper time hardly know what a canker worm looks like.

After a few heavy frosts, the moths of the canker worms issue from the ground. The female, which is wingless and of a silvery gray color, measures about one-fourth of an inch in length. After reaching the open air she roams until she finds a suitable tree upon which to deposit her eggs. The male has wings of a brownish-gray color, with a white spot near the tip of the front ones. He measures from one to one and a quarter inches from tip to tip. They are now mating, and the female is depositing eggs for next spring's brood of leaf destroyers.

The egg is small, and shaped like a tumbler. One cluster, or the eggs laid by a single female, would produce between 100 and 200 small canker worms. The eggs are laid side by side, on a branch or piece of bark, and remain sealed in this way all through the winter months.

I should recommend the use of a band of cotton or wool. This should be six inches wide. The band should be wrapped around the tree and tied firmly at the lower margin, then take hold of the top and turn it down so as to form a cone around the tree. The band should be smeared with printers' ink, raw linseed oil, axle grease, or any viscid oil

Raspberries in the South.

To the Editor of American Gardening.

In your issue of November 18 last, I read with much interest an article by Coy E. Chamberlain, Ga., entitled "Raspberries in the South."

Every one tells me raspberries don't succeed South. I have grown them on large areas in the North and would like to raise them in the Piedmont section of North Carolina if possible.

It would gratify all your Southern readers if you could get Mr. Chamberlain to write an article on the subject more in detail, especially as to when he cultivates, how, and how often during his first season, and also in subsequent years.

When does he apply his mulching? Does he cultivate all the spring, summer, and early fall and put his mulch on at freezing weather? Or does he only cultivate during the spring and then apply his mulch by July, or when, so as to shade the soil and roots and keep them more moist? I suspect the latter is his method, as I am told the drought is what seems to kill off raspberries.

How thick does he mulch? Only immediately around close to the plants, or all over the ground? What material does he find the best and cheapest for said mulch?

My plan North was to work them with a cultivator about once a week and after every rain, and not mulch at all. I was very successful with them, and would like to learn the most practical method best adapted to this hotter, dryer climate. Mr. Chamberlain seems capable of giving the information.—JOHN POLK, N. C.

READERS' NOTES.

Violet Spot.

I find that Violets grown in a subsoil of coal ashes are not much affected by the spot and do extremely well.—E. A. S., Mass.

An Acre of Strawberries.

I believe we are promised some real live talks on strawberries by Mr. Jerolaman and others. I hope they will make it so interesting that each will try for the possibilities of one acre in strawberries—the possibilities of one acre of naturally good land, enriched for any desired crop, thoroughly prepared, intelligently seeded (or planted), and intensively cultivated when conditions are right in a good season.—A. J. MASTERS.

Tomato Eclipse.

On page 827 Mr. Turner says Eclipse tomato is the best forcing variety, or words to that effect. As I force a few for market, I would like to have the best. Will Mr. Turner supply me with a little seed of the Eclipse or tell me where I can procure it?—STEWART RITCHIE, Newport, R. I.

Discussion.

I for one am glad to see the sparring bouts between our fruit growers that you are now publishing in AMERICAN GARDENING. While our friend, Mr. H. Jerolaman, the king of strawberry growers, has placed the chip on his shoulder, I find in our late numbers of AMERICAN GARDENING there are other enthusiastic strawberry growers who are willing to try and knock it off. I am glad to see them try while we who are trying to raise fruit for our family use, gather



FIG. 240.—CRESTED BEGONIA. (See Page 860.)

many good thoughts and suggestions that fall from the several pens. With a little practice and patience these bouts may be the means of a better class of fruit being placed upon our tables. I say again, keep up the agitation; it's catching, for in this case knowledge is power.—F. SIBSON.

The Strawberry Growing Challenge.

An Error Corrected.

To the Editor of American Gardening.

In response to the two letters given in your issue of December 4, page 826, entitled "Challenge Taken Up," I wish to ask the privilege of this communication.

In my letter to you on October 26 I stated that I had with eleven men for the past two days been engaged in setting a new bed of Henry and Mary plants, in order to show all visitors next June that this bed set October 20 and 21, 1897, would outyield in profit any bed set out in spring, and that I was willing to wager \$1,000 to that effect. I am still willing to do so, and will increase the offer to \$10,000, and put the money in any Newark, N. J., bank on deposit subject to the order of the party who wins.

The conditions of the offer are that the other man must set the plants in spring as soon as he can, or as soon as the land is in good condition for setting. The plants to be set out in the same manner as all are in habit of setting in spring, in hills cultivated both ways, or in rows three feet apart; plants in rows from 18 to 20 inches apart, and to be cultivated in any way deemed best. I am to set out my plants late in fall, or soon as the fall rains come (sometimes the last of September or in October, or first of November), and to set my plants just as I have been doing for the past 20 years, the rows the same distance apart and plants in rows the same as I always do.

Each one is to keep strict account of the fertilizers used, the cost of setting out the plants, caring for them, etc., and the one that shows the larger profit is to draw the cash and keep it, provided always the weather conditions are approximately the same in both states or places where the tests are made; for instance, if the party competing against me has no rain, or hail storm, or late frosts, then in that case I would not expect him to lose his money, and the same for myself.

I am positive that it is impossible to get a larger profit from spring or summer-set plants than I do from late fall-set plants; for the past 20 years Henry Jerolaman has tried to beat it and has failed in every instance. When I cannot do it I am just as positive that the man does not live who can. Why? I will answer: Here plants set out in spring, if set in rows, are always set 18 to 20 inches apart in rows, rows 3 feet apart, if in hills, from 3 to 4 feet apart each way; the fruit stems are all picked off, going over the plants two or three times, or late stems will appear, but if the plants are small, once or twice will do. They must be kept clean all summer and fall; runners cut off, or placed in rows in order to form matted row. If the plants are set out 12 inches apart in spring, and runners let grow, they will form a large matted row. The plants set in the spring and not allowed to bear fruit and runners cut off, will by fall become large plants, and you will be compelled to keep this bed in order until the following June without one cent of profit, then the plants will be old ones with from 8 to 20 fruit

stems, and berries on such plants are always much smaller than on plants from runners set in the last of July or August.

If plants are set out in spring 18 inches apart in the row and the runners allowed to make, the latter must be placed in the row which is to be kept clean all summer, and by fall if the ground is rich you will have large matted row, plants very thick, and the old plant that was set in spring, dead or dying. It will take to keep in order four acres of plants set out in spring, from five to six men all summer and fall, and when all expenses are paid there is not over \$150 to \$200 gross; and after paying interest on land taxes, etc., the profit is but little over \$100 per acre.

If the plants are set out the last of July and in August from spring runners, and then runners cut off, the berries are much larger. Less care is demanded as there are no fruit stems to cut off, and the yield per acre is about the same as before, but

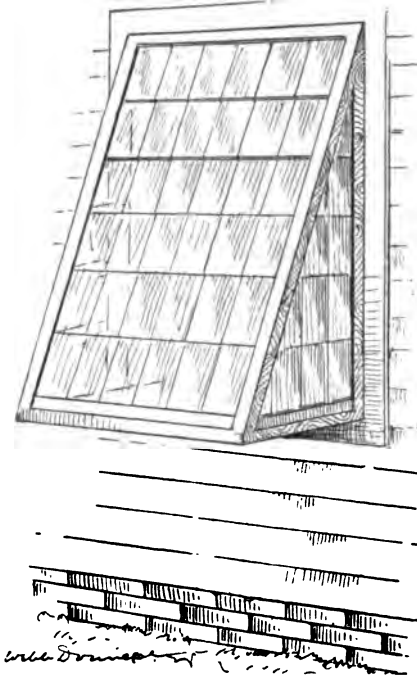


FIG. 241.—A HANDY PLANT WINDOW.
(See next page.)

the profit is about twice as much as from the plants set in spring, or \$200 per acre.

Plants that I set out during the last of September or in October are all large plants, and are set with but little more cost per acre than those set in August, although the plants are more than double the number, since some of the large bunches will contain two or three plants set just as thickly as I can put them—about 500 plants to a row 200 feet long; no water is used in setting out, so there are no pails to carry, no boxes to sprinkle, no shading in the hot July or August sun, and no rows to water after the plants are set, no cultivation, no hoeing or weeding; no care but top dressing with well-rotted barnyard manure and covering; then in spring put hay from off the top of plants between the rows and you are ready to pick. The yield will be as much if not more berries, just as large as if the plants were set in July or August, and much larger than the berries from plants set out in spring. I will stake my life against a \$5.00 bill for the benefit of the poor, that the profit

is at least double that from any plants set in spring as spring plants are at present set.

I know of what I am talking. I do not wish to deceive anyone, and I ask no one to take my advice. I am not here to injure any one (or am I here to brag). I only tell that which I have found to be true in every way for the past 20 years. If I had not found a way to grow four acres of strawberries without the help of five to six men each season for at least six months each year, compelled to pay (as we are for good help here) from \$9 to \$12 per week, why at the present time I would not have a single dollar of my own, but would have been compelled to go at something else, or if alive be the occupant of some poorhouse. This is my own dose, which I have taken for more than 23 years, and during all that time I have grown some few rows to always test the profit of spring or August-set plants, and in every instance the plants set out late, without expense other than for setting, have given more than twice the profit.

Plants set out in this latitude in October or November are liable not to get firmly rooted before the ground freezes, and I always have my manure ready to top-dress as fast as I set. This is put close up to the crown of the plants, and as soon as the ground freezes, I cover the plants one inch deep with salt hay at least 10 inches on each side of plant. Often during winter here the ground freezes to a depth of one foot, then rain will come and all frost goes out, frost again following, and so on for perhaps three or four times; yet for the past 20 years I do not remember losing one dollar's worth of plants set out in October or November, as the manure and mulch are a perfect protection, and in spring I find the plants firmly set and they will commence to grow soon as grass starts, and with those set out in the spring or early in the fall.

H. JEROLAMAN, N. J.

Velvet Bean.

The velvet bean, *Dolichos multiflorus* may be ranked as an ornamental climber; the flowers appear in large trusses, Wistaria-like, and are purplish brown in color, very plentiful; the velvety seed pods are also very ornamental. Velvet bean will grow on poor soil, and when once well established grows very fast. Provide brush or wire trellis for it to climb on. The large, dark green leaves give fine shade all summer.—C. FORKERT, Miss.

I received the Henry strawberry plants in fine condition; they were very fine and all will grow.—G. C., Ont.

I have neglected to acknowledge the receipt of the five Henry strawberry plants until this late day, but it is with pleasure that I am at it now. I received them in good condition. Please accept my thanks for sending such good plants.—F. A. B., Conn.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere.

THE READERS' CLUB

REPLIES TO THE PROBLEMS IN THE
QUESTION BOX.

Weak Stem in Roses.

H. W. C., page 845, says he keeps the temperature 56 to 58 degrees at night; that is the same as we keep ours; but 76 to 80 degrees during the day is 10 degrees higher than ours. Through November and the beginning of December there have been at least two dull days for one bright one, and I don't believe in a high temperature during dull weather. While the plants may look good to the eye grown in the temperature stated, they would make a soft growth; hence the weak necks. We must build sturdiness as the plants make growth.—W. T.

Availability of Liquid Manure.

The question asked page 845 is, in watering plants with liquid manure, how long will it be before the manure is in a condition to be assimilated by the plants. If the plants are in condition and need the liquid manure, they will take it up at once, and the grower should see an improvement in a few days, but during short days one should be very careful with the use of stimulants or it may do more harm than good; after the days begin to lengthen, there is not so much danger of over-feeding.—W. T.

Shading for Greenhouse.

The best shading for greenhouses that I am acquainted with is naphtha and white lead. It can be mixed so that it will just break the sun rays, but if for Palms more white lead is needed. Select a bright day and see that the glass is quite dry before putting on the mixture. One advantage about this shading is it will not harm the putty and if time is an object, it can be put on with a syringe, thus shading a house in a few minutes. But if neatness is the object, apply with a whitewash brush.—W. T.

Lettuce Dies Off.

There ought not to be much trouble in producing good lettuce under glass, providing a few simple rules are observed. In the first place, for good results, a light house is essential and by no means use green manure in mixing up a compost for lettuce; that is to say, if for immediate use. I have never had much trouble with lettuce damping off as described on page 845.

For two loads of soil, one load of thoroughly rotted manure answers our purpose. If grown on raised bench five inches of soil is sufficient. With a temperature of 40 to 45 degrees at night with a rise of 10 degrees during the day, with plenty of air on every chance, there should be no trouble with damping off, providing judgment is used in watering. When doing this give enough water to wet the soil through, but not to saturate it; as the lettuces come to the heading period they can stand being dryer at the roots.—W. T.

The Directions of the Rows.

Both in agriculture and horticulture the rows of all vegetation should run north and south and most especially is

it necessary with tall growing crops, for the simple reason that were they east and west the broad side exposed to the south would receive all the sunshine. In the case of Sweet Peas running east and west the vines would get drawn towards the sun, and the work of supporting would never be completed, also few good blooms would be found on the north side.—D. McFARLANE, Conn.

It is not absolutely necessary to have rows running north and south, in order to have good results with Sweet Peas, and it is not always convenient to do so. We had Sweet Peas last spring planted directly east and west and with good results; at the same time when convenient I certainly should plant north and south which allows both sides of the rows to get equal sunshine: that would mean more flowers and of better quality.—W. T.

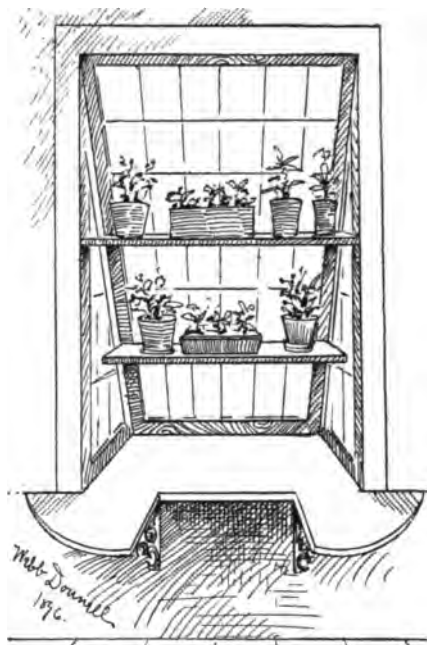


FIG. 242.—A HANDY PLANT WINDOW
INTERIOR.

Queen Chrysanthemum.

Replying to the inquiry on page 845, the Queen has always shown an eye with us, and for that reason has been discarded. I have never seen a fully developed flower of this variety but what had the same defect. This variety also drops its petals quickly, and taken altogether, has always seemed to me a greatly overrated one. It has a fine habit and is a splendid grower, and this probably has saved it from oblivion, but we have now so many fine whites that the Queen has surely seen its best days.—C. T.

A perfect bloom of Queen does not show the center; but I have observed an occasional plant produce imperfect flowers exposing a large center, and would suggest the cause to be either in the soil, watering, or feeding. Undoubtedly the inquirer received plants from genuine stock.—D. McFARLANE, Conn.

The Queen Chrysanthemum requires to be extra well grown if it is not to show the center; that feature is the weak point of this otherwise first class Chrysanthemum, as it is a healthy, vigorous grower. It is not difficult to produce strong plants, which usually mean large

blooms. Quite a number of flowers will show the center after they are past their best; Philadelphia, for instance, must be cut at a certain stage or the center will open. Another year try your plants thus: Propagate in May or early June and flower the plants in six or seven-inch pots, one bloom to a pot. By this method there should be no trouble in the production of large blooms, with material enough in the flower to close up the center.

Chrysanthemums grown in six-inch pots to single stems, with foliage down to the pot, will be nice to look at or useful for decorative purposes.—Wm. T.

Stored Celery.

It is better to cover the roots of celery when stored in trenches. Be sure that your celery plants are dry before the work of storing is attempted, and certainly never let the tops get wet after they are in the trench. If the bottom of the trench was too dry it would be indicated by the plants wilting. It takes from six to ten weeks for celery to blanch according to the variety, except self-blanching sorts, which ought to be well blanched previous to the period of storage.—D. McFARLANE, Conn.

The Best Chrysanthemums.

For specimen or standard plants if little disbudding is to be done, I would suggest: Wm. Robinson, red; Mayflower, white; Pres. W. R. Smith, pink, and Minerva, yellow. Cuttings to be started the first of January.

If for large blooms not exceeding three to the pot try Wm. Robinson, red; Mutual Friend, white; Pres. W. R. Smith, pale pink; Erminilda, for a darker shade; Golden Wedding, yellow. Cuttings to be started last week of March.—D. McFARLANE, Conn.

Medicinal Properties of Native Plants.

If the inquirer will send 50 cents to G. S. Cheney & Co., Boston, Mass., for "Druggists' Hand-Book," he will obtain a small but useful book relative to the medicinal nature of plants.—JOHN A. WHEELER, Millford, N. H.

A Unique Plant Window.

The two illustrations presented herewith show a winter window where house plants can be kept under the best of conditions, and where plants for the garden can be started in late winter. The window should be made with sides and front framed together. Then at the approach of winter all that will be necessary will be to take out the ordinary sash and screw this winter window into the casing. The front sash, which rests at an angle, should have greenhouse sash without cross bars.

The interior arrangement is shown in the second cut. Three shelves can be used, with the lower one very broad, extending about all three sides and out into the room. The upper shelf, it will be seen, is inside the line of the second shelf, and therefore does not shade it, while the second shelf can take but little light from the plants on the lower shelf, but a trifling amount if the shelf is made of slate. Any one handy with tools is ought to be able to put such a window together. But if constructed by a carpenter, the expense would be very small. W. D.

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 12, 1894.

PUBLISHED BY

A. T. DELAMARE PTG. & PUB. CO. LTD.

ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.

Telephone, 3154 Cortlandt. P. O. Box 1697.

REGISTERED CABLE ADDRESS

Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to creditsame.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious). Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1697, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 2 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

Announcement

The publishers of AMERICAN GARDENING, in order to increase interest among readers, as well as to add value to their paper, make the following liberal offers for 1898:

A Cash Prize

Each week, for the Best Photograph of Well-grown Plant, with description as to how the result shown was obtained; or for other suitable illustrative photograph and text. As high as \$5.00 a week will be paid, according to merit.

A Cash Prize

Each week for Best Set of Answers to the Question Box of the week previous. As high as \$5.00 a week will be paid, according to merit.

A Cash Prize

Every month for the Best Essay on an announced subject of general interest. Subject for each month to be announced in due time. Essays not to exceed two columns, and \$5.00 per column will be paid for the best essay. All essays submitted become the property of AMERICAN GARDENING.

OTHER 1898 FEATURES:

Art Supplement Free

In colors. Once each month—to every subscriber in good standing.

Literary Supplement

Monthly—For Advanced Readers.

What's in a Name? SOMETIMES much; sometimes nothing. AMERICAN GARDENING is a good name and will live. But a single title, however, does not always indicate all that is carried between two covers. And so it is with AMERICAN GARDENING to which we are thinking of adding a sub-title so that all may appreciate the comprehensiveness of their favorite paper. It is our intention in 1898 to make the paper so broad in its scope that every one who dwells in country and suburbs will be irresistibly drawn toward it, because they will find subjects of value to them not to be found in any other publication. We intend to cover every phase of interest in country life, excepting broad agriculture, which is now so ably cared for by many valuable contemporaries. We ask our readers for pointers in the above direction, and will pay handsomely for all articles of general interest affecting the millions who reside in the country.

The greatest encouragement our readers can confer upon us, and that which will be most agreeable to us, is the prompt renewal of their expiring subscriptions. If, with this, you will at same time forward one new subscription, you will have testified to the full your appreciation of our efforts.

The Question Box.

Winter season is the time for study, for work does not press quite so hard. If you want information on any subject connected with life in the country, send in your question. It will have faithful attention. And if it's a question of general interest it will be covered in such a manner as not only to please you, but may be the means of aiding scores and hundreds. Also see if you can't answer some of the questions asked, and so earn one of our \$5 prizes?

The Monthly Prize Essay.

This feature should surely be the means of drawing out some remarkably good things. If you have a subject in your mind you would like to see fully covered, let us hear from you. Practical suggestion is what we want, and \$5 a column to the winner is fairly good pay.

Advertisers, One Word With You.

We have a large number of contracts to begin the year with. Is yours among them? If not, you may be sorry, for AMERICAN GARDENING is going to boom in the year of 1898 as never before, and it's a pity to lose good opportunities for paying investments nowadays.

The Improved Appearance.

The improved appearance of AMERICAN GARDENING is an earnest of what is in store for subscribers throughout 1898. Notice the increased number of pages, heavier paper, more readable type. Above all, read our Announcements! Then let us hear from you if you know of any better or more valuable paper to the dweller in the country. If you do, we are open to suggestions for still further improvement. With your own renewal, send us two or three new subscriptions; that's the kind of appreciation all publishers value.

Our Poultry Corner.

TO those interested in poultry—and what dwellers in the country are not?—we are pleased to be enabled to announce that, commencing with the first issue in January, this department of AMERICAN GARDENING will be under the charge of Mr. P. H. Jacobs, one of the best-known practical authorities in the country. Thus AMERICAN GARDENING at once becomes the best paper for poultry raisers who seek prompt information, inasmuch as questions can be answered the week following. Mr. Jacobs will give all questions (which should be addressed to them paper, care of the Editor) his immediate and careful attention, and our readers can depend not only upon the sound answers they will receive, but as well upon all the varied features of the care and raising of poultry on which Mr. Jacobs will write during the year.

Monthly Competition

A cash prize of \$5.00 per column is offered for the most instructive practical essay on

Lettuce Forcing.

Manuscripts must be received at this office by January 1 and should be of about two columns in length. All MSS. submitted in this or any competition becomes the property of AM. GARDENING.

Subject for the February competition will be announced in good time.

Answers Prize Award.

It is with pleasure that we announce the award of the prize offered for the best set of answers to the letters published in one week's Question Box. For a very interesting and valuable set from D. McFarlane, Wethersfield, Conn., the prize of \$2.50 has been awarded.

The Henry Strawberry.

Arrangements have been made whereby a bountiful supply of these plants will be ready for spring delivery to subscribers and agents, and in this connection we beg to call the attention of our readers to our generous offer of these plants in another column. We do not think that a more liberal offer has ever been made than the one now advertised, whereby the agent or worker sending us in a club of ten new names, at \$1 each, becomes entitled to 100 Henry Strawberry plants, while five plants will be sent postpaid to each person in his club. This offer will not apply to a club of less than ten. It may be a very long time before such an offer of such a plant can be made again. The wonderful success which has accompanied our premium offer this fall, in the short time at our disposal to advertise it, leads us to believe that the orders for the Henry Strawberry next spring may exceed all anticipations; however, we have planned for a large supply for delivery and trust to be able to meet all demands upon us. Mr. Jerolaman's series of articles is now being placed in pamphlet form, and copies will be mailed free to all who desire to use same in the canvas for new subscriptions.

The Henry strawberry plants arrived December 4. They were so perfectly packed that their appearance did not in any way suggest their having journeyed across the continent to find their new home. To assure them of their welcome. I gave them the richest bed in my garden for their home and a "Heaven speed them!" to each, as I lovingly tucked it in. —J. M. WETHEREL, California.

THE QUESTION BOX

He that questioneth much shall learn much.—BACON.

Readers are invited to forward particulars of any difficulty or perplexity that they have encountered. If the question be one of general interest it will be inserted in this column, so that other readers who may have information to impart can assist their brethren by recounting their own experiences. Questions of a purely individual interest will be replied to by the Editor under the head of "Short Answers."

Questions submitted in this department will receive the full attention of the staff of AMERICAN GARDENING and when desirable will be answered editorially.

All communications for insertion should be clearly and concisely written on one side of the paper only, and addressed to the EDITOR of AMERICAN GARDENING, P. O. Box 1697, New York City. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query or answer are sent, each should be on a separate piece of paper.

Answers should always bear the title of the query replied to and the page on which it appeared, and our readers will greatly oblige us by advising, as far as their knowledge and observations permit, the correspondents who seek assistance. Conditions, soils, and means vary so infinitely that several answers to the same question may often be very useful, and those who reply would do well to mention the localities in which the experience was gained.

Important to Querists.—Correspondents must look through the whole of the paper for replies to their queries. Answers cannot always be given the week after the queries are received, but there is as little delay as possible in dealing with them.

Cash Prizes will be given for the best set of answers each week. Payment to be made monthly.

Pruning California Privet.

What is the proper time to trim a California Privet hedge; also, should plants just set out, be trimmed now?—J. E. C., N. J.

Propagating Shrubs from Cuttings.

What is the proper time for propagating shrubs from cuttings out of doors; I mean such as Viburnum, Escallonia, Hydrangea, Spiræa, Box, etc.—INQUIRER, N. J.

Best Avenue Trees.

We have our private drive through a meadow for about 300 yards before it enters the highway, and would like this road shaded. We have a fine lot of Black Walnut trees about 12 feet high, and want to know if these may be planted on either side, and how far apart; also if such an avenue would accord with a gentleman's otherwise well-kept place. Or should we plant some other trees?—ROCKLAND.

Grafting Over Large Apple Tree.

I have a large apple tree that I wish to graft entirely over into Russett apples. How large branches can I graft with reasonable chance of the grafts living, and how much of the top can I safely graft at once in the spring?—E. A. S., Mass.

Late Celery Culture.

Is the close culture of celery, such as the late kinds like Boston Market, a financial success? I notice that the large market gardens at Alington still bank up the late sorts with earth.—E. A. S., Mass.

What is the Best Grape.

I would like the experience of others as to the largest, hardy, best-flavored grape; black, red, or white.—A. J. M., Iowa.

Calculating Radiating Surface.

How do you get the radiating surface of a round pipe? That is, how many feet of radiating surface are there in nine feet of 4-inch pipe.—L. M. McLAUGHLIN.

Gloxinias in Winter.

Please give best means of keeping Gloxinias over winter. I find it quite difficult to keep them from either drying up or rotting.—WM. IZISH, Mich.

Fruiting Seedling Grape.

Will some reader inform me how long it takes to obtain fruit from seedling grapes, and whether anything is necessary, excepting to grow the vines and wait patiently?

I ask this because a German botanist, who afterwards became a resident of Philadelphia, insists that a seedling grape will not bear fruit until it be grafted onto a fruit bearing variety. This seems to me to be incorrect because I know of several grapes now on the market that were accidental seedlings, i. e., were self-planted and were not known until discovered in fruit. This was the case with the Christine (or Telegraph) which grew in the garden in Mr. Chas. Cristine and fruited there.

I have a fine seedling of the White Almira grape, now five years old, strong and unusually hardy. The vine is nearly two inches in diameter, and this year made a growth (two branches) of 16 feet.

How long must I wait before it fruits, and is there any way of hastening this much-desired result?—EXPECTANCY.

Mushroom Flatters.

(1.) Is "virgin" soil from an old pasture indispensable for mixing with the manure for the beds, and for casing the same?

(2.) Is it better to cover the bed with straw or litter, after casing or "solling," and is it advisable to leave it on after the buttons appear?

(3.) My foreman makes a distinction between "pinheads" and "buttons," and says the "pinheads" never mature, and are always followed by the "buttons," which latter eventually become mushrooms. I maintain that the "pinheads" are only small "buttons," which, under favorable conditions, would become full-fledged mushrooms. Which is right?

(4.) In preparing the bed should the manure be very moist?

(5.) After the appearance of the buttons in a bed which I lately made, only a very small proportion of them matured; or, in technical language, "the buttons got stuck." Was this caused by insufficient watering—they were on the dry side—and if so, how often should the bed be watered?

(6.) In our mushroom house there are two rows of benches, one over the other. Is it likely the top benches would be as productive as the bottom ones? And, would they be better still on the floor?

(7.) The benches are wooden with iron uprights. Could it be possible that the iron would be in any way injurious to the mushrooms? Robinson says they do not like either coal or iron.

(8.) Are salt and nitrate of soda in solution beneficial?

(9.) Is darkness necessary? Or is a certain amount of light and air beneficial?

(10.) What is the best depth for the beds?

(11.) Are shavings, leaves and sawdust, when mixed in with the manure, likely to produce spurious fungi?

(12.) For how many square feet of bed should 25 pounds of spawn be sufficient?

(13.) Are mushrooms a paying crop?—AGARICUS.

Short Answers.

(To J. McL.)—By hot water under pressure is meant that the system is closed, the hot water thus being pent up makes a pressure. In the usual system of using hot water in greenhouses there is an open or expansion tank, when, of course, the water is not under pressure.

(To J. McL.)—The seed described is no doubt that of a Trapa, the water chestnut. Please send a sample of your moss, etc.; we cannot undertake to give names otherwise.

(To W. Reid.)—The plant sent is *Andromeda media*.

Our 1898 Art Calendar.

I found the Calendar exactly as represented. It is so much nicer than those advertising ones. I was very glad to have it.—MISS H. LINSLEY, Conn.

Your Art Calendar for 1898 received in good order. It is beautiful, admired by all who see it and it gives us much pleasure in our home to show it to callers. Hoping you will receive the recompense your labor of love deserves, with kindest regards to AMERICAN GARDENING and thanks.—ROBERT LEITHEAD, Cal.

I have been a subscriber to AMERICAN GARDENING when it was a monthly, semi-monthly, and weekly, and have taken great interest in its improvement. It is the paper for the amateur gardener. Many thanks for your really beautiful Calendar.—CHR. CHRISTOFFERSEN, Utah.

I received Art Calendar for year 1898 all right, and my family and myself are very much pleased with it. I think it far surpasses anything in the calendar line that we have yet seen, and we have had some very beautiful ones heretofore. It is admired by all who see it. Should be in the home of every family.—PHILIP HARRIS, Pa.

Your Calendar received and I must say it is a daisy; anyone who loves flowers and nice pictures ought to subscribe to AMERICAN GARDENING at once to secure one of these. I take six horticultural papers, but AMERICAN GARDENING beats them all. It gives more short practical notes than any one I have, and these are valuable to every amateur gardener, florist, and nurseryman.—J. U., Iowa.

Your premium Calendar received, and I am justly pleased with it. The color work and the harmonious effect are simply grand. It is indeed an Art Calendar of the first class, and in my estimation the handsomest Calendar of its kind out.—W. D. BUSSING, N. J.

The AMERICAN GARDENING Calendar for '98 to hand. It is a work of art founded upon the most beautiful creations of nature—the woman and the Rose—in all their moods of the seasons. It is a credit to the publishers and a delight to the recipient.—G. N. CARUTHERS, O.

Your Calendar for 1898 received. It is all you represented it to be and we are very much pleased with it.—A. DRAPER, Mass.

Your Art Calendar duly received, for which allow me to thank you most heartily. My family and myself were simply delighted with it, and consider it a work of art indeed, fitted to embellish the finest parlor in the land.—ADAM SHAND, New Brunswick.

We are very much pleased with the Calendar you sent with the paper.—JAS. ALLEN, Mass.

Your very neat and artistic Calendar for 1898 has been duly received, and greatly admired for its usefulness and beauty by every member of the family, and when once seen I believe would be a great inducement for obtaining many new subscribers for AMERICAN GARDENING.—F. A. BERNHARDT, Conn.

The Art Calendar ordered from you is at hand, and I consider it the handsomest I have ever seen. I have given it a prominent place in the parlor and am very proud of it.—W. B. WOODRUFF, N. Y.

Received the Art Calendar safely, and was well pleased with it. It is an ornament to any home.—D. H. MANN, Mass.

Please accept thanks for the handsomest Art Calendar for 1898. "The prettiest Calendar ever received" is the family verdict. We consider AMERICAN GARDENING worth many times its cost, and with the handsome premiums no one who has any interest in garden products, need hesitate to subscribe for it.—D. S. HANKINS, Pa.

Your Calendar received. Kindly accept many thanks for same, as it is perfectly exquisite.—C. W. PRUSSIA, N. Y.

Mr. Jerolaman's Berries and Claims.

To the Editor of American Gardening.

I wish to thank Mr. Wooster for his article in AMERICAN GARDENING of December 11, and I shall watch with much interest for the reply by Mr. Jerolaman, but if it is no more to the point than his last reply to Mr. Wooster, it will certainly not amount to much, for that was just no reply at all. I must confess I have had a hard job to swallow some of Mr. Jerolaman's big berries—some of those "18 inches in circumference" ones! A berry 18 inches in circumference will be about 4 inches in diameter, and only one such berry could be put into a quart strawberry basket. Just take your tape and measure around the top of a flower pot and see how large 18 inches is.

Mr. Jerolaman says he has grown during the past season thousands of quarts of berries, of which it took only from 5 to 10 berries to fill a quart box heaping full; well, I have grown some large berries, but nothing like these. The past season my strawberries brought 25c. per box, the first of the season, and none of them less than 20c., while other local growers were getting from 9c. to 12½c. My Mary strawberries were very large, but they did not come up to 5 or 10 to the quart.

I am interested to learn how Mr. Jerolaman grows strawberries and, as he says in his letter to Mr. Wooster (page 847) "has no runners to cut off." One would suppose that if his land is made rich enough to produce 18-inch berries there would be a good supply of runners, which if left to grow would completely cover his ground. What a help it would be to me, and no doubt to others too, if he would just tell us how he does it.

One statement made by Mr. Jerolaman in his letter to Mr. Wooster, is very encouraging to me. He says: "I honestly believe that I have learned all that it is possible to know about strawberries!" Now, if he will only tell us all about it through AMERICAN GARDENING, we can stop experimenting and trying new methods of culture, and sit down to take life easy.

I am certain that if Mr. Jerolaman's method of setting plants in the fall is carried into general practice, it will result only in disappointment. This method may be best for Mr. Jerolaman, but outside of "Boyden Farm" there will be nothing gained by setting layer strawberry plants in the fall. Of course one can get a few berries from such plants, but it will be at the expense of the next season's crop. I cannot but think that Mr. Jerolaman's articles have been misleading to many people just starting in growing strawberries, (the old heads will not be caught.) Please note his claim, he has grown the Henry for four years or more, and not a single plant has ever died, either old or young. What a record! The berries grown on four-year-old plants are just as large and fine in every way, as those grown on young plants! It is also the earliest as well as the latest to ripen. I will give any man \$10 apiece for strawberry plants such as the Henry is claimed to be. Yet Mr. Jerolaman offered me 100

of the Henry plants at \$2. (This was before his deal with the AMERICAN GARDENING.)

I am really glad Mr. Jerolaman will "fully revise his series of articles on 'Big Berries For All' before it will be issued in booklet form."—A. A. HALLADAY, Vermont.

To the Editor of American Gardening.

I was much amused to read Mr. E. W. Wooster's comments concerning "Mr. Jerolaman and his methods of Strawberry Culture." It appears that he does not like this new king to keep him waiting for this new or old method of strawberry culture.

I do not know what he or any one else means by calling me king; if a king be one that perfectly understands his subjects and all their needs, or one that is master of his trade or business, then I am confident that I am a king indeed, and I can say with perfect truth that I am master of strawberry culture in all its parts, in every stage, in every little detail, and if it were not so, I would have gone out of the business 22 years ago. My farms, my strawberry beds, my sales from year to year, my credit at the Newark City (N. J.) National Bank (all readers are at liberty to write and find out my standing), all prove that I am master of my business. And when I say that the largest profit I make is on the plants set out when fall rains commence, about the last of September and in October, I mean just what I say.

I am sorry to learn that Mr. Wooster is jealous of this new king, and is afraid that the Editor will do harm to publish his methods. This proves to my mind that Mr. Wooster is honest in his belief that no one should injure his fellow man, and if Mr. Wooster is as confident that he understands his business as I am that I understand mine, then the Editor should do him justice and call him king too. Then between the two kings we ought to keep the readers of AMERICAN GARDENING well posted on strawberry culture, and if between us we should get the Editor on the fence, I think he would know which way to jump because he has seen my farm and strawberry beds.

When I commenced to write I was well aware that there were many Mr. Woosters in the United States, and that some of them would get angry or jealous, and so inserted the words Mr. Wooster has quoted, that I did not attempt to improve or instruct those already in the business. I do not attempt to ripen maturity. Unlike Mr. Wooster, I have for the past 20 years found that the safest time to set out strawberry plants is when the ground was wet or damp in cool weather and, to save one year's expense, to set in fall, receiving my profit and pay without waiting one year; and I will defy any one to prove that I have ever in the past 20 years lost one dollar's worth of strawberry plants set in September, October, or November, by reason of their being thrown out by action of frost in freezing and thawing. Why? Because I always have my manure ready to top dress soon as plants are set.

On my return home from the South I am told it has been freezing and thawing here since the last days of November. My man tells me that he did not finish

covering the plants with salt hay until December 4, but that the manure was all on before that time. I removed the hay to-day from the plants I set November 8, the day before I left, and found every plant just as I set it, not a single one had moved a particle, and I will guarantee that in spring they will never know they were moved in the fall, and in June next will grow just as large and just as fine fruit as any plants that I set in spring and in August last.

Come out, Brother Wooster, in June next and learn something. You will not find me such a bad king as to advise others to lose time and money, and if you want my crown I will give it to you, and you can wear both; like Sancho Panza, one day suffices me to be king, ruler, or governor. For the past 20 years I have received letters directed to the strawberryman or strawberry king of New Jersey, and AMERICAN GARDENING was not the first to give me that title. My object in writing the book was to do good, not evil, and to get some reward for the time thus spent, if not in dollars and cents, then in thanks from those who take my advice and are benefited by it, and I do not ask Mr. Wooster or any other reader of AMERICAN GARDENING to take the advice given, unless they think best to do so. I only tell that which I have found for the past 20 years or more is best for myself.

Mr. Wooster says in his comments on my methods, that it is a lamentable fact that 99 per cent. of all prominent strawberry growers in the United States who have been at the business for more than a quarter of a century, alive to all the improved methods, do not know any more to-day than he does, or any more than they all did 25 years ago, and it is a shame that this new monarch of New Jersey (such a little state) should put them all in the shade. If Mr. Wooster, of Maine, is correct, that all growers (except myself) have learned nothing in the past 25 years, it is certainly lamentable, and in that event I would advise the other 99 to go at something that they could understand. If I could not learn all about strawberry growing in three years, then my friends would be justified in placing me in a lunatic asylum as a useless member of society.

Mr. Wooster is also afraid that I will not make my promise good, and warns all readers to watch this new king that declares himself king of all strawberry growers in the United States. I never know any one who had faults who did not suspect others of them.

The one that has been in the business for 20 years or more and then publishes broadcast to the world what he does know about the business would not make near as large a book as that which he did not know, does harm to the public by keeping others out of a business in which nine times in ten they would succeed, if it were not for the fear that they could not learn it in 20 years or more. Such a one does more harm than the one that tells the public that it is a very simple matter to learn, that there is nothing complicated about it: that anyone with ordinary common sense could learn all about it in much less time than it takes the merchant, mechanic, tailor, or any other business man to master his special line.

H. JEROLAMAN.

The Bee Keeper.

We have the following from a reader of AMERICAN GARDENING referring to a recent article: "Your beekeeper resumes: (page 796.)

(1) "A strong colony of vigorous bees." How is the novice to know if a colony is vigorous?

(2) "A prolific queen." How is the novice to know when he has a prolific queen?

(3) "A plentiful supply of good food." How is the novice to know that his hive has a plentiful supply of good food?

(4) "A good hive." How is the novice to know what constitutes a good hive?

Now for the replies:

(1) When the last honey flow of the season ceases, which in most parts of the Eastern and Middle states is with the Aster or "Iron weed" in October, the colony should well cover eight combs, 8,200 square inches of the ordinary L frames, while the weather is yet warm. With colder weather the bees naturally will cluster and leave some combs not covered. So novice must take that into consideration. So much for the "strong."

The "vigorous" is not so easily measured or determined. Bees that hatch during the summer months will wear themselves out by fall, and if the breeding is not kept up at a reasonable rate until fall, we must go into winter quarters with a great many nearly worn-out bees; these will die off very rapidly by midwinter and often our colony will be so depleted by spring as to be helpless. The remedy is a young vigorous queen, and plenty of food not later than the middle of July. Then the colony will naturally breed up into the best condition to withstand the severities of the winter. The bees that hatch out and fully mature while the weather is yet warm enough for them to fly daily, seem to be our best winterers. We cannot have them all just right, but should strive to have as many as possible that will live through the winter and be vigorous for early spring work to give the colony its first start. The first and most important maxim for the beekeeper is: Keep your colonies strong.

(2) We can readily determine which hive has a prolific queen by opening it. If the bees boll out at every corner, the hive is overflowing full; plenty of brood in all stages, nearly half of the combs occupied solidly with brood in a healthy condition. But if you find the hive only partly filled with bees and patches of brood scattered and uneven, your queen is giving way and should be superseded by a young queen. A queen generally wears out in about three years, though I have had queens give me excellent satisfaction for five years, but this is the exception.

(3) Use the scale, weigh the hive and all and deduct hive, combs and bees, or weigh the combs and allow for frame and wax. The strong colony should have not less than 30 pounds; better make it 35, or if very large colony, 40 pounds. The quality of the honey can be determined by tasting it. If it is honey dew or fruit juice it is not good for winter food and should be replaced by syrup made of granulated sugar.

In examining and weighing it is well to remember that sometimes colonies have a great lot of pollen in their combs

and lightly covered with honey and capped. Allowance must be made for this, as pollen should not be consumed by the bees until they start spring brood raising.

(4) This question is answered very differently by different apiarists. There are so many different hives and all have good points, but there is hardly any one hive that has all the good points.

I will promise "Novice" that I will give this question full consideration in an early number of AMERICAN GARDENING.

December Work for the Bee Keeper.

Now the bees need very little attention. They clustered for cold weather and should not be disturbed. But there is plenty of time for the beekeeper to read up and plan for next season's work. GARDENING AMERICAN will contain weekly instructions and advice in this line. All that will appear will be of a practical, timely nature to enable the reader to use it right among his bees. Any topic you wish to have treated, or any question to be answered will receive due attention if you make your desires known. Have you a neighbor who keeps bees? He should take AMERICAN GARDENING for '98. Get his subscription and earn a liberal premium as offered by the publishers.

L. W. LIGHTY, Pa.

A Morning Glory Cult.

Miss Eliza Ruhamah Scidmore has written an article on "The Wonderful Morning Glories of Japan," which, with many illustrations, appears in the December Century.

It is hardly known, even to foreign residents in Japan, that that land, which has given us so much of art and beauty, has lately revived the culture of its most remarkable flower, the Asagao, our Morning Glory. For size, beauty, range of color, and illimitable variety there attained, this sunrise flower precedes all others, until its cultivation has become a craze, which is likely to spread to other countries, and—who knows—perhaps there introduce the current Japanese custom of five o'clock-in-the-morning teas and garden parties.

Asagao, the morning flower, is more especially Japan's own blossom than the Chrysanthemum, which, like it, came from China as a primitive sort of weed, afterward to be evolved by Japanese art or magic into a floral wonder of a hundred varying forms.

We who know and grow the Morning Glory as a humble back-yard vine on a string—a vine with leaves like those of the sweet potato, and puny little pink or purple flowers—are as far in the floral darkness as the Chinese, who know it chiefly as a wild thing of fields and hedge rows, the vine of "the little trumpets," or the "dawn flower," that is entangled with briars and bushes for miles along the top of Peking's walls. The old poetry and the old art do not seem to be permeated with it, as in Japan, where the forms of vases, bowls, and cups, the designs and paintings of the greatest masters, repeat the graceful lines of vine and flower, and scores of famous poems celebrate the Asagao in written characters as beautiful to the eye as is their sound to the ear.

The Asagao was brought to Japan

with the Buddhist religion, that particular cult of early rising. Scholars and priests who went over to study the new religion brought back the seeds of many Chinese plants. The tea plant came then, and Elsal brought the seeds of the sacred bo-tree; and Tai Kwan, the Chinese priest at the Obaku Temple in Uji, who may have introduced the flower to Japan, was one of the first to sing of the Asagao in graceful outas, classic poems which scholarly brushes repeat to-day. "Asagao bloom and fade so quickly, only to prepare for the morrow's glory." is Tai Kwan's best-known verse. The glorious colorings of the recently-introduced Japanese Morning Glories have shown us some of the hidden beauties of the race.

Tennyson's Love for Flowers.

An elaborately illustrated article, "Tennyson and His Friends at Freshwater," by V. C. Scott-O'Connor, appears in the December Century. The author says of the poet:

"Willingly he took no part in the destruction of life. His sympathy with nature led him to mourn over the cutting down of trees, as if they were, like the grove in Dante's 'Inferno,' the abode of his personal friends," and he never would consent to his flowers at Farringford being plucked. "I can very well remember the look on his face," Miss Weld, his niece, tells me, "when he met me, one day, returning from his meadows, with a wheelbarrow full of fading Daffodils, plucked by me with the lavish hand of a child. He gazed at them very sorrowfully, and in gentle words expressed his regret that so much beautiful life had been needlessly sacrificed."

Rural Free Delivery.

A subject that would stand more discussion than it gets is free delivery by the Post-Office Department in rural districts. It is not impracticable, and the chief questions about it are whether the farmers want it and whether it would be worth what it would cost. There would be some economies in it resulting from the diminution of fourth-class post-offices, and some gains in revenue from an increased postal business. In thousands of districts it would pay very well. The \$10,000,000 or so that might be saved by some wholesome amendments to the law which govern second-class mail matter would pay the deficit on a good deal of rural free delivery.—Harper's Weekly.

How's This!

We offer One Hundred Dollars reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.
WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists.

There is Not a Home in the Land

But calls for a yearly Calendar.

Every family tries to get one or more; generally more.

There are Calendars and Calendars

Some are good, some bad, most of them indifferent.

There Will Not be a Calendar Issued for 1898

To exceed in artistic elegance, finish, beauty of designs and effective coloring, the one we to-day offer as a premium to every subscription to AMERICAN GARDENING received before December 31, 1897.

EVERY SUBSCRIBER IS ENTITLED TO ONE

AND CAN EASILY EARN TWENTY.

OUR magnificent **Rose and Girl 1898** six sheet **Art Calendar**, two months to a sheet, each sheet $8\frac{1}{2} \times 11\frac{1}{4}$ inches, is superbly lithographed in eleven colors, and printed on hammered paper; the whole tastefully tied with silk bow—undoubtedly a work of art fit for the most elegant home, and as handsome a Calendar as was ever published. Each one of the six designs presents a distinct type of female loveliness and a fresh study in roses, the coloring on each sheet being rendered in harmony with the design. There is not a line of advertising on the Calendars to detract from their value. They will not be sold by us for less than \$1.00 each.

Description

Who is Entitled to a Calendar?

EVERY SUBSCRIBER renewing before **December 31, 1897**, enclosing Five Cents additional to pay packing and postage.

EVERY NEW SUBSCRIPTION—To induce people to test the value of AMERICAN GARDENING we will send the Calendar absolutely free to every name received direct not previously on our mailing list. Remit \$1.00 for A. G. 12 months.

EVERY ONE sending us a club of Four 3-month trial subscriptions at twenty-five cents each, will get a Calendar, free as a premium, by return mail.

EVERY NEW name sent in by an agent.

NOTE.—We have ordered manufactured for us a large stock of these superb Calendars in the endeavor to have sufficient supply for all demands, but will not guarantee to fill orders after supply is exhausted. Therefore, order yours now.

Special to Agents A copy of our Art Calendar to show people will clinch the argument and obtain the subscription. Bona fide Agents will be mailed one copy, securely wrapped, on receipt of only Twenty-five cents (one-fourth its value.) Armed with this superb Calendar we misjudge human nature greatly if any ordinary mortal cannot secure a big list of new subscriptions every day. Every new subscriber you send us gets a Calendar by return mail.

We Pay Agents

Every new subscription at \$1.00 entitles the agent to **Five of the Wonderful Henry Strawberry Plants**, to be delivered next Spring. Thus 100 new subscriptions would secure agents 500 plants; a possession worthy of your consideration. Every new subscriber taken by agent will receive one of our Art Calendars free by return mail.

Agents who do not want the Henry Strawberry Plants can retain as their payment **20 cents in cash** on each subscription they take, or will be credited **twenty-five cents** on any book, magazine or publication they wish to obtain through us.

Address all
correspondence

AMERICAN GARDENING, P. O. Box 1697, New York.

REMIT BY P. O. or EXPRESS MONEY ORDER—IT IS SAFEST.

The Poultry Yard.

Mash for Laying Eggs.

The proper composition of a mash for winter layers seems to be a matter of much concern to nearly every poultry raiser at first. Indeed, this is as it should be, for upon this mash depends quite largely the supply of eggs. A very good mixture consists of equal parts of bran, middlings, corn meal, and meat, with half a part of ground oats. Five or six quarts of this will furnish a sufficient breakfast for 100 hens, but it will be better to replace a portion of it with clover or potatoes as often as is convenient. The mash is to be cooked, or at least scalded. It is well to avoid feeding it hot. Any wide departure from natural conditions is quite sure to bring trouble, and Nature does not give hot feeds to fowls. Roup, or the colds which are its precursor, may follow the use of too hot mashes.

When to Feed.

There is frequent controversy between feeders as to the best time to feed the mash. An occasional one is found who uses it three times a day. The majority, however, give a soft feed but once a day, and usually in the morning. A few advocate feeding it at noon, urging that it tends to make the birds lazy if fed at the first meal. Against this, it is contended that the soft feed enters the system sooner than hard grain, and that this is what is needed most during the cold of early morning, and after a long night of fasting. A small amount of grain, scattered widely an hour or two after breakfast will furnish exercise for several hours.

Great Poultry Show.

The National Poultry Association, of Chicago, will hold their second annual show, January 24 to 29th at the Second Regiment Armory Hall, on Michigan avenue, Chicago, Ill. The importance of this show is sufficient to secure excursion rates over the railroads, and any one desirous of attending can arrange for cheap transportation by addressing the secretary, W. W. Hogle, 1015 Benson avenue, Evanston, Ill. Elaborate preparations are being made and there is no doubt but what it will be the best show of the season in the central west.

Eggs Broken Internally.

Young hens often have difficulty in laying their first eggs, and not a few birds are lost at this time. A little warmed oil poured into the egg duct may sometimes help a case like this, and perhaps save a valuable hen. Sometimes a soft-shelled egg may be brought forth in this way, also. Older hens, however, often have the misfortune to break eggs internally soon after they leave the egg-cluster. Such eggs may remain within the body, a source of inflammation, for months. The bird ceases to lay, sometimes gets heavy even to dragging, but is useless forever after. If it is suspected that a hen does not lay, effort should be made to prove it, or at least to find out the truth. The non-layer is the non-payer!

Bemedy for Colds.

Some one recommends the dilution of the contents of a certain bottle of patent chicken medicine in a quart of water, to which is to be added a tea-

Vegetables

can be raised at a profit, and the yield enlarged, if properly fertilized. Most fertilizers do not contain enough

Potash.

Vegetables need plenty of potash—at least 10%—besides the phosphoric acid and nitrogen.

Write for our books which tell all about fertilizers. They are free.

GERMAN KALI WORKS,
93 Nassau St., New York.

 **THE CROWN Bone Cutter**
for cutting green bones. For the poultryman. Best in the world. Lowest in price. Send for circular and testimonials. Wilson Bros., Easton, Pa.

HATCH Chickens BY STEAM—
With the **MODEL EXCELSIOR Incubator**
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class hatcher made. **GEO. H. STAHL,**
114 to 122 S. 6th St. Quincy, Ill.

Raise Hens

People living just outside cities and large towns can (owing to their nearness to markets,) make large profits in the poultry business. No other occupation pays better or is easier to conduct. It can be successfully carried on by women or boys and girls, provided they have a knowledge of the right methods of management, feeding, etc. This may easily be gained by faithful study of that best and most practical poultry paper,

Farm-Poultry

It teaches how to make money raising poultry and eggs for market. It is edited by practical poultry raisers, who tell their readers how to prevent and cure all poultry diseases; bring pullets to early laying maturity; make hens lay when prices are highest; build the best houses and yards; keep poultry free from vermin; hatch strong chickens in incubators; caponize and dress poultry for market.

Published semi-monthly.

Price, \$1.00 a year; 50 cents for six months. Sample copy and a 25c. book, "A Living from Poultry," sent for 12c. in stamps.

I. S. JOHNSON & CO.,
Custom House St., BOSTON, MASS.

spoonful of carbolic acid. Coloring the drinking water with this mixture is supposed to be all that is necessary to cure an ordinary cold in any bird. With all due respect, we consider that the same benefit would probably be received from properly diluted carbolic acid, without the more costly bottled medicine. There are few diseases of fowls that cannot be helped by the use of a disinfectant in the drinking water. **M. V. NORRIS.**



We Call on every reader to secure us at least one new subscription now to **AMERICAN GARDENING** for 1898, so they will not miss any of the following offers and inducements:

Prospectus for 1898

All the Good Things Continued

Which have made **AMERICAN GARDENING** the standard publication of the Horticultural world, and given it more bona fide subscribers than all other Horticultural papers combined.

Cash Prizes Offered Every Week

For Photographs of Well-grown Specimens (flower, fruit, vegetable or plant), with description as to how the result depicted was attained—from start to finish.

Cash Prizes Offered Every Week

For Best Answers to Question Box. This department is absolutely free, and there is no necessity for any reader to remain in ignorance on any subject which may puzzle him.

Colored Art Supplement Every Month

Free to every subscriber.—Beauties all. Every one values a good picture. Ours will be more than good.

Cash Prize for Best Essay

On a Subject of General Interest. One Prize every month.—This feature we expect to prove a drawing card.

Literary Supplement Monthly

Special Feature for Advanced Readers, containing articles of more permanent and scientific interest.

New Writers on New Subjects

Which we know our readers will appreciate.

And with all this

{ **Array of
Attractions**

We Give Premiums

To those who obtain us a new subscription as well as to the new subscriber. See advertising columns.

Don't fritter away your time and money on worthless reading. Subscribe to a practical publication, admitted by all the standard authority of the age and country. Take our advice: Talk American Gardening to your friends, get their subscriptions, and they will bless you evermore.

Oak-tanned leather Harness

Send your address with 2-cent stamp for Illustrated Catalogue, all kinds of Hinges and Double Cast-Steel Hinges, and direct to the customer at wholesale prices. WE CAN SAVE YOU MONEY.

KING HARNESS CO., No. 3 Church St. Oswego, N.Y.

Mention American Gardening when you write.

PEACH TREES, \$3 PER 100.

All kinds of Trees and Plants CHEAP. Cat. FREE. RELIANCE NURSERY CO., Box 1410, Geneva, N.Y.

Mention American Gardening when you write.



Lane's Steel Car-jack
Ask your hardware dealer.

Makers **LANE BROS.**

Poughkeepsie, N.Y.

Mention American Gardening when you write.

1840 OLD COLONY NURSERIES. 1897

Hardy Shrubs, Trees, Vines, Evergreens and Perennials.

A large and fine stock of well-rooted plants, grown in a sandy loam. Good plants, best sizes for planting; very cheap.

Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.

Mention American Gardening when you write.

\$4 Worth of New Music for the ladies and**"Scribner's Lumber and Log Book"**

for the men are the premiums we are offering with one year's subscription to

"The Market Basket," at \$1.

Send the dollar, we will send you a long list of music from which you can select 10 pieces, which sells regularly for 40 cts. each.

"The Lumber and Log Book"

is a board bound book of 190 pages. No farmer, mechanic, saw mill man or business man should be without it. It is invaluable. It treats over a hundred different subjects. It's just what you ought to have. It's a perfect schoolmaster. We send the \$4 worth of music, the Lumber and Log Book and the Market Basket for one year, all for \$1. Send the \$1 now, and we will send the Market Basket free until January 1.

THE MARKET BASKET PUB. CO.,

120 So. 2d St., Philadelphia, Pa.

A. J. MERRILL, Manager.

Mention American Gardening when you write.



2-Years

we were required to perfect our new

"Vesta" Tubular

Lantern which we now offer as something extraordi-

nary in the Lantern line. It has the Railroad Lantern's rugged constitution joined to the tubular system, and the result is a splendid light-giving, wear and abuse resister. We will, if desired, mail our special Circular of the "Vesta" Lantern; or, upon receipt of \$1.00, we will send you (freight prepaid) the very best Lantern for general service you ever saw. Why not "see it" on those terms?

Our Illustrated Catalogue is Mailed Free.

R. E. DIETZ CO.,

60 Laight St., New York.

ESTABLISHED IN 1848.

Only good Lanterns are stamped "DIETZ."

Mention American Gardening when you write.

KNOWN WORTH

You judge a man by his reputation. His reputation is formed by what he does. So in selecting a musical instrument—study its reputation. That represents what it does. Look into the merits of the

"Bay State"

Guitars
Mandolins
Banjos
Zithers
Pianos

Their superiority invites the closest scrutiny. Their reputation is their warranty, for it tells what it does. In choosing a "Bay State" you purchase known worth. Twenty-seven awards. Only winners of American gold medals.

Send for Catalogue and Prices

JOHN C. HAYNES & CO.

453-463 Washington St.
BOSTON.

Mention American Gardening when you write.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

COMPETENT man desires position as head gardener. Can make your garden pay. Head Gardener, care American Gardening.

GARDENER wants situation on private place; has had charge of both private and commercial establishments; references. Address Colman, care American Gardening.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance.

STRAWBERRIES, Potato Seeds. Wm. A. Olds, Okemos, Mich.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

VELVET BEAN, Dolichos Multiflorus, for ten cents in postage stamp. I will send you enough beans for a large arbor. C. Forkert, Ocean Springs, Miss.

WASHINGTON Grape; fine foliage, fine blossom, fine fruit; for pots or garden; fine plants ten cents postpaid; order now. T. J. Miller, Olympia, Wash.

STRAWBERRY plants, 25c. each, of Clyde, Glen Mary, Wm. Belt and Bismark, sent prepaid for one dollar. Catalogue free. Enos W. Dunham, Stevensville, Mich.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

...THE...

ENCYCLOPEDIA OF GARDENING.

A Complete Dictionary of Cultivated Plants, Flowers, Etc.

BY T. W. SANDERS, F. R. H. S., EDITOR OF "AMATEUR GARDENING," LONDON.

Descriptions, with Popular and Technical Names of Plants, Date of Introduction, Number of Species in Cultivation, How Propagated, Suitable Soil, Proper Temperature, Time of Planting, &c.

Crown 8vo., cloth, gilt lettered, 435 pages. Price, delivery included, \$1.75. Address your order to

AMERICAN GARDENING, P. O. Box 1897, New York.

The Window Garden.**The Hyacinth.**

Fresh literature on the Hyacinth is actually becoming scarce. If we except the sort of stuff sometimes called literature, which appears in sheets gotten out mainly for advertising purposes. This is plentiful enough, and consists largely of adjectives, coupled with the guesses at cultivation of a new lot of crude writers who crop up every year to tell what they do not know.

The real lack of new literature is not at all surprising, however, if we consider the fact that it is nearly 200 years since the Hyacinth took a leading place as a florist's flower, and that new varieties are not common, so that there is really almost nothing new to be said. Some, therefore, say nothing, thinking that every one knows all that is to be known about this very popular flower. But the new people coming to take interest in growing flowers and the new generations coming forward upon the stage demand for themselves the same information which their predecessors have, in their time, demanded.

So few people know of the delightful Roman Hyacinth, even though it is forced every year, not by the thousand merely, but by the million! Its cheapness, its grace, its profusion, its earliness make it just the one flower to meet the December needs of the great mass of window gardeners, and it is a crying pity that, with all our efforts, we find it so nearly impossible to get before those who would

You Want **Books!**

A little energy will earn you a Library.

Do You Know

That **AMERICAN GARDENING** issues the most comprehensive Catalogue of Books on all subjects connected with the Home in the Country?

Also That We Allow

A credit of Forty Cents in Books for every New subscription sent us at \$1.00.

Just Think of It

Only Five New Subscriptions to earn any Two Dollar Book in our List.

If you have not received one of our Book Catalogues send stamp for a copy at once. Now is the accepted time.

AMERICAN GARDENING, NEW YORK.

P. O. Box 1897.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

be so helped by it the information which they need. The great trouble seems to be that the majority of people look upon a horticultural paper as a luxury, and therefore to be gone without. A "luxury," indeed, they find it, but a necessary one, when they once discover that it gives them just the help they have been wanting so long.

The White Roman is the advance guard in the Hyacinth army. After it come its nearest relatives, the colored Romans; the miniature Dutch sorts, and the hand some large-trussed double and single varieties which, to most people, stand for the name of Hyacinth.

The early Romans are the easiest to handle, partly because they are single, partly because they will stand more heat and variation in conditions without injury. Beginners are almost sure to want to grow the heavy double sorts above all others, and their difficulties may very largely be laid to this desire. Coupled with this is the fact that they have not patience enough to wait till the bulbs are properly rooted, and floral writers who sympathize with their haste tell them that three weeks will do for the rooting period if they don't want to wait longer. But it is the very doubles which they insisted on having which need the longest rooting period, because the spike is so much thicker that it needs more force below it in order to get it pushed through the neck of the bulb. Novices who have been disgusted by having their precious Hyacinths stay snubbed down to the earth just above and at the surface, wasting their bloom where it could give no pleasure, should give their minds for a short time to the study of this principle: The whole secret of success in the pot culture of Hyacinths consists in getting the bulbs well-rooted and established in the pots at a low temperature before beginning to force the tops. They will not become well rooted in less than six weeks to two months, the latter period being much the better. How foolish, then, to wait till late to order, the bulbs meanwhile losing strength, and then try to hurry them into bloom without roots to support and feed the tops and blossoms!

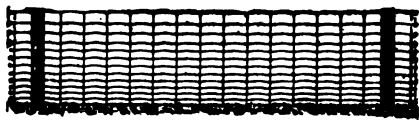
The miniature Hyacinths are very pleasing, and give heavier spikes than do the Romans. Considerable time can be gained with the larger sorts, by selecting early varieties, some of which are among the best. Cockade Hyacinths and Grape Hyacinths give variety. The latter do not really belong to the genus, but are cousins to the Hyacinth.

Also allied to the Hyacinth are the Lilliums, the Fritillarias, the Tulips, the Scillas, the Alliums, and the Ornithogalums. For second forcing, the members of the Lily family are not worth much; those of the Amaryllis family are still less valuable, while only the class known as "Cape bulbs" are worthy the trouble of keeping over and re-potting.

The coloring of Hyacinths is remarkable, for among them we find all shades of red and blue except one or two of the most brilliant, with about every shade of yellow, and a wonderful variety of shadings of color on white. One sort is advertised as giving twelve spikes to the bulb. I have no personal confirmation of this supposed fact, which is marvelous among the large sorts. M. V. NORRIS.

We PAY CASH each WEEK the year round, if you sell Stark Trees. Outfit free. STARK NURSERY, LOUISIANA, Mo., Stark, Mo., Rockport, Ill., Summerville, N. Y.

Mention American Gardening when you write.



Tranquillity Stock Farm

is the appropriate title applied to an estate in New Jersey on which is erected more than 13 miles of Page Fence. From the mammoth Percheron down to the baby Chester White, everything is tranquil there.

PAGE WOVEN WIRE FENCE CO., Adrian, Mich.

Mention American Gardening when you write.

A \$1.00 Raisin Seeder for 50c.



POSTPAID.

We are tired of selling dealers and waiting 90 days for our money, so we will sell housekeepers at Jobbers prices.

Send 50 cents, and we will mail you postpaid one of our best

RAY STATE RAISIN SEEDERS

Guaranteed to seed 1 lb. of raisins in 5 minutes. Simple to operate and easy to clean.

EASTON MFG. CO. D. 10, 64 Federal Street, BOSTON.

Mention American Gardening when you write.

A BARGAIN

We have made arrangements to furnish **THE OHIO FARMER** of Cleveland, O., and **AMERICAN GARDENING**, both papers, one year, making a total of 104 great papers, for only \$1.60.

ONLY \$1.60

THE OHIO FARMER

is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the LEADER of the Agricultural Press of America. A 20-page, 80-column paper EVERY WEEK in the year; employs THE VERY BEST WRITERS that money can produce; a strong, fearless defender of the agricultural interest of this country, and CLEAN in both reading and advertising columns. IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE.

Present subscribers can order this combination at once and have their present term of subscription to AMERICAN GARDENING extended for one year. New subscribers to THE OHIO FARMER will receive the rest of this year free. Address all orders,

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

Wild Flowers in Art and Nature

By J. C. L. SPARKES, Principal of the National Art Training School, South Kensington, England, and F. W. Burbidge, M. A., F. L. S., Curator of the University Botanical Gardens, Dublin, with colored plates by H. G. Moon.

COMPLETE IN SIX PARTS. PRICE \$3.00 FOR THE SET OF SIX. FIFTY CENTS A PART.....

The series furnishes, through its superb letterpress and magnificent illustrations, one of the most delightful volumes for the library or parlor, and is in addition a complete guide to the mastery of the art of painting flowers in colors. Each of the twenty-one superb colored plates mentioned below is accompanied by detailed instructions from the best master, as to how to paint the subject. No more suitable Holiday Gift than this.

Contains Twenty-one Magnificent Colored Engravings.

PART I.
The Forget-me-not
The Yellow Iris
Wild Heather
The Hawthorn

PART II.
The Scarlet Poppy
The Ox-eye Daisy
Blue Cornflower

PART III.
The Common Primrose
The Wild Hyacinth or Blue Bell
The Common Daffodil
The Wood Anemone

PART IV.
The Wild Dog Rose
The Meadow Buttercup
The Harebell

PART V.
The Cowslip or Paigle
The Sweet Violet
The Convolvulus
The Foxglove

PART VI.
The White Water Lily
Red and White Campions
Honeysuckle or Woodbine

The above Engravings are alone worth the full price of the series.

Read this Remarkable

Holiday Offer...

This Offer will be withdrawn Jan. 12, 1898.

For a Club of FIVE NEW SUBSCRIBERS, at \$1.00 each, we will send "WILD FLOWERS IN ART AND NATURE," in SIX PARTS, with the twenty-one magnificent colored engravings above enumerated to the club getter, and one of our superb ART CALENDARS, elsewhere advertised, to each member of the club.

Mention American Gardening when you write.

W. and D's. "Sure Crop"

MUSHROOM SPAWN

8 LBS. FOR \$1.00.

Hyacinths, Tulips, Narcissus, Lily of the Valley, Spireas.

SPECIAL PRICES TO CLEAR.

WEEBER AND BON,

Seed Merchants and Growers,
114 Chambers Street, NEW YORK.

Mention American Gardening when you write

The man who
Will not Advertise
Will not
Meet with

Success

The man who
Advertises judiciously
Will

Succeed

Don't
Fritter away
Your money
In worthless mediums

Advertise

Only in
Successful papers
Advertise in

American Gardening

Publishers AMERICAN GARDENING:

Gentlemen—It may interest you to learn that my advertisement in your paper brought me customers from Mexico, New Zealand, Canada, New Brunswick and Manitoba, as well as from our own country.

F. L. WRIGHT, Mich.

November 19, 1897.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

Thos. Garrett, late of the firm of Garrett & Rose, Jersey City, N. J., has accepted the position of Orchid grower for G. Schlegel, Bay Ridge, N. Y.

John Doughty, until lately head gardener for Mr. Theo. Sidwell, Shohola, Pa., has been engaged in a similar capacity by Mr. J. E. Habinger, Elm street, New Haven, Conn.

Mr. W. E. Griswold, of Bellows Falls, Vt., sends us a photograph of his greenhouse, showing a collection of bush Chrysanthemums and general florist stock.

The Ladies' Home Journal will publish a new and large portrait of Mrs. McKinley, taken a few days ago in the White House conservatory. This is the second photograph which the President's wife has allowed to be taken within ten years.

The Water Garden.

CHANGE OF PRICE.—On and after January 1, 1898, the price of "The Water Garden" will be Two Dollars, regardless as to whether the purchaser is or is not a subscriber to this paper. Readers are requested to note this change in the "Catalogue of Horticultural Books" they have recently received from us.

Business Cards.

C. D. Zimmerman, Buffalo, N. Y. Horticulturist
Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. Jos. Forsyth Johnson, P. O. Box 1697, New York City.

DO YOU NEED WATCHING?

Or, to put it another way,
Do You Need a Watch?

We sell them, sell them at such an exceedingly low price that you can't afford to go watchless. Got 'em all sizes and styles. But we'll just mention two:

An Elgin or Waltham Watch, best movement made, hunting case, accurate time-keeper, handsomely engraved, Dueber Case, heavily gold-plated—last for all time. Ladies' or gentleman's size.

We'll send it to your address with privilege of examination. If it's not entirely as represented, send it back—costs you nothing. If you like it, pay the agent express charges and \$6.50. —That's fair. Or else

A Hunting Case Watch—beautifully engraved case, first-class movement, any size, heavily plated (14k)—looks just like a \$40.00 gold watch—keeps as good time as any of them. Sent to your express agent with privilege of examination—same conditions as all our watches sent out—and if you like it, pay him \$5.45 and express charges.

If you take our word for it, and send money with order, a handsome chain goes with either, and express charges are paid by us, for the prices named above.

Royal Manufacturing Co.
334 Dearborn St., CHICAGO.

Mention American Gardening when you write

6.50
14k
3.45
14k

STERN
WIND
& REVE
LADIES
ON "CENTS
SIZE

HUNTING
CASE
GENTS &
LADIES
SIZE

Greensborough, Ga.

The annual Chrysanthemum exhibit of Greensborough, Georgia, Floral Club, November 3-5, was the finest in the history of the Club. The plants were mostly grown in open ground, and the season was unfavorable, having numerous droughts. The cut blooms were exquisite, however. There were only a few pot-grown plants, and not many grown to single stem.

New York.

The regular meeting of the Gardeners' Society was held Saturday, December 11, twenty-five members in attendance. A. Piper, 174th street, exhibited a well-fruited plant of an orange which, it was claimed, fruits more readily and makes quicker growth than the Othabete orange. A certificate was awarded. J. I. Donlan reported that a silver cup for the most ornamental exhibit in the recent exhibition at the Waldorf-Astoria had been awarded to C. Knight, Glen Cove, L. I. The treasurer read his report for the year which showed that the Society has just managed to keep a balance on the right side. The following officers were elected: President, W. Scott, gardener to T. C. Eastman, Tarrytown, N. Y.; vice-president, A. Taaffe, gardener to T. O. Matthelson, Irvington, N. Y.; treasurer, Robert Angus, gardener to Major R. E. Hopkins, Tarrytown; secretary, Wm. Bartholomae, gardener to W. B. Isham, Riverdale, New York City; Executive Committee, R. Brett, F. R. Pierkovsky, W. Anderson, John Shore, G. B. Winslade, C. Webber, W. Sage, and A. J. Wengerter.

Wm. Watt, gardener to Col. de Grau, Jamaica, L. I.; R. Whyte, gardener to C. Graef, Tarrytown, N. Y., and C. Knight, gardener to E. R. Ladew, were elected to active membership.

A. L. Marshall, Pawling, N. Y., exhibited three Cannas all seedlings from Columbia; they give evidence of merit. J. I. Donlan and Jessie H. Marshall are the names given to two of them; the other is not yet named.

Robert Laurie, gardener to Cornelius Vanderbilt, Newport, R. I., exhibited six plants of Begonia incarnata, and two of B. socatrana before the horticultural section of the American Institute, Tuesday, December 14, for which he was awarded the diploma of the American Institute. The plants of Incarnata displayed evidence of unusual cultural skill. Mr. Laurie claims that he has an improved form of this old but charming and most useful Begonia, and he names it "Improved." Certain it is that the plants submitted showed considerable improvement both in size of individual bloom and in color. The committee was not able to agree upon the permanency of these improvements, thinking that the growers' high cultivation had much to do with it. This exhibit was much admired and certainly was a grand showing.

Roses Under Glass.

Growers are now in the throes of the worst time of the year—dark days combined with extremely bad weather. In central New York we have had only one bright day, with two or three peeps of

the sun in three or four weeks. The temperature, too, has been very trying, with lots of cold rains. Syringing has to be almost abandoned, thus giving red spider a chance to put in an appearance. I have found it very practicable, instead of syringing a whole house during these times to go over one bench each day or so—those that are most likely to be infested with spider—and the corners. By doing this the plants dry off much quicker than if the whole house is syringed at one and the same time, and but very little harm, if any, is experienced. On no account should red spider be allowed to get the upper hand; I would rather take my chances with anything else than let this pest once get a strong foothold.

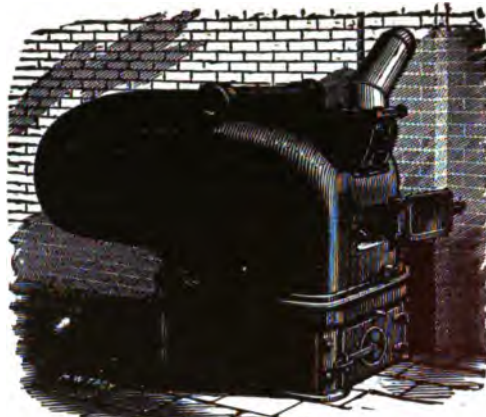
It seems hardly necessary for me to make any remarks on watering, as in previous notes the subject has been well nigh exhausted. Still circumstances alter cases and I would advise not to wait for a bright day on which to do much of this work. Rather keep the beds well looked after in this respect without regard to the weather, and when a favorable day does come, we will be able to center our whole energy on syringing. Now especially, syringing should be done as quickly as possible, and as early as the temperature will permit, thereby giving the plants the best possible chance to dry off by nightfall. Where a man has rather an extensive territory to cover with this work, he will lose much valuable time if he has to water all at the same time. Despite the exercise of the greatest care in this work as well as syringing, in such miserable weather a petal or two on some of the best blooms will get spotted, and if allowed to remain the entire flower will be spoiled. This is often the case with American Beauty, but it takes only a short time to go through a house and pick over what few there are. It pays.

Cold weather will shortly set in; then we will be more on the safe side in using water as well as stimulants, as the atmosphere in the houses will then be working with more freedom atoning to a great degree for the lack of sunshine.

The chrysanthemum has most probably taken a good deal of our time lately, making us liable to neglect some of the current work in the rose houses. The holidays will soon be here, and good roses will unquestionably be in demand at good prices. To get good blooms on straight stems it is very essential that the plants be kept tied up, and last but not least, disbudded. I think this latter operation is not given the attention by many that it deserves. There are a few who think it a sin to cut off side buds because such growers believe they are out so many flowers. In one sense they are, and this opinion may suit these who have no competition and whose customers don't know what a good bloom is or ought to be; but when the latter knowledge is abroad, the advantage of disbudding will not only very soon become a matter of much consequence, but an item that will receive constant attention. By disbudding, larger and finer quality blooms are obtained, and at the same time a large amount of strength is diverted to other channels, obviating to a great extent the excessive drain on the plant producing so many flowers to the shoot.

In some instances the crown or center bud of such varieties as Perle and Meteor at this season become a little malformed or bulbous, in which case they should be pinched out, leaving the most promising side bud.

GREENHOUSE HEATING AND VENTILATING, Horticultural Architecture and Building.



Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

**FIVE PATTERNS OF BOILERS
NINETEEN SIZES**

Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron
Frame Construction erected complete
or the Structural Iron Work ship-
ped ready for erection.

Iron Frame Benches with the
"Perfect Drainage Bench Tile
or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.

Success With House Plants Assured

By growing **JADOO FIBRE** Or watering **JADOO LIQUID**
them in.... them with...

PLANT YOUR SPRING BULBS IN JADOO FIBRE

Send for **PRICES** and list of **PRIZE WINNERS**

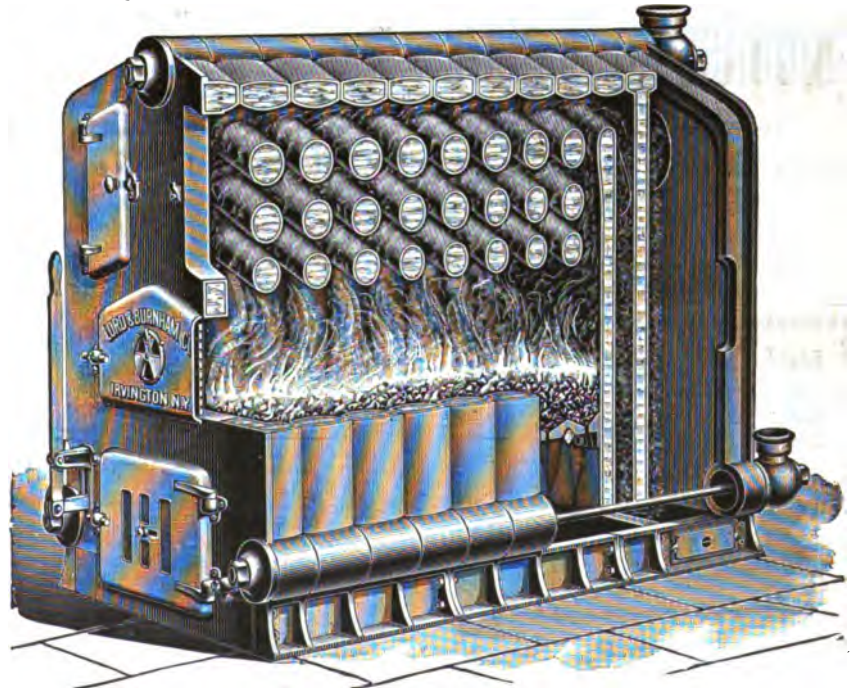
THE AMERICAN JADOO CO., 813 Fairmount Avenue, Philadelphia, Pa.

Mention American Gardening when you write.

LORD & BURNHAM CO., Horticultural Architects and Builders and Manufacturers of Heating and Ventilating Apparatus.

(Established 1856.)

Plans and estimates furnished on application for Heating and Ventilating Apparatus
erected complete, or for material only. Highest Awards at the World's Fair.



NEW SECTIONAL HOT WATER HEATER.

Specially adapted to large ranges. Will heat up to 18,500 feet of glass. Highest economy. Moderate cost. Also heaters for smaller work. Send six cents postage to New York office for latest catalogue of Heating and Ventilating Apparatus.

NEW YORK OFFICE:
100 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write.

WHOLESALE MARKET REPORT.

New York.

Cut flowers of high grade have advanced in value fully 50 per cent. Roses of special quality are very scarce. This class Bride, Bridesmaid, Meteor, and Carnot make from \$8 to \$15 per 100. American Beauty specials now make \$5 per dozen. Carnations are meeting with steady sale at price ranging from \$2 to \$6 per 100. Violets range from \$1 to \$1.75 per 100. Roses and Carnations are likely to be in light supply for Christmas; Violets, on the other hand, will be abundant.

Orchids are selling well; Cattleya and Dendrobium formosum are making from 30c. to 50c. per bloom. Cypripedium insignis and others meet with slow sales at \$10 and \$12 per 100. Valley keeps steady at \$3 and \$4 per 100. Lilies and other such stock move a little better.

Christmas green now forms one of the most interesting topics of the day, but to all appearances country collectors are not making much for their labor. Holly is selling very cheap. The market is very full and quality good. Bouquet green made up in roping sells for \$4 and \$6 per 100 yards. There is but little loose stock on hand, and dealers are trying to get 7c. per pound, owing to the readiness with which this has sold. Collectors have been tempted to send in the trailing Lycopodium, but it meets with no sale.

Imported Mistletoe has met with a serious setback, 225 cases, the entire shipment per the S. S. St. Louis arriving Saturday late, was entirely destroyed through heating in the ship, although it had been placed in No. 5 beef house, which was supposed to be equal to cold storage; not a single case was saved. A similar quantity had arrived the previous week in excellent condition; what little of this that was left advanced to fabulous prices. A further shipment is

expected to arrive on Monday by the White Star liner. Despite the scarcity of the imported article, Southern Mistletoe did not improve in value. New York will not use it. Laurel roping is offered at \$2 per 100 yards and sells slowly.

Export trade is evidently booming. Quite a large proportion of the cargo on the S. S. St. Louis sailing on Wednesday, was made up of fruit, mainly apples. There were more than 1,000 boxes containing one bushel each of Newtown Pippins, each apple wrapped in soft paper. The majority of these came from Watsonville, Cal. There was a large number of barrels mostly Winesaps and Albarmarle Pippins. There was a vent hole in each barrel to admit air, and the boxes were not made tight either. The goods were put into the forward rooms of the ship.

The general condition of market trade is good and the prospect for Christmas is bright.

The dull weather at this time is not favorable for the production of first-class lettuce, cucumbers or tomatoes. Mushrooms are abundant and falling in price.

Apples—Albarmarle Pippin, Va., poor to fair, \$2@3; good to fancy, \$4@6; Winesap, Va., poor to fair, \$2@2.50; good to fancy, \$3@4; Johnson's Winter, Va., poor to fair, \$2@2.50; good to fancy, \$3@4; King, State, poor to fair, \$2@2.50; good to fancy, \$3@3.50; Ben Davis, Western, poor to fair, \$2@2.50; good to fancy, \$2.75@3.50; Greening, State, poor to fair, \$2@2.50; good to fancy, \$3@3.75; Baldwin, State, poor to fair, \$1.75@2.50; good to fancy, \$2.75@3.25; N. Spy, State, poor to fair, \$1.75@2.25; good to fancy, \$2.50@4; mixed lots, poor to fair, \$1.50@2; good to fancy, \$2.25@3.

Pears—Beurré Bosc, per barrel, \$2@3, Lawrence, per barrel, \$1.50@2.50; Beurré Clairgeau, per barrel, \$2@2.50; Beurré d'Anjou, per barrel, \$1.75@2.50; Vicar, per barrel, \$1.25@1.75.

Grapes—Catawba, fancy, per small basket, 10c.; Catawba, ordinary, per small basket, 7@9c.; Concord, per small basket, 7@9c.; Concord, in trays, per 100 pounds, \$1.25@1.75; Catawba, in trays, per 100 pounds, \$1@1.50.

Oranges, etc.—Florida, fancy, bright, best sizes, per box, \$3.75@4; straight lines, per box, \$3.25@3.50; russett, fair to choice, per box, \$3@3.25; rough and coarse, per box, \$2.50@2.75; grape fruit, bright, per box, \$5@7; mandarins, per box, \$4@6; tangerines, per box, \$7@10.

Nuts—Hickory nuts quiet; freely offered at \$1@1.50 per bushel of 50 pounds; bull nuts quoted 50@65c.

Brussels sprouts—Per quart, 4@7c. Cauliflowers—Choice to fancy, per barrel, \$3@5; fair to good, per barrel, \$2@2.50; culls, per barrel, \$1.

Celery—Choice, per dozen, 25@30c.; fair to prime, per dozen, 15@20c.; small, per dozen, 8@12c.

Cabbages—Jersey and Long Island, per 100, \$3@3.50; State, per 100, \$2.50@3.

Cucumbers—Florida, per acre, \$1@1.50.

Chicory—N. O., per barrel, \$3@4. Egg plants—Florida, per barrel \$5@6; Florida, per box, \$2.50@3.

Green peas—Charleston, per basket, \$1.50@2.50.

Lettuce—New Orleans, per barrel, \$2.50@4; Florida, per basket, 75c.@\$2; Charleston, per bushel basket, 75c.@1.25.

Onions—Orange Co., red, prime, per bag, \$1.75@2.25; Orange Co., yellow, per bag, \$1.50@2; Orange Co., white, per bag, \$1.50@3.50; Orange Co., inferior, per bag, \$1@1.25; State and western, yellow, flat hoops, \$1.25@1.75; eastern, white, per barrel, \$2.50@5; eastern, red, per barrel, \$2.25@2.75; eastern, yellow, per barrel, \$2@2.25.

Okra—Florida, per carrier, \$1@2.

Peppers—Florida, per carrier, \$1.50@2.25.

Radishes—Norfolk, per 100 bunches, 60@75c.

String beans—Florida, round, wax, per basket, \$1.50@2; Florida, round, wax, per crate, \$1.50@2.25; Florida, flat, wax, per basket, \$1@2.50; Florida, flat wax, per crate, \$1@2.25; Florida, green, per basket, \$1.50@2.50; Florida, green, per crate, \$1@2.50.

Spinach—Norfolk, per barrel, \$1.25@1.50; Baltimore, per barrel, 75c.@\$1.

Tomatoes—Florida, prime, per carrier, \$2@2.25; Florida, fair to good, carrier, \$1.50@1.75.

Turnips—Russia Can., car lots, per barrel, 60@90c.

Cucumbers, per dozen, 50@90c.

Mushrooms, per pound, 25@40c.

Tomatoes—Per pound, 10@25c.

Lettuce—Choice to fancy, per dozen, 40@60c.

The outlook.—Indications point to an ample supply of turkeys for the holidays. Invoices are increasing rapidly, and while there will undoubtedly be a good demand for choice to fancy stock, moderate prices are generally expected, most receivers not looking for more than 12@18c. for average run of best western. There does not appear to be much hope for any material improvement in fowls and chickens until after the holidays. Fancy ducks and geese will sell fairly, but ducks expected to be plenty and prices moderate, while ordinary geese will not be wanted.

Turkeys—Jersey and up-river, fancy, per pound, 14@15c.; Maryland and Delaware, fancy, 14@15c.; Maryland and Delaware, good to prime, 12@13c.; State and Penn., fancy, per pound, 12½@13c.; State and Penn., good to prime, 11@12c.; western, fancy, per pound, 12@12½c.; western, good to prime, per pound, 10@11c.; western, poor to fair, per pound, 6@9c.

Spring chickens—Philadelphia, fancy, per pound, 11@13c.; Philadelphia, fair to good, 8@9½c.; Jersey, prime, per pound, 9@9½c.; State and Penn., good to prime, 8@8½c.; western, dry-picked, prime, per pound, 7½@8c.; western, scalded, prime, 7½c.; western, fair to good, per pound, 6@7c.; western, inferior, 4@5c.

Fowls—State and Penn., good to prime, 7@7½c.; western, prime, 7c.; western, fair to good, per pound, 6@6½c.; western, inferior, 4@5c.

Ducks—Near-by, fancy, per pound, 9@10c.; western, fancy, per pound, 8c.; western, poor to good, per pound, 4@7c.

Geese—Maryland, prime, per pound, 9@10c.; western, prime, 8c.; western, poor to good, per pound, 4@7c.

Squabs—Choice, large white, per dozen, \$2@2.25.

Philadelphia.

This market has cleaned up very well during the past week; prices are firmer under light receipts of many things.

Hothouse grapes are not in good demand, 50c. to 60c. being the best price for home-grown stock.

Hothouse tomatoes are moving fairly well at 20c. to 25c. per pound.

Good stock mushrooms sell well at 50c. to 60c.; but most of the stock coming in is poor and off color.

Receipts of apples have been light and prices keep firm. Kings, choice, per barrel, \$3.50@4; Winesaps, choice, per barrel, \$3.50@3.75; do. fair to good, \$2.50@3; Ben Davis, choice, per barrel, \$3@3.25; do. fair to good, \$2@2.50; Rome Beauty, choice, per barrel, \$3.50@3.75; do. fair to good, \$2.25@3; Greenings, choice, per barrel, \$3.25@3.75; do. fair to good, \$2@2.50; Baldwin and Spy, choice, per barrel, \$3@3.50; do. fair to good, \$2@2.50; mixed varieties, choice, per barrel, \$3@3.25; do. fair to good, \$2@2.25.

Pears—Beurré Bosc, per barrel, \$2.50@3.50; Beurré Clareaeu, per barrel, \$2@2.50.

Grapes—Catawba, per 5-pound basket, 7@8c.; Concord, per 5-pound basket, 6@8c.

Brussels sprouts—Per quart, 5@10c. Cauliflower—Choice, per barrel, \$2@3; fair to good, \$1.50@1.75.

Cabbage—No. 1, per 100, \$2.50@3; No. 2, per 100, \$1.75@2.

Cucumbers—Florida, per crate, \$1@1.50. Egg plant, Florida, per box, \$2@2.50.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,
&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION
HOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

**A \$7.00
BOOK OF
EUGENE
FIELD'S
POEMS**

to each person interested in
subscribing to the Eugene
Field Monument Souvenir
Fund. Subscriptions as low
as \$1.00 will entitle the donor
to this handsome volume
(cloth bound, size 8 x 11) as
a souvenir certificate of sub-
scription to the fund toward
building a monument to the
Beloved Poet of Childhood.
But for the noble contribution
of the world's greatest artists
this book could not have been
manufactured for less than \$7.
Address: EUGENE FIELD MONUMENT SOUVENIR FUND,
414 First Dearborn Building, Chicago, Ill.

Randomly Dis-
tributed by 25 of the
World's Greatest
Artists.

Address: EUGENE FIELD MONUMENT SOUVENIR FUND,
414 First Dearborn Building, Chicago, Ill.

Mention this journal, as advertisement is inserted as our contribution.

Lettuce—Southern, per barrel, \$2.50@3; per basket, \$1.75@2.25.
Onions of choice stock have been scarce with good demand; choice white, per barrel, \$3.50@4.50; choice yellow, \$2@2.50; fair to good, per barrel, \$1.50@1.75; choice yellow, per bushel, 75@80c.; fair to good, 60@70c.

Radishes—Norfolk, per 100 bunches, \$1@1.50.

String beans—Florida, wax, per basket, \$1@1.50; Florida, green, per basket, \$1@1.75; Charleston, green, per basket, \$1.25@2.

Spinach—Norfolk, per barrel, \$1.50@2.

Tomatoes—Florida, per carrier, \$2@3.

Potatoes, choice stock, have been in good demand, and selling in carload lots at 75@80c. per bushel; fair to good, 65@70c. per bushel. Jersey sweets, per basket, 50@55c.; Southern sweets, per basket, 30@40c.

Boston.

Cranberries higher; fancy stock bringing \$7 at the beginning of the week, and a little bit scarce; crates \$2@2.25.

The apple market is in good shape for anything that is fancy; there is plenty of common stock, telling too truly that the farmers had an idea that there were no apples and that everything would go; a few fancy Nova Scotia Kings placed on Monday at \$6 a barrel; Talman Sweets are wanted \$3@4 a barrel; fancy Ben Davis, high color and good size, \$3@3.25; a choice Baldwin worth \$3.25@3.50; few fancy packed New Hampshire Baldwins bringing \$4; Greenings could be quoted \$2.50@3.50. Readers must keep in mind these prices are for the quality that in other years was known as "choice No. 1." the "off" qualities offered on the market are bringing prices "off from these figures."

Egg plants \$3 a dozen; Virginia sweets \$2.50@3 a barrel; Jersey \$3.25@3.50; not quite as scarce as last week. Spinach 30@40c. a bushel.

Fancy cucumbers are in good demand at 8c. each; anything not up in quality sells hard and at low prices. Cauliflower \$2.50@3 for choice; some small bring only \$1@1.25 a dozen; Brussels sprouts 15c. a quart; cabbage in larger supply, bringing 4@5c. each.

Celery is druggish, excepting for the Boston Market, which is not in any too large supply, and easily brings \$1.50@1.75.

Onions having their own way \$2@2.25 a barrel; some home stock brought in early in large round-hooped barrels, realized \$2.50.

Turnips take a range from 75c. to \$1.50. Radishes 25@35c. a dozen. Mint 50@75c. a dozen. Oyster plant 75c. a dozen.

Burré Bosc pears \$3@3.50 a bushel; some Seckels offered and move at any price buyer will pay, from \$2 to \$2.50 a bushel; Anjous steady at \$2.50.

Leeks 40@50c. a dozen. Parsley unchanged at 75c. a bushel. Artichokes \$1.50. Carrots 75c.@\$1. Parsnips or beets 50@60c. bushel.

Florida green beans selling well at \$3.50@4 a crate; while the wax move slower at \$2.50 a crate.

Lettuce sells hard on account of the smallness of the heads, 30@40c.

York State mushrooms 30@40c. a pound; home-grown 50@60c.

Hothouse tomatoes not quite as high 15@25c. a pound; California four-basket carriers about \$1.50, some trying to get \$2.

Gros Colmar or Allcant hothouse grapes \$1@1.50 a pound; Black Ham-burgh 75c.@\$1.

Few Florida pines here of the large variety, 35@60c. each.

Green Mountain potatoes quite firm 80@85c.; Hebrons and White Stars 75c.; red varieties 60@70c. a bushel.

Hubbard squash firm, Western bringing \$25@30 a ton; while nearby fancy stock bringing 2@2½c. a pound. Mar-row sells \$1.25@1.50 a barrel; Bay State \$1.25; Turbans \$1.50. The hardest thing perhaps to be found on this market to-day is "choice apples."

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Agricultural, etc.		A.	B.	General—Con.		A.	B.
American Agriculturist.....	\$1 00	\$1 85	Donahoe's Magazine.....	\$3 00	\$2 00		
Breeders' Gazette.....	2 00	2 40	Eclectic Magazine.....	5 00	5 25		
Country Gentleman.....	2 00	2 75	Electrical Review.....	3 00	3 20		
Farmers' Advocate (Canada).....	1 00	1 75	Engineering Magazine.....	3 00	4 00		
Farmers' Magazine.....	1 00	1 75	Forest and Stream (new only).....	4 00	4 26		
Farmers' Review.....	1 00	1 90	Forum, The.....	3 00	3 00		
Farm, Field and Fireside.....	1 00	1 50	Frank Harrison's Magazine.....	50	1 40		
Farm and Fireside.....	50	1 40	Frank Leslie's Popular Monthly.....	3 00	3 50		
Farm and Home.....	50	1 40	Godey's Magazine.....	1 00	1 90		
Farm Journal.....	50	1 25	Golden Days.....	3 00	3 35		
Farm News.....	50	1 20	Good Housekeeping.....	2 00	2 70		
Gleanings in Bee Culture.....	1 00	1 85	Harper's Bazaar.....	4 00	4 25		
Home and Farm.....	50	1 45	Harper's Magazine.....	4 00	4 25		
Indiana Farmer.....	1 00	1 85	Harper's Weekly.....	4 00	4 25		
Mass. Ploughman, new.....	2 00	2 60	Harper's Round Table.....	2 00	2 50		
Michigan Farmer.....	1 00	1 60	Home Queen.....	50	1 35		
National Stockman and Farmer.....	1 00	1 85	Illustrated American.....	4 00	4 30		
Nebraska Farmer.....	1 25	1 85	Independent.....	3 00	3 60		
New England Farmer.....	2 00	2 50	Jenness Miller's Illus. Mag.....	1 00	1 75		
Ohio Farmer.....	1 00	1 60	Judge.....	5 00	5 20		
Orange Judd Farmer.....	1 00	1 85	Judge's Library.....	1 00	1 85		
Pacific Rural Press.....	2 40	3 00	Ladies' Home Journal, The.....	1 00	1 90		
Practical Dairymen.....	50	1 35	Ladies' Home Companion.....	50	1 45		
Practical Farmer.....	1 00	1 85	Ladies' World.....	35	1 30		
Prairie Farmer.....	1 00	1 85	Leslie's Illustrated.....	4 00	4 40		
Rural New Yorker.....	1 00	1 80	Life.....	5 00	5 40		
Southern Cultivator.....	1 00	1 85	Lippincott's.....	3 00	3 25		
Southern Farm.....	1 00	1 85	Macmillan's.....	3 00	3 60		
Southern Florist and Gardener.....	1 00	1 75	McClure's Magazine.....	1 00	1 90		
Strawberry Culturist.....	50	1 85	Munsey's Magazine.....	1 00	1 90		
Strawberry Specialist, new.....	50	1 00	Nation, The.....	3 00	3 80		
Renewals.....	50	1 25	New England Magazine.....	8 00	8 50		
Texas Farmer.....	1 00	1 75	New York Ledger.....	2 00	2 50		
Texas Farm and Ranch.....	1 00	1 85	" Tribune (Weekly).....	1 00	1 90		
			" World (Tri-Weekly).....	1 00	1 75		
Horticultural, etc.			North American Review, The.....	5 00	5 50		
Canadian Horticulturist.....	1 00	1 90	Notes and Queries.....	5 00	5 50		
Garden and Forest.....	4 00	4 25	Observer, new only.....	3 00	3 25		
Gardening (Chicago).....	2 00	2 50	Renewal.....	3 00	4 00		
Meehan's Monthly.....	2 00	2 85	Outing.....	3 00	3 35		
Vicks.....	50	1 85	Park and Cemetery.....	1 00	1 85		
Poultry.			Peterson's Magazine.....	1 00	1 85		
Americana Poultry Advocate.....	25	1 15	Philadelphia Press (Weekly).....	1 00	1 85		
Fancier's Review.....	50	1 85	Phrenological Journal.....	1 50	2 25		
Farm Poultry.....	1 00	1 50	Popular Science Monthly.....	5 00	5 65		
Ohio Poultry Journal.....	65	1 50	Popular Science News.....	1 60	2 50		
Poultry Herald.....	50	1 40	Puck.....	5 00	5 10		
Poultry Keeper.....	50	1 35	Puck's Library.....	1 20	1 95		
Poultry Monthly.....	1 00	1 25	Puritan.....	1 00	1 90		
Reliable Poultry Journal.....	50	1 40	Review of Reviews.....	2 50	3 25		
General.			Scientific American.....	3 00	3 60		
Advance (Cong'l) new.....	2 00	2 60	" Supplement.....	5 00	5 25		
renewals.....	2 00	2 90	" with.....	7 00	7 25		
American Field, new.....	4 00	4 25	" Builders' edition.....	2 50	3 10		
renewals.....	4 00	4 50	" inc. B'l'ds' edit.....	5 50	5 75		
American Kitchen Magazine.....	1 00	1 75	All 3 editions.....	9 00	9 25		
American Machinist.....	3 00	3 20	Scribner's.....	3 00	3 60		
Aquarium.....	1 00	1 75	St. Nicholas.....	3 00	3 60		
Arena.....	3 00	3 60	Sunday School Times.....	1 50	2 10		
Art Amateur.....	4 00	4 35	Texas Siftings.....	4 00	4 25		
Art Interchange (with plates).....	4 00	4 85	The Etude, new only.....	1 50	2 15		
Atlantic Monthly.....	4 00	4 80	renewals.....	1 50	2 25		
Ave Maria.....	2 00	2 70	The Outlook.....	3 00	3 35		
Babyhood.....	1 00	1 90	Toledo Blade.....	1 00	1 85		
Baptist Missionary Magazine.....	1 00	1 90	Turf, Field and Farm, new.....	4 00	4 25		
Carpentry and Building.....	1 00	1 85	renewals.....	4 00	4 60		
Century.....	4 00	4 60	Womankind.....	50	1 20		
Chicago Herald (Weekly).....	1 50	2 35	Young Ladies' Journal.....	4 00	4 60		
Chicago Inter-Ocean.....	1 00	1 80	Youth's Companion, new only.....	1 75	2 35		
Chicago Weekly Times.....	50	1 40	Renewals.....	1 75	2 75		
Christian Herald.....	1 50	2 15	Foreign.				
Christian Register.....	3 00	3 85	Farm and Home.....	2 25	3 25		
Churchman.....	3 50	4 10	Field.....	10 50	11 00		
Colman's Rural World.....	1 00	1 85	Garden.....	4 50	5 25		
Cosmopolitan.....	1 00	1 90	Garden Work.....	2 50	3 25		
Delineator (Butterick's).....	1 00	1 90	Gardener's Chronicle.....	4 50	5 25		
Demorest's Monthly Magazine.....	2 00	2 60	Gardener's Magazine.....	4 50	5 25		
Detroit Free Press (Weekly).....	1 00	1 90	Gardening, Illustrated.....	2 25	3 00		
Domestic Monthly.....	1 50	2 15	Gardening World.....	2 50	3 25		
			Journal of Botany.....	4 75	5 25		
			Journal of Horticulture.....	4 00	4 85		
			Kew Gardens Bulletin.....	1 50	2 25		
			Revue Horticole.....	5 50	6 10		

Address all Orders to AMERICAN GARDENING, P. O. Box 1897, New York.

The Henry Strawberry!

To Meet The extraordinary demand for this unequalled Strawberry we are preparing 100,000 Henry plants for delivery through next Spring to

Premium Earners

Henry Strawberry Plants can be obtained solely through a subscription to AMERICAN GARDENING; as the publishers will not sell plants under any consideration;

Neither will Mr. Jerolaman who has signed a contract with us to that effect.

Who is Entitled to Plants

NEW SUBS. AND RENEWALS

Five plants of the Henry will be mailed, postpaid, as a premium to every Renewal or New Subscriber sending us \$1.00 for a year's subscription. When remitting be sure to state if you want this premium.

TO AGENTS AND WORKERS

For every \$1.00 received from agents and present subscribers for New Subscriptions, we mail, postpaid, Ten Henry plants, Five to the New Subscriber and Five to the Agent.

Special to Club Raisers!

CLUBS OF TEN

To every agent sending us in a club of Ten New Names and \$10.00 we will forward in payment therefor One Hundred (100) Henry Strawberry Plants, by express, as well as send Five plants, postpaid, to each person in the club.

All orders are now held for Spring Delivery....

The series of articles on "Big Berries for All," written by Mr. H. Jerolaman for AMERICAN GARDENING, with additions, will soon be in pamphlet form; and agents and friends will be supplied with copies on receipt of stamp. It will be the most unique pamphlet on the Strawberry ever issued.

Address Your Letters to
AMERICAN GARDENING, NEW YORK.
P. O. Box 1697.

NEW CREATIONS IN FLOWERS.

If you want to know about them send 10 cts. for Mrs. Theodosia B. Shepherd's

New Catalogue of Rare and Beautiful Flowers.

Many New Begonias, New Cosmos, Rare Cacti, etc., not offered by others.

Ventura-by-the-Sea, - California

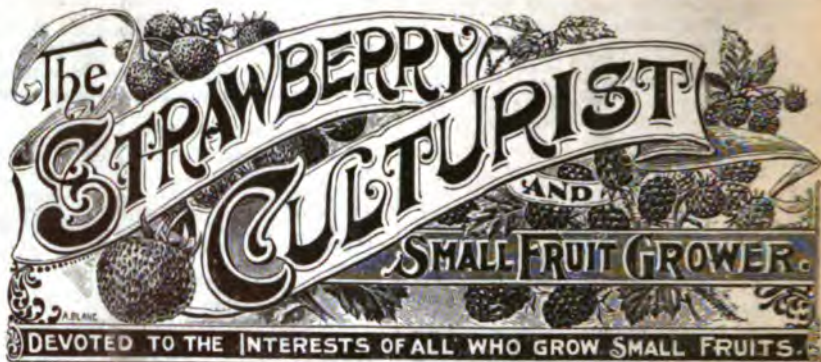
Mention American Gardening when you write.

**MAKE
YOUR
FLOWERS
GROW**

Peerless Flower Food will do it. Urges nature to do her utmost. Gives new life to drooping plants, makes everybody lucky with flowers. Clean and odorless. Price 25 cents per pound pkg. By mail 40 cents.

Sharpless & Carpenter,
121 S. Delaware Ave., Philad.

Mention American Gardening when you write.



A Monthly Journal Published at Salisbury, Md.,

By W. F. ALLEN, Jr.

The only paper published **Devoted Exclusively to Small Fruits.**

Small fruit growers can gain more valuable information from one year's subscription to this paper than by reading any book published on the subject at three or four times the cost. The STRAWBERRY CULTURIST, unlike most other Horticultural and Agricultural Journals, is edited on a farm, by a farmer and a farmer's son, who was brought up at the plow handles or hoeing in the berry fields. Its contributors are of the same stamp, and what they say is practical and not theoretical. It is from experience that they write, which is far more valuable to those seeking information than the words of polished theorists, who, in reality, do not know a cultivator from a hay rake.

SUBSCRIPTION PRICE ONLY 50c. PER YEAR, including 6 plants free by mail of the Marguerite Strawberry illustrated above. Sample copy free.

Address **THE STRAWBERRY CULTURIST, Salisbury, Md.**
Mention American Gardening when you write.

1846.

1898.

AMERICAN GARDENING

"Intensive Cultivation is the Keynote to Success."

A WEEKLY JOURNAL DEVOTED TO GARDENING AND FRUIT CULTURE IN THE OPEN AND UNDER GLASS.

VOL. XVIII. No. 157.
COMBINED SERIES VOL. LI.

NEW YORK, DECEMBER 25, 1897

5 CENTS A COPY.
\$1.00 A YEAR

CONTENTS OF THIS ISSUE:

Asparagus Sprengeri... 883	Fence Portable..... 880	Orchids Shown..... 892	Rockery, A Home..... 878	Watering..... 880
Avenue Trees..... 882	Fruit Garden..... 878	Peach Culture, Experi- ments in..... 880	Roses, Typical..... 880	Window Garden, The.. 889
Beekeeper, The..... 887	Grape, Fruiting..... 881	Peninsula, Fruit Grow- ing On The..... 870	Shrubs From Cuttings.. 881	
Black Langshan, The... 870	Jacobs, P. H..... 887	Poultry Yard, The..... 871	Sled Runners, Handy.. 880	Illustrations.
Cannas, Wintering..... 881	Market Reports, New York, Boston, Phila- delphia..... 804	Private Gardeners..... 892	S rawberries, How To Grow..... 883	Asparagus Sprengeri Grown in Jadoo..... 883
Celery Storing..... 878	Mushroom Matters..... 881	Privet, Pruning..... 881	Strawberries, Improv- ing..... 882	Jacobs, Mr. P. H..... 887
Clematis Dying Off..... 884	Nepenthes, The..... 878	Question Box..... 885	Tomatoes, Fertilizing.. 180	Nepenthes Hookeriana. 877
Clematis, Pruning..... 882	N. Ills. Horticulturists.. 886	Readers' Club..... 881	Tools of 1702..... 883	Rockery, A Simple..... 879
Experiment Station Work..... 878				Sled Runner, Handy... 880

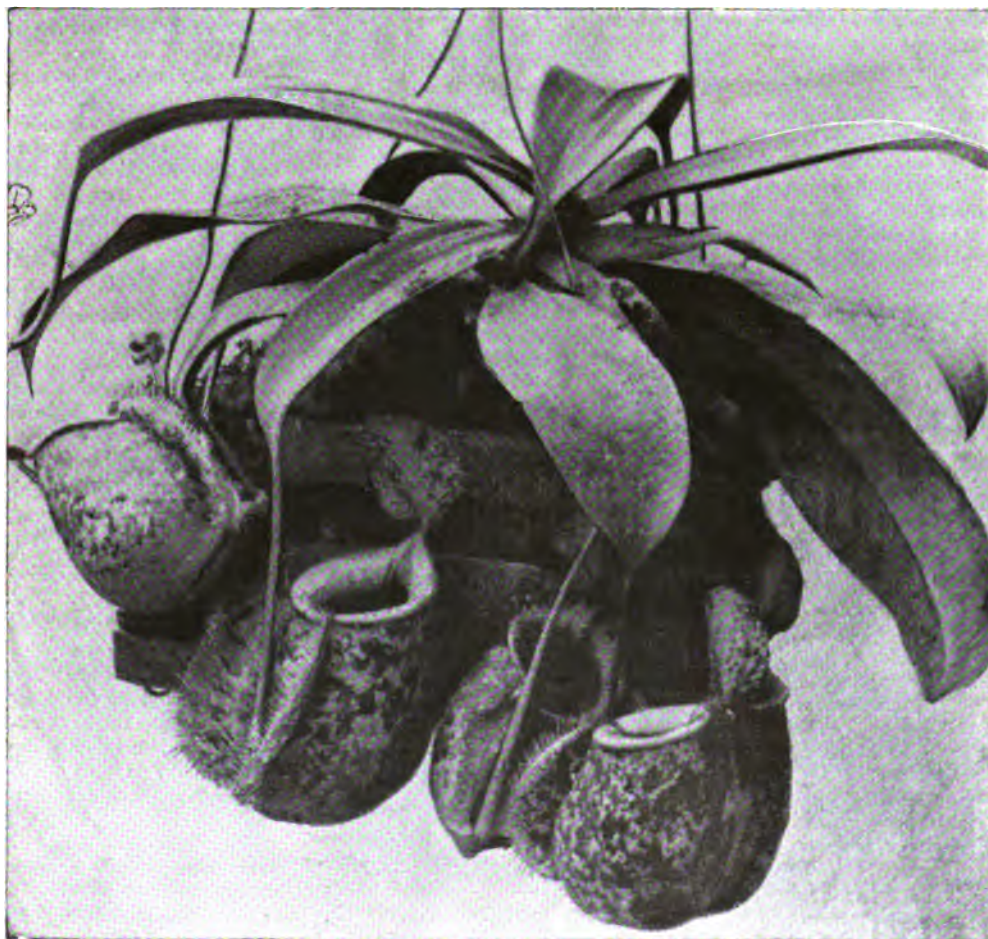


FIG. 243.—NEPENTHES HOOKERIANA. THE ASIATIC PITCHER PLANT.

(See next page.)

The Nepenthes.

Among the many curious and beautiful subjects which have come to ornament our greenhouses from tropical Asia there are none more singular nor of more exquisite appearance than the *Nepenthes*, or as they are commonly called, Pitcher plants.

Our front page illustration shows a well-grown plant of *Nepenthes Hookeriana*, which was discovered at Sarawak, a province of Borneo, and not far from the Equator, in the year 1847. *N. Lindleyana* and *N. Loddigesii* also were found in Borneo that same year.

Noting the locality from which these gems were collected, it is not to be wondered at that they indulge in high, moist temperatures when under cultivation. The heat necessary for them varies from 60 to 90 degrees, the first named is about the lowest they will stand in the winter months, and to be successful with them they need at all times considerable moisture in the atmosphere.

In our climate *Nepenthes* are comparatively easy to grow under glass and will produce their pitchers much more readily than they do in some European countries where the sun is less powerful.

The plant grows best in a pan or basket depending from the roof. The compost most generally used is fibrous peat, charcoal, potsherds, and sphagnum moss; good drainage is one of the essentials and the dressing of moss prevents evaporation.

If the plants are ever needed for decoration or exhibition a point to remember is that the pitchers will stand all this and give great satisfaction by their wonderful endurance, providing the liquid secretion always found in the bowl naturally is not lost, so that one of the points to guard against is the tipping or spilling of this, otherwise the pitcher soon dies. Propagation is carried on from seed or offsets. A strong moist heat is necessary to germination.

Concerning Experiment Station Work.

To the Editor of American Gardening.

It is very much to be regretted that we have such outbursts as those from Mr. Rose and Mr. Wright published on page 810 of AMERICAN GARDENING, with regard to the experiment stations.

These men seem to condemn our experiment stations *in toto*; they regard them as nuisances and even compare them with that almost universally condemned humbug, the annual seed distribution! They say that in most cases there is harm done rather than good by the experiment stations' tests, that both time and money are wasted, and that we are given no practical results. Yet they claim that experimental work is all right if mixed with a little common sense!

How many new kinds of strawberry plants, or for that matter, any other plants, did they send to have tested? Did they get unfavorable reports from the station as the results of testing those plants?

The government maintains a station in every state at a big expense; many states have state stations extra, and they are to-day and always have been of inconceivable benefit to the horticultur-

ists as also to the common one-horse farmer; in fact, they show partiality to none, but give actual facts, as they are from trial. A well-conducted station can determine what a new plant is worth by using a one-half dozen as certainly as if there had been a one-half thousand planted; furthermore, station officers are necessarily compelled to test all new things on as small a scale as possible, because hundreds of different tests may have to be made, and hardly any station has more than 15 or 20 acres to use for trial grounds.

Who has taught the orchardist, truck farmer, or general farmer to prevent the depredations of noxious insects, or how to eradicate them entirely? Who has given and published formulæ for the best and most suitable manures in order to save thousands of dollars to those not acquainted with their uses? The experiment stations.

Many a farmer has been helped on the road to success by studying their bulletins, and it is to be regretted that we still have men living who regard their work as comparatively nothing and mere child's play! Who will gainsay the abilities of such men as Profs. Bailey, Atwater, Green, Smart, and many others, who have given their life work for the benefit of the farmer, and who receive comparatively little compensation for their unceasing labors? Who, I say?

Those men in making their "kick" against experiment stations put me in mind of the fellow who believed that "book learning was no good no how;" so they had better experiment for themselves hereafter. It would be a good idea to question these soured gentlemen on experiment station work, by whom it was brought about and determined if this great of greatest industries of making sugar out of sugar beets can be profitably carried on in the United States, East as well as West. That sugar can be made out of beets has long ago been known, but through tests and actual experiments, our various stations have come to the assistance of the farmer and informed him on what kind of land to grow the beets, what kinds of fertilizers to use, how to cultivate and produce beets which would yield the greatest amount of sugar. No one farmer could make these tests, the experiment stations alone could do so. Now see the result: even in New York state, where it was supposed beets would do no good, the sugar beet industry is to-day a success, and no doubt in the course of a few years, every state in the union will have its sugar factories to enrich the farmers, at least those of them that will raise the raw material!

Through whose effort were brought about all the benefits the farmer derives from this new industry? Certainly not through those of men like those mentioned above, but solely and only through the scientific and untiring efforts of our experiment stations. M.

Subscribers will note that the year is rapidly closing. Encourage us in our efforts by sending in your renewals early, also new subscriptions. Tens of thousands would gladly subscribe to AMERICAN GARDENING did they but know of its existence and its great value.

The Fruit Garden.

As the end of the year draws near and we begin to write for the last number, we find ourselves thinking not of what we are going to do, but of the past year and what work has been accomplished. Has our work benefited anyone? Has it been a case of empty words and self?

To the last I can emphatically answer. No; but a weekly practical routine of worked-out facts, given not as the only right mode, but partly as a questioner after other worker's methods. As to the last idea, it was apparently a failure, or the subjects were too weak to deserve the comment of others; it certainly was not perfect even to the writer.

But if anyone has derived benefit from the weekly message, the main object for its commencement will have been attained. Should any member of the spade wander this way he will find a ready questioner on garden sauce, who with his partner's help, will endeavor to make life bearable for the wanderer.

J. HOLLOWAY, Glen Cove, L. I.

A Home Rockery.

My rockery pictured in the accompanying sketch, is 20 feet long, 2 feet 6 inches high, and 2 feet 6 inches across the top. It is built of rough cobble stones held together with Portland cement. At the bottom I had well-rotted manure with sandy loam say to 6 inches; my Ferns and Cannas did well.

The rockery filled in a vacant place and was very ornamental and much admired. It is at the north side of the front entrance, covered by the foliage of Chestnut and Maple trees with lattice fence dividing from a tennis lawn belonging to my neighbor, whose house is some hundred feet beyond, and shades from the north wind.

In moving Ferns they should be taken up when the fronds begin to appear: if the operation be delayed they do not do as well. In this section there are a great number of our native Ferns. I find them all to do equally well, and so with other wood plants. If your readers will try a rockery or fernery, they will, as I do, derive a great deal of solid satisfaction and pleasure.

PALMER BURROWS, M. D., Ont.

Storing Celery.

When reading in your paper of the different ways of keeping celery, I have been tempted to tell my way. Supposing the celery is grown to full size, I cut off all the roots and the useless green stalks, and pack in convenient sized dry goods boxes, alternate layers of celery and sphagnum. The moss must be damp but not soaking wet. I nail up the boxes and pile them up out of doors until decided cold weather, then remove to barn or shed, and keep there until it is no longer safe to do so, and then finally to the cellar.

The essential conditions are damp, but not wet, and as cold as possible without spoiling. I have frequently kept even White Plume until March perfectly.

J. T., Conn.

Fruit Growing on the Peninsula.

Conditions and Prospects.

Few people who have never visited this peninsula, have any idea of its capabilities or possibilities as a fruit and vegetable growing locality. No especial effort is ever made to advertise it, except what is seen from the railway trains, and as a rule, a railroad does not show up a country to its best advantage. At Chicago where our products would have compared with those of any other state, the whole appropriation was gobbled up in a little cottage suitable for the seashore, or to show a few old rags left from the wardrobe of some Revolutionary hero. I never saw finer crops grown here than were produced in 1893, and not a handful could we have for exhibition; so, as previously stated, our products, except Delaware peaches, are but little known and are scarcely celebrated.

Many people speak of the Delaware peach orchards as if that fruit was

man, but our fertilizer bills offset his water tax, or labor bills. Taxes are 50 cents on the \$100 in most of our counties, while they are \$1 or more elsewhere. Farm labor at 75 cents a day, where \$1 is paid North and West, and board given too in many places.

Our yields of crops also compare with other localities. A neighbor of mine got 50 bushels of wheat per acre this year, and yields of 25 to 35 bushels were quite the rule. Around the northern portions of the state yields of 40 bushels were the rule. I have seen fields of 50 and 100 acres of corn in Queen Anne's Co., Md., that would shuck 50 to 75 bushels to the acre right along; and clover that cuts two tons easily.

In the matter of fruits, this section has always been known as the chief source of supply of peaches for New York, Boston, Philadelphia, Baltimore, and the many lesser cities of the Middle and New England states. At one time there were more than 10,000,000 peach trees grow-

the factory. You see these canning factories at nearly every station on the railroad. A large concern at Dover cans beef, ham, poultry, plum pudding, etc., and has a world-wide reputation for its products.

The late Governor Marvil was the pioneer basket and crate manufacturer. I believe he invented the package and made a fortune out of its manufacture. Many towns have similar factories which use up quantities of gum and pine timber for all kinds of shipping packages.

Our towns don't furnish enough pickers in berry season, so tents are erected which hold from eight to twelve people, and families come from the oyster and fish localities after their work there is done; they live in these tents during berry season and help pick. Some growers get pickers from the cities also. Many growers have a store and are able to provide their labor with anything they wish at market price, but do not compel them to deal with them. The butcher's wagon and baker's cart make daily trips to these shanties and often do a lively business. A man sells lemonade, cakes, pies and peanuts in the field and on Saturday has a good pile of checks to be cashed with those of the pickers.

The railroad companies run entire trains of fruit, potatoes, and melons. Thousands of acres of watermelons and cantaloupes are grown and shipped by the train load. The two lower counties of Virginia may be styled one vast potato patch where the main crop is sweet potatoes, the soil being admirably adapted to this crop. I have seen tubers that weigh nine pounds, and I also grew 13 that filled a 5-8 bushel peach basket.

To a traveller in May, there is no prettier sight to look upon than fields after fields of crimson clover. This is made into ensilage, hay, or plowed under for manure. It will grow on any land, rich or poor, but the richer the land the larger the crop. As an improver of worn-out lands it is equal to \$10 to \$12 an acre on any land. Cow peas may follow this crop, giving two crops of green manure the same season, furnishing quantities of nitrogen, that most valuable and expensive element of plant food.

The weather, as a rule, is good, climate mild. To-day (December 11) the mercury stands at 68 degrees in the shade. While the ground has been frozen several times we have had no snow and but few days that outdoor work could not be done. January is about the beginning of winter, and some seasons it extends to March. We often can plow, seed, and do farming operations the last of February.

Nearly every winter we get ice for home use, but there is plenty of artificial ice, so no need to go without it.

Every portion of the peninsula has its advantages and disadvantages. I prefer the southern part of the state of Delaware, because we have both water and railroad transportation, and the promise of another railroad. Our soil is light and easily worked and has good bottom. Our fruits come earlier and sell higher; we have no lack of labor; we are in from three to ten hours of Wilmington, Philadelphia, Baltimore, Washington, New York, Boston, Hartford, Prov-

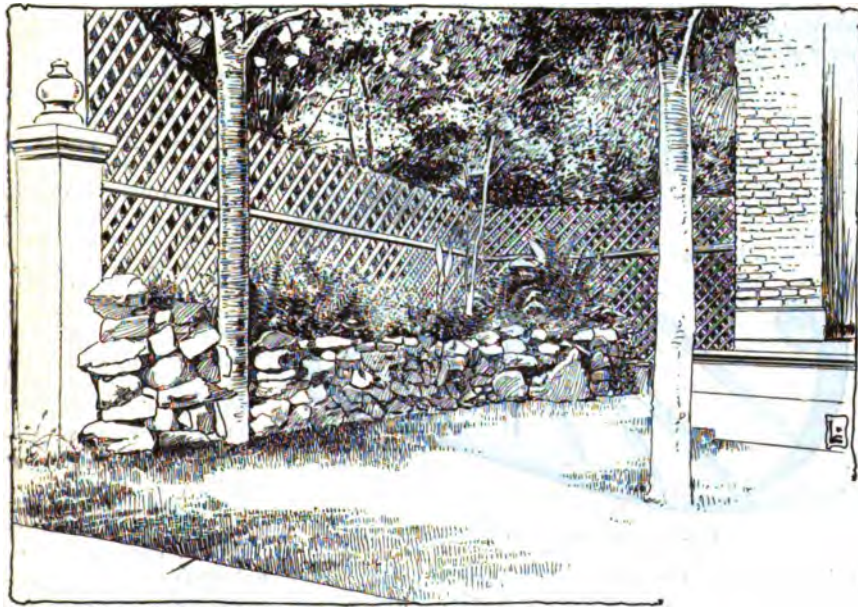


FIG. 244.—A HOME ROCKERY. (See opposite page.)

our only production, when in fact, there is no fruit, vine, or plant, that will grow in a temperate climate that will not grow here. We have wide-awake men, but hardly enough of them. The fact is crops are so easily produced that a fair living is assured every one, and there often is not that attempt made to secure more than a living as might be under other conditions. I have been in twenty states and seen good and bad farming, but I venture to say as good, neat farms are not often found as may be seen in many sections of Delaware and Maryland.

The county is nearly level, making the use of machinery easy. The country roads often of shell are, as a rule, good. The water courses abound in many kinds of fish, oysters, clams, crabs, and terrapin. Formerly any quantity of game birds abounded, but these have been killed rather closely. Still a good day's sport may often be had.

The soil in some localities is poor, in others good, but responds to, and shows for years the effect of, manures or clover. Nearly every town has a fertilizer factory; this would astonish a Western

ing here. Orchards of 25,000, 50,000 and more trees are not uncommon. More than \$100,000, was the net return for a single crop of peaches to a Maryland grower a few years ago, and the product of a single farm often reaches 150,000 quarts of strawberries, and 100,000 quarts of red raspberries annually.

You can go to many single growers and buy a car of strawberries, peaches, pears, potatoes, as easily as you could wheat or corn in the West, and I have seen 500 pickers at work in a single berry field.

The canning factory in my town claims to handle more peas than any other in the world. Its capacity is 100,000 cans per day, and six big hullers are used to hull them. The peas are grown by contract at 2½ cents per pound. They are either pulled up or cut with a mower, and hauled like hay to the cannery, where they are hulled and canned at once. The grower can have the vines for manure if he wants them.

The same factory later in the season handles peaches, tomatoes, and pears. More than 500 persons are employed in

idence, and in easy reach of all the interior markets of Pennsylvania, New York, and the New England states, the best in the world. No other section is so well situated.

The mean annual temperature is 51 to 53 degrees, with a rainfall of about 50 inches. There are no states in the Union that have so many bearing peach trees as Delaware and Maryland, and the approximate cost of producing them is lower than in any other locality in this country owing to fertile soil and a genial climate.

The state of Maryland produces one-third of the oysters of the world, the value of the product in 1892 being \$5,800,000.

Your correspondent who inquires on page 845, would get more for his money in Southern Delaware where he could grow peaches, which he could not do at Dover. His products would ripen earlier and sell for higher prices. He can bring up the land by means of cow peas, crimson and red clover, and commercial fertilizers and raise good crops at the same time.

I would not plant blackberries, but the Lucretia dewberry pays. For raspberries the Miller is the main variety. I would try some Loudon and the Logan berry is worth a test. Currants are not a paying crop, but gooseberries pay in some sections.

Every one grows more or less strawberries, the leading kinds being Bubach, Tennessee, Crescent, Haverland, Michel's Early, Brandywine, and others.

Of plums I would select some each of natives and Japans. Milton, Whittaker, and Wild Goose being among the best natives; Red June, Abundance, and Burbank the best of the Japans.

Meech and Champion are the best quinces. Kieffer pears have paid, but with the large quantities being planted, I doubt if they will pay in years to come.

Of peaches the Mt. Rose, Lady Ingold, Oldmixon, Foster, Reeves' Favorite, Wheatland, Elberta, Cowper's Late, Crawford's and Chairs' Choice are among the best.

Good winter apples like Stayman, Paragon, Missouri Pippin, Nero, York Imperial, Stark, and Lankford pay handsomely.

Some parties have made good money out of grapes. Sweet potatoes have paid handsomely the past season, and so have round; but a few years back they did not.

When a man is near a creamery he can keep cows at a profit, but if not, only enough for his own use will be found best. There is no better locality for pigs and poultry, and if properly handled both pay good profits. We have first-class schools and good churches in every town and locality.

CHAS. WRIGHT.

The 43d annual meeting of the Western New York Horticultural Society will be held January 26 and 27, 1898, in Rochester, N. Y. Essayists of well-known ability, both scientific and practical, will address the members and an interesting question box is arranged.

Portable Fence.

In your issue of November 6, I notice a short clipping and cut of a portable garden fence the panels of which are made of four boards and two standards and every second panel has six pieces to brace it. There is so much use for a piece of portable fence on every farm that the matter is of considerable importance but it seems as though the above mentioned style would be very costly. There are very few months in the year but what a piece of portable fence would be used if a practical, reasonably priced affair could be procured. We often need a piece to keep the chicks out of the garden while the seeds are sprouting, to make a sheep pen, to enclose the stacks, to make a pen to turn a lame or sick animal into. In this connection I wish to mention a hurdle or portable fence made by the Page Woven Wire Fence Co. at Adrian, Mich. Each panel is 8 or 10 feet long and 36 to 58 inches high, the panel frame is solid wrought iron and the wires are woven on by hand, making a very handsome affair. No posts are used except a short piece of round iron to be driven into the



FIG. 245.—HANDY SLED RUNNER.

ground for each length, and the panel frames are wedged together by a very simple and easily adjusted wedge. One man can put up 130 feet in an hour. It has given good satisfaction, and I believe it will supply a long-felt need on the farm.

J. H. R., Mich.

National Experiments in Peach Culture.

The committee which was appointed at the last meeting of the Association of Colleges and Experiment Stations for co-operative work in testing the five races of peaches in United States, and to find out their adaptability to different thermal lines, has agreed upon a plan and is submitting it to 24 different experiment stations and asking them to co-operate in this work. It might be interesting to individuals also to engage in this work. If the experiments prove what they reasonably appear able to do, the question of what varieties to plant in a given latitude will be easily determined. It could be easily predicted then from what races varieties should come which will be adapted to a given latitude. If this can be determined it will be an enormous saving of money to individual growers. They would at once discard all varieties

which come from races which they would know are not at all adapted to their latitude. Of course, it is expected that humidity will affect results, and therefore modify conclusions as well as latitude.

The following races and seedlings are recommended: Peen-To race: 3 Peen-To, 3 Angel, 3 Waldo. South China race: 3 Honey, 3 Pallas, 3 Early China. Spanish race: 3 Cabler's Indian, 3 Texas, 3 Victoria. North China race: 3 Chinese Ching, 3 Elberta, 3 Mamie Ross. Persian race: 3 Alexander, 3 Mountain Rose, 3 Oldmixon Free.

The following are members of the committee and will look after the experiments in their respective localities: Prof. R. H. Price, Texas; Prof. G. H. Powell, Del.; Prof. E. J. Wicson, Cal., and Prof. L. R. Taft, Mich.

Handy Sled Runners.

With the advent of winter one waits the snowy mantle over the earth, and when it comes sleighing is in order. To the farmer a wagon on sled runners becomes almost a necessity, and he will be glad

to know he can convert his wheel wagon by using the Handy Sled Runners as illustrated herewith. These are being introduced by the Electric Wheel Co. of Quincy, Ill., and will fit any farm wagon. You can take off your wheels and fit the runners to your wagon in a few minutes, no tool except an ordinary monkey-wrench being required. The runners are also arranged so that one can make an ordinary bobsled if desired. When attached to the farm wagon they will track

with other bobsleds as they are attached to the shoulder of your skains. They are made of wrought steel and will not snap off or break as the ordinary cast iron runners do, particularly in specially cold weather. The standard runners have tires 19-16 inches wide, and 9-16 inches thick.

Fertilizing Tomatoes.

To the Editor of American Gardening.

It seems evident from recent letters that tomato growers can produce the same results without bees as with them—a stroke of luck I suppose.

Last year I grew Livingston's Perfection, and the whole house during the season did not produce more than 100 pounds of fruit. At the present time I have had 150 pounds already, leaving about five times that amount yet to come on this crop. I account this success to having the bees; last year I did not have them. Was it the weather or the bees or variety grown? Perhaps the critics on tomato growing can explain. On the average, two tomatoes weigh one pound. The Lorillard is my favorite variety.

JOHN FRASER, N. Y.

THE READERS' CLUB

REPLIES TO THE PROBLEMS IN THE
QUESTION BOX.

Are Bees Necessary for Cucumbers?

I have had considerable experience in forcing the English cucumbers and I am quite sure it is not necessary to fertilize the flowers to get fruit; in fact, for market purposes, you will get better shaped fruit without fertilization. Anyone can try the experiment and will find a cucumber that has been fertilized will grow large at the end and small at the stem, which certainly would not improve the looks of the fruit for market. On the other hand, should any one desire to save seed the fruit that is intended for seed must be fertilized.

If we have come to a point where we cannot get good tomatoes without bees, I fear the bees will not improve them much; the structure of a tomato blossom is not very inviting to bees anyway.—Wm. T.

Fruiting Seedling Grape.

In answer to the question on page 865, about seedling grape, I speak from 15 years' experience as a private gardener. If the seedling of the White Almira grape is five years old, do as I have done. Cut back the vine any time this month or in February, only leaving one or two of the strongest eyes or buds on your two side shoots or branches. Give a good top dressing of rotted manure this month, and spade under in spring. Keep off aphids and mildew in summer with a mixture of sulphur and tobacco dust, applying this mixture with a bellows. You will then have fruit next year and no grafting is necessary. Prune your vines every year and top dress.

Seedlings produce a few bunches the third year if well pruned every year, and by the sixth or seventh year come into their full bearing. If the fruit is not of excellent flavor, I would advise you to graft from a good quality later on.—OTTO TREIBER, gardener for A. Friedlander, Esq.

Hardiness of Hale Plum.

Regarding the hardiness of the Hale plum in the vicinity of Boston, so far as I know, the first trees of this variety to be planted in that neighborhood were set out last spring, and they never have been wintered in that latitude; but here in central Connecticut, where the climate is fully as trying, they have gone through two winters past without the least injury to the wood, while the fruit buds are more hardy than those of Burbank or Abundance.—J. H. HALE.

Mushroom Flatters.

Replying to Agaricus (page 865) and taking the questions seriatim:

(1) Virgin soil is not absolutely indispensable. I have had equally good results from the use of good garden loam, free from stones or decayed wood.

(2) Have invariably found that beds covered with litter give better results than others. Beds made in a dry place, or where subject to any draughts, will do better if kept covered after mushroom

rooms appear. This is not so essential in mushroom houses properly constructed, where proper humidity can be maintained.

(3) My experience coincides with that of your foreman, that pin-heads, while they are virtually small buttons, have no vitality and rarely amount to much, even under best conditions.

(4) Every particle of the prepared manure should be moderately moist, but not wet enough that, by squeezing a handful in the hand, one drop of water should ooze out.

(5) Beds properly made should not be permitted to become dry, by preventing any evaporation of moisture therefrom, by covering as suggested in No. 2. When buttons "get stuck" it may result from insufficient heat and uncongenial moisture at the time of spawning, or by the use of weak or old spawn, which if stored in a very dry place, becomes very dry and hard. I have found it advantageous to keep spawn bricks packed in paper, or in nearly air-tight wooden boxes. Should the beds be dry, water the straw covering on top, sufficient to permit the bed to absorb the moisture. Do this every morning until the bed is fairly moist.

(6) I have had equal success with four beds one above the other, as with on the floor proper. This of course depends upon the position and structure of house. If on the north side of other buildings, or shaded from direct rays of the sun, with double walls and roof, so that an equal degree of moisture permeates the whole house, the tiers can be successfully operated.

(7) We have never noticed that iron was injurious to mushrooms.

(8) In some experiments made some years since, I found the use of one ounce of nitrate of soda per gallon of water, used for watering or syringing, gave better crops, but not perceptibly better than by the use of clean rain water. Either is much better than ordinary well water.

(9) Darkness is not necessary. Enough light to see is permissible.

(10) An average depth of 15 inches.

(11) No, unless they are somewhat decayed. I have frequently mixed these materials with the manure, when such have been used fresh as bedding for horses, and are thus impregnated with ammonia.

(12) I generally use one pound English spawn per three square feet of surface.

(13) This is difficult to answer, so much depends upon circumstances, appliances, markets, and luck. Given suitable conditions they would pay at 80 cents per pound wholesale. When I grew them to sell some years ago I averaged exactly one dollar per pound; the price since has materially decreased. If good markets can be secured at above figure, I would say mushrooms are a profitable crop if reasonable success in growing them is assured.—W. M. EDWARDS.

The Availability of Liquid Manure.

Liquid manure, if properly diluted, is supposed to be almost immediately available as food for all plants, especially after it has filtered through the earth from the surface to the roots of the plants.—E. W. W., Me.

Stored Celery.

L. S., page 845, will find his celery will be much better if heeled in when put in trenches. I always keep rain from it after lifting, as I find it is liable to cause it to rot, unless you have room enough so as not to crowd it; then rain would not do any harm, as it would dry out again on fine days.—C., R. I.

Tuberoses and Winter.

Tuberoses will not stand any frost whatever, neither are they of any service for flowering a second time. It is not worth while trying to cultivate them up to a flowering stage, for they can be purchased so cheaply each season and will give greater satisfaction.

Pruning California Privet.

To keep a Privet hedge in good order with the least trouble, it should be clipped at least three times during the growing season, while the wood is young and soft. Plants just set out will do better if one-half the last season's growth is cut off.—W. M. E.

In answer to the inquiry of J. E. C., on page 865, I would say that it is likely a considerable portion of the stems will be winter killed, and for that reason I would prefer to leave the pruning until spring time and then cut them off evenly, and low down. They should make strong shoots next season, and these should again be cut back, and sheared to about half their length in July. They will break again, making about six inches of fresh growth. In this way we get a good bushy hedge. July will always be the best month in which to trim Privet hedges.—T. D. H., Mass.

Propagating Shrubs from Cuttings.

These are propagated in the fall from well-ripened wood of the past year's growth. Make cuttings 6 to 8 inches long, set the cuttings in rows 2 to 3 inches apart, leaving only about one inch of the cutting above ground, pressing the soil compactly against them. When ground freezes mulch with any light material.

Box-wood will do better planted in early spring.—W. M. EDWARDS.

The Best Grapes.

In answer to A. J. M., page 865, I would remind him that tastes differ, and there is probably no grape, black, red, or white, which all judges that would agree in pronouncing the largest and best flavored. I should say the best black is Campbell Early; the best red Brighton; the best white, Moore's Diamond. I think these are all hardy, but Brighton needs another vine near it to pollinize its flowers, if it is to yield a full crop.—W. H. W., Mass.

Wintering Cannas.

I have lost all my Cannas for a few years by putting them in the cellar out of the reach of frost; now I put them in pots or anything that will hold them and keep in the conservatory in a growing condition, though watered sparingly. In this way I have plenty of fine plants for spring planting; those I cannot care for this way have gone to the potato bin.—J. A. W.

Pruning Clematis.

Clematis can be pruned in the spring. I always cut back to 18 to 24 inches, and thin out the weaker growth so as not to have too much vine, and thus produce larger and better flowers. When left to grow at will it becomes too dense, and then covered almost with small blooms not so interesting to the eye, I think, though it is prized by many for the mass of blooms.—W.

Directions of the Rows.

In planting Sweet Peas the rows should be north and south so the sun can shine on either side and thus produce a symmetrical growth. I have planted rows east and west and then have more trouble in keeping them on the trellis or brush; the north side seems to go more to vine and does not produce as many nor as fine blooms. I think brush the best for peas, as it leaves the tops open and gives a better circulation of air.—W.

Algae in Lily Pond.

G. N. C. (page 827) is advised to use Bordeaux mixture, one-third less than the usual strength, as applied to other plants, applying with a spray pump or hand syringe. That will destroy the algae.—WM. TRICKER.

Best Avenue Trees.

Walnut trees are not recommended for avenue planting. With the exception of the nuts dropping in the fall, I know of no objection to Black Walnut for this purpose; it is a majestic tree, healthy, and not troubled with any insects, and will grow in any situation. If it is determined to use it, we would set the trees 35 or 40 feet apart. When transplanted, being very hard wood, they should be severely pruned.

Our choice for this purpose, however, would be either with Scarlet Oak or Maple.—W. M. EDWARDS.

Black Walnut trees (*Juglans regia*), are not suitable for an avenue on a gentleman's well-kept place or driveway. If used, you will always have an unsightly looking avenue after the fruits commence to drop. This tree is best suited as single specimen on the lawn. For an avenue or drive, speaking only of private places, the best tree is *Acer dasycarpum*, Silver Maple. Prune well when transplanted and transplant 15 or 20 feet apart, early in spring or last part of October is best.—OTTO TREIBER, gardener for A. Friedlander, Esq.

I should advise Rockland to plant his avenue with American Elms. They are quick growing, healthy, and comparatively long-lived. There is no tree more graceful. Their winter aspect is beautiful, and this is important when we remember that deciduous trees are leafless for nearly seven months of the year. Their falling leaves give little trouble, and it is seldom they kill the grass about them, as Maples do, by dense shade near the ground.—T. D. H.

Tomato Eclipse.

Replying to Mr. Stewart Ritchie who inquires (page 861) for seed of Eclipse tomato, I will be glad to forward some to him if he will mail me his full address.

Having grown this variety for over three years, I can confidently recommend it as superior to any other sort I have grown, and I have tested a good many kinds, both English and American during the past few years.—W. N. CRAIG, Taunton, Mass.

Gloxinias in Winter.

I saw in AMERICAN GARDENING, December 18, 1897, page 865, a question as to the best means of keeping Gloxinias over winter. I am very fond of these plants and I have about 30 pots of them in my bay window. Two I have had a little over 18 years. I seem to have very good success with them.

Firstly, I do not see why Mr. Irish wishes to dry them out in winter; then I do not think they need so much rest as some think. I am always interested in what I see about Gloxinias. We stay in North Carolina winters and in Croton, Ct., summers. We went home last summer, June 4. My Gloxinias were late and all in bloom then. I cut off the tops of a half a dozen so as to be able to take them home for gifts, and as it was a rather rough way of treating them, I thought I would keep and start them myself.

I put them in four-inch pots, part garden soil and leaf mould, June 10, and set them on an outdoor east window shelf, where they had the morning sun, and all the rains (and a great deal of the latter) and were in full bloom by the first of October, and were small not large bulbs; by that I see that they did not need much rest. I never had any do better, and such small bulbs! When we go home to Connecticut I sink the pots in the ground in as shady a place as I have and leave them to take care of themselves. The bulbs are not dried and are in a good condition to start in the fall. I will say further that Gloxinias need lots of sun and lots of water.—MRS. CHARLES MERRITT, N. C.

I had the same trouble as Mr. Irish (page 865) until I allowed my bulbs to stay in the pots they had grown in during the summer. I never let them get dust dry. A little water once a week keeps the roots alive.—T. D. H.

Wants the Strawberries to Do Better.

W. S. (page 845) is advised as follows: To the old patch: In the spring just as soon as the frost is out of the ground, with a fork dig two alleyways through the patch 18 inches wide (removing the mulch to one side to enable you to do so), shaking the soil all out of the plant roots back into the alleyway. This will give you three matted rows about 20 inches wide, from which all the mulch then should be drawn into the alleyways. Over these rows sow when plants are dry, and follow with a brush to clean the foliage, about 50 pounds of commercial fertilizer that contains about 10 per cent. of potash and phosphoric acid; nitrogen not absolutely necessary in this case, as the mulch will furnish an abundance of that. A shaking over these beds of fine straw, if the season should prove to be a dry one, will give more berries and lengthen the fruiting season.

In a cellar at 50 degrees in the light, strawberry plants would continue to

make a slow growth and be more than likely to send up fruit buds before spring. This would do no harm to those plants that were to be set for plant-making, if these buds were nipped as soon as they appeared; as the plants would be growing stronger all winter, and in such sized pots there would be no danger of their root-binding; but as this cellar growth would be tender, they should be gradually hardened off in the spring, while in the pots, by being set in the open air sun during the day, before being set in the open ground.

The plants to fruit should be gradually frozen, soil and all, and placed in the coolest and darkest part of the cellar where they will remain frozen till the frost is out of the open ground, when they should be taken to the open air a few days before being set in their final resting place.

The plants to grow plants from should be treated as follows: Spread on the ground fine manure four inches deep as soon in the spring as it is in good condition to work, and plow this under 6 to 8 inches deep; set your plants without disturbing their roots much, in a row, three feet apart, giving them plenty of room on either side to spread; for in a favorable season, if strong-growing varieties, under the culture I here advise, they are likely to spread one rod wide. Before setting the plants, however, the ground should be worked up fine with a fine-tooth cultivator to a depth of four inches, and the surface spread an inch deep with well-decomposed, fine cow manure. The cultivator should be kept going often, so that no crust can form or weeds start. The first three or four plants that form should be trained along the row so as to fill up space between the plants, after which they should be encouraged to reach out and make plants from 4 to 6 inches apart all over the ground they are going to occupy. The weather should be dry the plants should be assisted to take root by putting a little earth over the joints of the runners, and frequently watering.

The plants to fruit should be set one foot apart in a row on ground prepared as above, and after being set, a small handful of, phosphate, the kind as mentioned here, placed around each plant, and over this a good mulch of straw or any other good substitute for it. No runners should be allowed to grow till after they have fruited; then the mulch should be removed and cultivation begin. The first four plants formed should be trained, two on either side from the row from each plant, and about one foot from the plant. Set these plants close together and keep all other runners out.—E. W. WOOSTER, Me.

Deepen and enrich the soil with well-rotted stable manure or a compost containing a large quantity of humus. Matted rows give the largest quantity of fruit, but it is inferior in size to the single plant system. Allow one square foot of surface to each plant, but two cubic feet for the root system of each plant. The largest berries are produced the first year of fruiting. But the second crop will give a quantity that exceeds the matted row at its best. If the soil is in the best condition, top dressing is of little value; usually all runners must be kept off of fruiting plants.—H. SNYDER.

Wants to Grow Strawberries.

I understand that J. M. Cushman, page 845, wants this acre to fruit in the summer of 1900, and is not particular about its fruiting, or a part of it, before that time. If, however, he wishes to set some in the fall of '98 to fruit the following summer, I will give information respecting that later.

Considering the character of the soil and the kind of crop grown upon it the past season, it is reasonable to suppose that the organic or vegetable matter which is so very necessary to be present in considerable quantities in order to grow a good crop of strawberries, has

There is no hoed crop so well adapted to prepare ground for strawberries as an early crop of potatoes. There is only one objection to them—they are heavy feeders on potash—just what the strawberries also demand, if you are after fruit more than plants in number; but this need not trouble you much when you can get that potash nearly free in the form of wood ashes.

New stable manure is not a good balanced ration for either the potato or strawberry, as it contains an excess of nitrogen for their wants; and in order to make it good food for such the proportion of nitrogen must be reduced, or that

let hogs in on it, and let them do the treading. The cool weather, and the ashes will, in a measure, keep it from over-heating.—E. W. W. Me.

J. M. Cushman cannot employ his team and hired man better than in drawing all the manure he can get on terms mentioned, and spreading it broadcast as drawn; it is far better than muck. If the application of ashes is deferred until next fall, it will be better for the strawberries. Fall planting is unadvisable for this section, as they cannot be set out early enough to be profitable. Cultural directions are given in all horticultural papers and are so simple that they need not be repeated here. The main points to be observed are to secure a deep rich soil, abundance of moisture, strong healthy plants, and then give them intelligent care. To secure the first two conditions, there is nothing better than well-rotted stable manure. It contains all the nutriment required if only used in sufficient quantities. To assist in the decomposition of the manure, some green crop to be plowed under, or two such crops if possible, will fit the land for the best results, but don't use buckwheat for that purpose. It has a tendency to sour the soil. Lime corrects the acidity, but is detrimental to the strawberry.—HENRY SNYDER, Md.

Asparagus Sprengeri.

The plant of *Asparagus Sprengeri* shown in the accompanying picture, is the one which took first prize at the recent Pennsylvania Horticultural Society's Chrysanthemum show.

The plant was only in a 6-inch pot last spring, and during the month of June got a shift into an 8-inch pot. The potting soil up to this shift was rotted sod and manure with some sand in proper proportions. Shifting into a 10-inch pot, half Jadoo and half soil was used, and for the final shift pure Jadoo. The plant was watered a few times with the Jadoo liquid 48 to 1, and grew quickly and strongly. No special care was exercised in its culture, in fact a good many of the long sprays were cut for decorative greens.

In potting *Asparagus Sprengeri* we do not ram the soil so tight as for Palms, etc., believing that only a medium tight potting allows the large corms and fibrous roots more room to develop properly. We have faith in the future of Jadoo fibre and liquid, but they must be used with intelligence and common sense.

PENNRock Co., Wilmington, Del.

Notice to Readers.

With this issue Vol. XVIII of *AMERICAN GARDENING* is brought to a close; an Index of Contents has been prepared and will be given gratis with next week's number.

Attention is further called to our notices and announcements on page 886 of this issue for particulars of prize competitions, etc.

We solicit from our readers notes of experience and observation. While our space is limited we will always manage to make room for any communication that contains germs of real, practical value to fellow-subscribers.

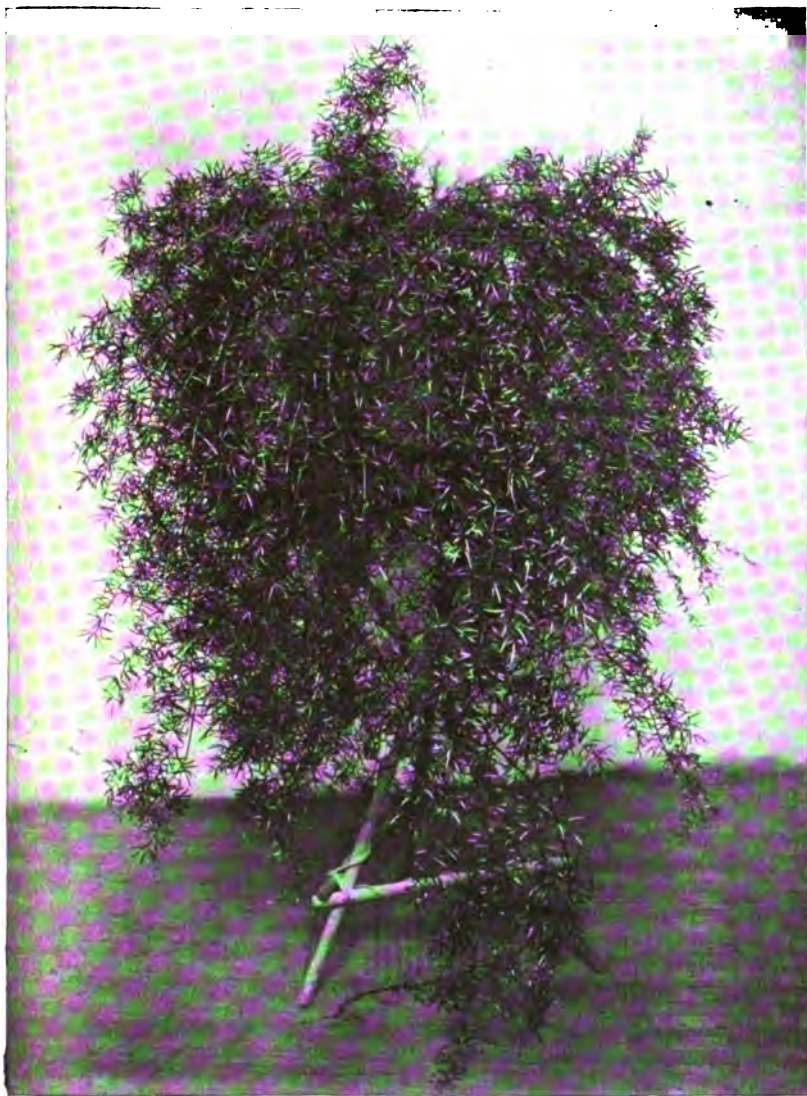


FIG. 246. *ASPARAGUS SPRENGERI*. (Grown in Jadoo.)

been pretty well exhausted. Of course the corn stubble and roots of the corn will furnish some of this organic matter, but in such a coarse state as to be of little value to the strawberry till it is refined; in fact, if it were to be planted to strawberries next spring, it would be better to remove all that one could conveniently with the spring-tooth harrow, or a like tool; but being plowed under in the spring, if they have not already been plowed under, and the ground planted to potatoes, their little value can be made practical use of. But it seems Mr. C. is well situated to supply this organic matter to the soil very cheaply.

of potash raised; and as the former cannot be practically done without a loss of the most valuable element of complete fertilizers, it is not, at least in this case, to be advised.

During these winter months when you can best afford the time, haul your manure and ashes, pile this under cover if convenient and to every cord of manure mix five bushels of ashes. You will want at least 30 cords of this mixture for your potatoes and some 50 bushels of ashes for a reserve for the strawberries. It will do no harm if the manure heats up a little, but if it heats up violently, it should be trodden down, or better still,

AMERICAN GARDENING

\$1.00 a Year. Every Saturday.

An Illustrated Weekly Journal Devoted to Gardening and Fruit Culture in the Open and Under Glass, and Record of Current Events in Horticulture.

Entered (weekly form) as second class matter at the New York Post Office, January 14, 1894.

PUBLISHED BY
A. T. DE LA MARÉ PTD. & PUB. CO. LTD.
ROSE AND DUANE STS.,
RHINELANDER BUILDING, NEW YORK.
Telephone, 3154 Cortlandt. P. O. Box 1897.
REGISTERED CABLE ADDRESS
Commercial Cable) Florez, New York.

Publishers' Announcements.

Checks, Money Orders, etc., should be made payable to JOSEPH MAGILL, Treasurer.

Terms—Cash in advance. Change of address on mailing tag indicates a receipt.

Subscriptions—Our mailing list is corrected up to Tuesday in each week; remittances received later in the week will be credited in following issue. After remitting please watch the date on your wrapper and inform us of any failure to credit same.

Missing Numbers.—Subscribers failing to receive their copies will confer a favor by promptly advising us with present (and past) FULL ADDRESS.

Remit by Express Money Order (which is safe, convenient and expeditious), Draft, Post Office Money Order or Registered Letter.

This paper is mailed regularly to its subscribers until a definite order to discontinue is received and all arrears are paid in full.

Communications

To insure prompt attention, should be addressed AMERICAN GARDENING, P. O. Box 1897, New York. Communications relating to the contents of the paper, manuscripts, etc., offered for insertion in its columns, should be specially addressed to "The Editor." Forms close Tuesday evening.

Advertisements

In order to insure insertion, must reach this office by Tuesday night of each week. Rates, 25 cents per square line; in "For Sale" column, 3 cents a word. Write for special discounts on yearly or large orders.

AMERICAN GARDENING is the official organ of the New Jersey Floricultural Society, the New York Gardeners' Society, and the American Institute Farmers' Club.

"Royal Sport."

Our first Colored Supplement will be presented free to every reader of AMERICAN GARDENING with the issue of January 15.

It is a water color facsimile of the celebrated painting by Edmund H. Osthaus, renowned for his faithful and artistic rendering of dogs, and shows a beautiful spaniel emerging from the brush, carrying the game. The picture will be well worthy a frame, and we know will be appreciated.

Clematis THE more striking symptoms of this disease are Dying Off. (1) the leaves suddenly turn black; then (2) the vine dies down to a spot near the root that has a diseased appearance. Frequently, after a period of rest, the plant will take a fresh start, sending up a new shoot from the root. But the life of this growth is of short duration; for the plant that once dies down is doomed to perish soon.

In several issues of the present year attention has been called to the trouble experienced by many readers in growing the Clematis, and as a matter of general information we give the gist of a paper by Prof. Comstock which he presented to the meeting of the Western New York Horticultural Society in 1890.

At first sight there are strong reasons for locating the seat of the disease in a limited section of the vine near the

ground. This section has a diseased appearance; the plant dies down to this point; and later fresh shoots are sent out from below it as if the roots were healthy. It was doubtless these reasons that led Professor Arthur to look upon a fungus which he found in the plant at this point as the cause of the disease. But my studies, says Prof. Comstock, have convinced me that this fungus simply accompanies the disease, and that the cause of it is something very different.

Every grower of Clematis has observed knotty growths of varying size upon the roots of some of the plants. It is in these knots or galls, that the cause of the disease is to be found. If a gall be cut across and the section examined with a hand lens of moderately high power, there will be found embedded in the abnormal plant growth, small, pear-shaped bodies of the same color as the cut surface of the root, but rendered easily visible by their smooth, polished surface. These pear-shaped bodies are sacs containing a large number of eggs. In fact, each sac is the body of a worm which has become greatly distended by the eggs which have been developed within it. It is these worms cankering the roots of the plants that cause the disease; and, as they multiply rapidly, when soil becomes infested by them the spread of the disease is terrible.

The animals in question are worms, belonging to the order known to zoologists as the Nematodes, or thread-worms. The species of this order that have attracted the attention of gardeners abroad are commonly known as eel-worms. A good illustration of the order is the "vinegar eel," a minute creature often seen wriggling near the surface of vinegar. The majority of the species are, like the "vinegar eel," harmless, feeding upon dead or decaying vegetable matter. A few species attack growing plants.

Both sexes of this species when young are very minute, requiring a high power of the microscope to detect them, and are thread-like in form. They can crawl very rapidly, and it is in this stage that the species is spread from plant to plant. The males undergo some remarkable changes, but are always more or less thread-like. The females, after finding lodging places in the tissues of the roots and becoming fertilized, become distended in a remarkable manner, assuming the pear shape already described, and becoming of sufficient size to be seen by means of a simple lens.

The range of plants infested by eel-worm is very great. It is already known to attack at least 75 species of plants belonging to widely different orders. It is found in diseased roots of Roses; it is very common in Begonias; it does a good deal of injury to cucumbers, potatoes and tomatoes. In the South it is especially destructive to peach, grape, and garden vegetables, including cabbage, turnip, lettuce, beet, parsnip, egg-plant, and melon. This wide range of food plants is the most discouraging element in the treatment of this disease. In fact, it does not seem that we are in condition to name with any great degree of certainty any plant on which the worms cannot live. In this direction lies an important field for future experiments. When such plants have been determined,

the cultivation of them on infested ground, and thus starving out the worms, will be the most practicable way of meeting the evil in the case of field crops.

A German writer, Professor Kuehn, strongly urges the use of what he terms catch-plants against the species that infests sugar beet. He has used rape as a catch-plant. This is sown on infested fields; the young worms in the soil penetrate the roots of the plants. After the roots have become infested, but before the females have begun to produce young, the plants are pulled up and destroyed. In this way several crops of rape are produced upon the infested field one after another in the same season, each succeeding crop tending to entrap the worms remaining in the soil. But, obviously, the use of catch-plants is a very expensive method of fighting the pests, and yet it is an expense that would be gladly met by the owners of valuable lands if they could feel sure of such results as these reported by Professor Kuehn.

As regards remedial measures, Prof. Comstock remarks: "It seems to me, that the growers of Clematis can at once, without waiting for further discoveries, reduce their losses to the minimum by a little care in the management of their plant-houses, in the procuring of potting soil and in the choice of fields for planting out.

"The conditions in some of our establishments where Clematis is grown are those most favorable for the multiplication and perpetuation of the disease. The benches upon which the pots stand are covered with gravel or coal ashes, which is changed at infrequent intervals; the roots of the diseased plants pass through the hole in the bottom of the pot and ramify in the gravel or ashes, and the worms follow the roots, infest them, and this soil becomes a breeding place for the pest. When another lot of plants is placed upon such soil, obviously in a short time these plants will become diseased. It is recommended, therefore, that between each two lots of plants the soil be carefully removed from the benches and placed where it will not contaminate other crops; that before renewing the soil the benches be thoroughly washed with lye so as to destroy any worms that may be lodged in the cracks; that the soil for potting be carefully selected so that it shall not be a source of infection; that in planting out great care be taken to make sure that it be done on land which is free from this worm; if any roots of any kind are found in the soil which have unnatural swellings upon them, the field should not be used, as there will be a strong probability that such swellings are galls made by this worm; and finally, until a grower is able to produce only healthy plants he should not use root-grafts, for roots that are apparently healthy often contain the worms."

A Sample of Many.—The paper the last two weeks is simply immense. If I can only make some others think the same I will be happy.—W. E. RUTAN, N. J.

Horticultural Books.—We have facilities which enable us to supply any horticultural book published in this country or Europe. Send 2c. stamp for our new catalogue.

THE QUESTION BOX

He that questioneth much shall learn much.—BACON.

Readers are invited to forward particulars of any difficulty or perplexity that they have encountered. If the question be one of general interest it will be inserted in this column, so that other readers who may have information to impart can assist their brethren by recounting their own experiences. Questions of a purely individual interest will be replied to by the Editor under the head of "Short Answers."

Questions submitted in this department will receive the full attention of the staff of AMERICAN GARDENING and when desirable will be answered editorially.

All communications for insertion should be clearly and concisely written on one side of the paper only, and addressed to the Editor of AMERICAN GARDENING, P. O. Box 1697, New York City. The name and address of the sender are required in addition to any designation he may desire to be used in the paper. When more than one query or answer are sent, each should be on a separate piece of paper.

Answers should always bear the title of the query replied to and the page on which it appeared, and our readers will greatly oblige us by advising, as far as their knowledge and observations permit, the correspondents who seek assistance. Conditions, soils, and means vary so infinitely that several answers to the same question may often be very useful, and those who reply would do well to mention the localities in which the experience was gained.

Important to Querists.—Correspondents must look through the whole of the paper for replies to their queries. Answers cannot always be given the week after the queries are received, but there is as little delay as possible in dealing with them.

Cash Prizes will be given for the best set of answers each week. Payment to be made monthly.

Wants Horse Radish.

Can any one tell me where in New York to purchase a barrel or two of horse radish roots? Or how is it sold? I do not find it quoted in your market reports.—J. THORNLEY, New Britain, Conn.

Exterminating Moles.

What are the best, simplest and most efficacious and quickest ways of exterminating ground moles from the lawn and bulb beds; or what will induce them "to move on" to somebody else's place? My garden is full of bulbs, and the moles are playing havoc among the beds and in the lawn. There was not a mole on the place two weeks ago. Can they be chased out, or suffocated by pouring oils or acids down the runs? I have tried dogs, but they simply ruin the place, and don't catch the moles.—CHAS. H. DAVIS.

Best Variety of Tomatoes.

Which is considered to be the best variety of tomato for ordinary purposes?—W. B. LONGSTRETH, Ohio.

Platanus Occidentalis.

Will you kindly tell me through your valuable paper what the shade tree *Platanus occidentalis* is, and whether it is adapted to Iowa?—W. B. B.

For a Shrubbery Bed.

What shrubs should be used in a triangular bed of foliage 20 feet on each side, the object being to obtain as dense a mass of foliage as possible, from four to ten feet high, or possibly higher than that in the center.—W. B. B., Ia.

Chinese Lily.

Can I grow Chinese Lily with dwarf foliage? mine always grow with the foliage as high as the flowers.—A. A.

Pertaining to Roses.

I have a bed, especially prepared, which will accommodate 36 Roses. I want to plant the hybrid tea class. For the purpose I want such varieties as can be carried through the winter, with moderate protection, in this climate

where it sometimes goes to 18 or 20 degrees below zero, though not often.

I had in mind the following varieties: Duchess of Albany, Mme. Caroline Testout, Kaiserin Augusta Victoria, President Carnot, and Meteor.

Can you suggest a better list, and describe best mode of winter protection of such varieties when planted in a solid bed, and what of the hardiness of the two varieties, President Carnot and Kaiserin Augusta Victoria. My aim is to procure a permanent bed by giving proper attention?—W. O. C., Missouri.

Preserving the Cassabanana.

Will some one who has been successful in preserving this fruit kindly give his or her experience in these columns?

As I do not see seed of above plant listed in any catalogue, I would be pleased to send each reader of AMERICAN GARDENING a few seeds gratis on receipt of stamp to pay postage.—SID. J. YANCEY, Covington, Ga.

When to Trim Apple Trees.

When is the best time to trim old apple trees that have been neglected for years? What treatment would be recommended besides trimming?—M. J. B.

Repairing a Hedge Row.

I have lately bought a farm here, and there are a great many thorn hedges, but there are a few gaps where the hedge has died which look bad and make the fence useless. The hedge is about three feet high and has been kept trimmed. What had I better do to fill those places soon, and where would I be likely to buy the plants or trees?—MRS. A. HAMLEN, Flemington, N. J.

Raising Sensitive Plants.

Will some one please tell me how to raise sensitive plants (*Mimosa pudica*)?—W. A. S., O.

Margaret or Marguerite Strawberry.

I have a few fall-set Margaret strawberry plants and have recently seen the Marguerite very highly spoken of. Are they one and the same kind?—W. E. R.

Best Early Vegetables.

What is considered the best extra early bean for market gardeners? Also the best early cucumber? I planted White Spine cucumbers last spring (outdoors) and they blossomed for three weeks before they set a cucumber.—W. L. MESPLAY.

Wants Worm Proof Corn.

My extra early sweet corn was rendered almost unmarketable this year by the worm which appears to enter at the silk. Is there any variety of extra early corn (good for roasting ears) which is not thus infested? I have heard that the Early Pearl was good. Is it extra early?—W. L. MESPLAY.

Moving Rambler Rose.

I have a two-year-old Crimson Rambler Rose (with several branches, two of them 15 feet long) planted in my back garden. Can I move it to the front without injuring next year's crop of flowers? If yes, how, and at about what time in the spring is best? I wish to make a show with it, as I think it will be something grand, judging by what it did this spring with two little three-foot whips.—W. E. R., N. J.

How to Use Horse Manure.

(1) What is the best way to apply fresh horse manure to land on which crops are growing, as mulch or hoed in?
(2) In which way will land in the long run get most good from horse manure, by composting or by applying it to the land while fresh?—J. J. H., Fla.

Germinating Sand Pear.

Can you give us any information with reference to germinating Japan pear

seed? This is a very desirable stock in this section, but it is difficult to germinate.—FLORIDA.

Care of Lælias.

I have lately received some large plants *Lælia albidia* and *L. anceps* on block; the clumps are separated into several distinct plants with numbers of dead bulbs among them. Should they not be divided and if so, when? Do they do best on blocks or in basket? I find your paper of great help to me and wish you long-continued success.—C. R. H.

Planting a Pond.

I have a pond which is about 80 feet in diameter and slopes toward the center where it is about 2 feet deep. The pond is supplied by rain water from the roofs, also by an artesian well which flows into the well at the rate of about 10 gallons per minute. I keep some ducks who use the pond. I would like to plant some plants and shrubs in and around the pond, and ask for advice as to what plants or shrubs would be best suited, and how to go about planting same.—ABITA SPRINGS, Fla.

Ground Crickets.

I have made two sowings of beets and carrots, but have no plants to show for my labor. The seed sprouted and the little plants could distinctly be seen in the rows, but next morning they had disappeared; as other plants came up day by day, so they disappeared next morning. On examining the situation I found that the ground was perforated with holes the size of a pencil, looking like ant-holes. My neighbors inform me that the destructive cause is "ground crickets." How can I get rid of them or protect my young plants?—ABITA SPRINGS.

Culture of Geraniums.

Will you through your Question Box have some one give the proper treatment, including temperature, of the Lady Washington Geraniums, so-called, from the time they leave the cutting bench till they bloom.—JOSEPH H. SPERRY.

A Neglected Berry Patch.

Last spring I planted 5,000 strawberries at my country home, which I can only go to about once a month. I hired a man to cultivate it, which he did—when he had nothing else to do. The result is an elegant crop of pig weed three feet high.

What is best for me to do—plow the field up and start over? If I should cut down the weeds, cultivate, fertilize and mulch next spring, would I probably get berries enough to pay the expenses of the plot?

I have to hire it all done, as I can only go there on Sundays.—P. J. STUYVESANT.

Fluck Mulch for Strawberries.

Will not fine muck, procurable upon the place, make a good winter protection for strawberry plants in the hill. Also, if used alone or combined with ashes would it also be a winter and spring fertilizer? Would slacked lime be of additional use in this way? How much to use? Would it be of use to put any mulch of any kind between the rows, with this mulching upon plants, until ready for summer mulching with straw; with our sandy land and no standing water?—J. M. CUSHMAN, Mich.

Flaggots on Cucumbers.

Many of the cucumber-growers under glass of this vicinity are troubled with a small maggot about an eighth of an inch long, white, with a dark streak through the body. It turns into a small knat-like fly. They attack the roots of the cucumbers and the vine suddenly wilts and dies. Can any of the readers of the magazine suggest a remedy? The earth is new sod mixed with fresh stable manure.—P. F. W., Ill.

Short Answers.

(To J. Bradley.)—The Carnation leaves show a bad attack of the "rust" disease. Try to induce a brisk growth on the plants as soon as the days begin to brighten.

(To J. C. G.)—Your Hollyhocks are attacked by the Hollyhock disease (*Puccinia malvacearum*). Destroy very badly diseased plants by burning and use Bordeaux mixture freely on the rest; it may save some, but it is doubtful.

(To J. W. G.)—Designs for poultry houses alone or combined with other structures can be found in the Poultry Keeper illustrated Quarterly, No. 1; price 25c.

(To J. C.)—The shoot sent was crushed to a pulp by the cancelling stamp used in the mails. Please send fresh material packed in a box with damp moss or blotting paper. Possibly it was *Gynura aurantiaca*.

(To J. J. H.)—Lime will hasten the decomposition of the pile.

Monthly Competition

A cash prize of \$5.00 per column is offered for the most instructive practical essay on

Lettuce Forcing.

Manuscripts must be received at this office by January 1 and should be of about two columns in length. All MSS. submitted in this or any competition becomes the property of AM. GARDENING.

Subject for the February competition will be announced in good time.

Answers Prize Award.

The prize offered for the best set of answers to the letters published in one week's Question Box has this week been awarded to W. M. Edwards, Darien, Conn. and a check for \$5.00 is sent this day.

To the Editor of American Gardening.

Your letter of December 11, with check for \$5 has been received, and I thank you very much. This award for the set of best answers, and at the same time the honor of being the first to receive such award is indeed very gratifying and flattering to me. This new policy of giving an award for the best answers will undoubtedly be very much appreciated by the patrons of AMERICAN GARDENING, and will, in my opinion, bring you many new subscribers and cause the old ones to exert themselves to make your already highly educational journal more interesting than ever.—MAX MUNTE.

Cambridge City, Ind., Dec. 1897.

Received from AMERICAN GARDENING, Five Dollars, said sum being amount of prize awarded me for best set of answers to Question Box for current week of Dec. 11.

\$5.00.

(Signed)

MAX MUNTE.

The New Jersey State Horticultural Society will hold its 23d annual meeting in the State House, Trenton, on Wednesday and Thursday, January 5 and 6, 1898.

Every good gardener wants the best books. Our new catalogue of selected books is the best guide out. Sent for 2c. stamp.

Concerning the Future.

[Reprinted from last issue.]

What's in a Name?

Sometimes much; sometimes nothing. AMERICAN GARDENING is a good name and will live. But a single title, however, does not always indicate all that is carried between two covers. And so it is with AMERICAN GARDENING to which we are thinking of adding a sub-title so that all may appreciate the comprehensiveness of their favorite paper. It is our intention in 1898 to make the paper so broad in its scope that every one who dwells in country and suburbs will be irresistibly drawn toward it, because they will find subjects of value to them not to be found in any other publication. We intend to cover every phase of interest in country life, excepting broad agriculture, which is now so ably cared for by many valuable contemporaries. We ask our readers for pointers in the above direction, and will pay handsomely for all articles of general interest affecting the millions who reside in the country.

The greatest encouragement our readers can confer upon us, and that which will be most agreeable to us, is the prompt renewal of their expiring subscriptions. If, with this, you will at same time forward one new subscription, you will have testified to the full your appreciation of our efforts.

The Question Box.

Winter season is the time for study, for work does not press quite so hard. If you want information on any subject connected with life in the country, send in your question. It will have faithful attention. And if it's a question of general interest it will be covered in such a manner as not only to please you, but may be the means of aiding scores and hundreds. Also see if you can't answer some of the questions asked, and so earn one of our \$5 prizes?

The Monthly Prize Essay.

This feature should surely be the means of drawing out some remarkably good things. If you have a subject in your mind you would like to see fully covered, let us hear from you. Practical suggestion is what we want, and \$5 a column to the winner is fairly good pay.

Advertisers, One Word With You.

We have a large number of contracts to begin the year with. Is yours among them? If not, you may be sorry, for AMERICAN GARDENING is going to boom in the year of 1898 as never before, and it's a pity to lose good opportunities for paying investments nowadays.

The Improved Appearance.

The improved appearance of AMERICAN GARDENING is an earnest of what is in store for subscribers throughout 1898. Notice the increased number of pages, heavier paper, more readable type. Above all, read our Announcements! Then let us hear from you if you know of any better or more valuable paper to the dweller in the country. If you do, we are open to suggestions for still further improvement. With your own renewal, send us two or three new subscriptions; that's the kind of appreciation all publishers value.

Our 1898 Art Calendar.

Subscribers desiring one of these really magnificent calendars should send in their renewals at once. We have printed scores of testimonials in recent issues to show the esteem in which they are held by subscribers who have received copies, and we stand in no fear of contradiction of our claim that never before has such a tasty, handsome, and valuable calendar been offered by any publication for so little money.

Order now while we still have a supply on hand. Verb. sap!

Northern Illinois Horticulturists.

The thirty-first annual meeting of the Horticultural Society of northern Illinois held at DeKalb, was one of the most interesting meetings ever held by the Society. The fine exhibits of apples and potatoes were a surprise to most people in this year of short crops of those articles. Among the papers presented and discussed were: "Shall the orchard be allowed to go to grass?" H. R. Cotta, Freeport; "Vegetables for the farmer," Mrs. Emma Groh, Dixon; "Protection of our song birds," Mrs. A. W. Flak, DeKalb; "New ideas in potato culture," L. H. Read, Grand Rapids, Wisconsin; "Spraying for insect enemies," J. L. Hartwell, Dixon; "Marketing fruits and vegetables from a grocers' standpoint," C. G. Bodman, DeKalb; "Small fruit for the average farmer," E. S. Furman, El Paso; "Pansy and pansy seeds," William Toole, Baraboo, Wis.; "Results of plant variation," Jonathan Perian, Chicago; "Does it pay to bother with flowers?" Mrs. Clinton Rosette, DeKalb; "Fruit culture versus general farming; pleasures and profits of," B. F. Wyman, Sycamore; "The child and the garden," Col. F. W. Parker (of the Cook County Normal School).

Mrs. Jennie M. Willson, Mears, Mich., won the prize of \$15 for best essay upon the topic, "Why and how should horticulture be taught in rural schools?"

The officers elected for the ensuing year were: J. L. Hartwell, Dixon, Pres; H. R. Cotta, Freeport, first vice-president; J. Friend, Nekoma, second vice-president; Lewis Ulm, Sterling, third vice-president; Dwight Herrick, Rochelle, secretary; L. Woodard, Marengo, treasurer.

Prof. Jas. Troop, of Lafayette, Ind., has been appointed by the Governor as State Entomologist of Indiana.

Announcement

The publishers of AMERICAN GARDENING, in order to increase interest among readers, as well as to add value to their paper, make the following liberal offers for 1898:

A Cash Prize

Each week, for the Best Photograph of Well-grown Plant, with description as to how the result shown was obtained; or for other suitable illustrative photograph and text. As high as \$5.00 a week will be paid, according to merit.

A Cash Prize

Each week for Best Set of Answers to the Question Box of the week previous. As high as \$5.00 a week will be paid, according to merit.

A Cash Prize

Every month for the Best Essay on an announced subject of general interest. Subject for each month to be announced in due time. Essays not to exceed two columns, and \$5.00 per column will be paid for the best essay. All essays submitted become the property of AMERICAN GARDENING.

OTHER 1898 FEATURES:

Art Supplement Free

In colors. Once each month—to every subscriber in good standing.

Literary Supplement

Monthly—For Advanced Readers.

Mr. P. H. Jacobs.

As was announced in our issue of last week, we have secured the services of Mr. P. H. Jacobs to conduct the poultry column in AMERICAN GARDENING during the coming year.

The close association of the poultry yard and the garden in thousands of country and suburban homes authorizes the course of giving that adjunct a decided prominence in these columns and to small poultry raisers AMERICAN GARDENING thus becomes an invaluable weekly guide and aid.

In placing the department in the hands of Mr. Jacobs, our poultry matter at once assumes an authoritative rank; and a few details as to the career of that gentleman are now presented so that readers may know what manner of man it is who instructs and advises them.

Mr. P. H. Jacobs was born near Rich-

The Bee Keeper.

Comb Foundation.

Comb foundation has been used for more than twenty years by large apiarists, and in that time many valuable improvements have been made in its manufacture. It also has been greatly reduced in price. It is used almost universally by our most progressive beekeepers and rarely can anyone be found who would condemn its use.

Careful investigation has proven to us that the bees must consume at least 12 pounds of honey, possibly more, to secrete wax sufficient to build one pound of comb; thus combs weighing one pound cost about \$2 at a low estimate, counting the honey and time for building.

We can purchase comb foundation at an average price of 45c. to 50c. per

times as much drone comb as is profitable to the beekeeper. Thousands of dollars are lost annually by this one item of rearing and feeding millions of useless drones. By the use of comb foundation in the brood nest all this can be saved.

The use of foundation in the surplus case is often more profitable yet than in the brood chamber. As a rule, we do not put the surplus cases on until the brood combs are filled with brood and honey, and the bees would not enter them were we to put them on sooner, so the bees want room immediately to store the honey that is generally coming in rapidly. If we use no comb foundation in the sections, the bees have to build every bit of comb, and often by the time they get right under way of comb building and have many sections half or three-fourths full, the honey flow is over, or nearly so, and we have any number of half-finished sections that are not marketable.

The best we can then do then is to extract the little honey, which is three times the trouble it is worth, and store the sections for next season which is a nuisance as any one who has tried it can testify. The moth, the mice, the ants and what not will continually try to ruin them for us.

I advise my readers from practical experience, not to keep any more colonies than they can readily handle and take good care of, then use the best hives and the best modern methods, and, to their surprise, many will learn that bees are more profitable than any other branch of industry on the rural home.

L. W. LIGHTY, Pa.



FIG. 247.—MR. P. H. JACOBS (Poultry expert).

mond, Va., in 1841, on a large plantation where vegetables and fruits were specialties. He became interested in agricultural problems at an early age and especially studied the theories of Edmund Ruffin, the pioneer of American agricultural science. Later moving to Philadelphia, he completed his studies in chemistry.

At a very early age poultry had an attraction for the young Jacobs, and in 1852 he began to engage in what has been his life interest. The Shanghai was the first breed he handled.

Mr. Jacobs is also a practised newspaper hand, having for the past twelve years edited the Poultry Keeper, which journal he still conducts. He is also agricultural editor of the Philadelphia Record and of the Implement Age, and was formerly editor of the American Fertilizer, Farmers' Magazine, and Field, Farm and Stockman.

Mr. Jacobs is a practical poultryman who speaks from experience. His first contribution appears next week.

pound. This comb foundation the bees can draw out and have ready to store honey, or raise brood, in a very short time. Not only is there this saving of money and time, but we secure nice straight combs. Combs that are the pride of any beekeeper as they can be manipulated so easily, can be interchanged when needed and have no offsets and bulges to smash bees and ruin brood. If desired for extracting they can be uncapped very quickly and will be a source of pleasure whenever the apiarist needs to handle them.

By the use of foundation we can secure nearly all worker comb and anyone who has fed a big hoard of drones for a few seasons knows well the cost thereof. For instance, if you were keeping poultry for the profit in eggs, and kept and fed about one-third roosters, the profit would be cut in half, no doubt. The same holds good in the bee yard. If the bees are allowed to build their own comb as they desire, they will build ten

The Tree Planting Association of New York City held its second annual meeting recently. The annual reports encouraged the members. The association now has 172 members, and a snug little balance in its treasury. Thirty-two new members have joined during the last month, many of them women. The great majority of the members consists of old New York people, owners of much real estate. The reports show 126 trees planted in the city since October.

The Henry Strawberry.

Arrangements have been made whereby a bountiful supply of these plants will be ready for spring delivery to subscribers and agents, and in this connection we beg to call the attention of our readers to our generous offer of these plants in another column. We do not think that a more liberal offer has ever been made than the one now advertised, whereby the agent or worker sending us in a club of ten new names, at \$1 each, becomes entitled to 100 Henry Strawberry plants, while five plants will be sent postpaid to each person in his club. This offer will not apply to a club of less than ten. It may be a very long time before such an offer of such a plant can be made again. The wonderful success which has accompanied our premium offer this fall, in the short time at our disposal to advertise it, leads us to believe that the orders for the Henry Strawberry next spring may exceed all anticipations; however, we have planned for a large supply for delivery and trust to be able to meet all demands upon us. Mr. Jerolaman's series of articles is now being placed in pamphlet form, and copies will be mailed free to all who desire to use same in the canvas for new subscriptions.

There is Not a Home in the Land

But calls for a yearly Calendar.

Every family tries to get one or more; generally more.

There are Calendars and Calendars

Some are good, some bad, most of them indifferent.

There Will Not be a Calendar Issued for 1898

To exceed in artistic elegance, finish, beauty of designs and effective coloring, the one we to-day offer as a premium to every subscription to AMERICAN GARDENING received before December 31, 1897.

EVERY SUBSCRIBER IS ENTITLED TO ONE

AND CAN EASILY EARN TWENTY.

OUR magnificent **Rose and Girl 1898** six sheet **Art Calendar**, two months to a sheet, each sheet $8\frac{1}{2} \times 11\frac{1}{4}$ inches, is superbly lithographed in eleven colors, and printed on hammered paper; the whole tastefully tied with silk bow—undoubtedly a work of art fit for the most elegant home, and as handsome a Calendar as was ever published. Each one of the six designs presents a distinct type of female loveliness and a fresh study in roses, the coloring on each sheet being rendered in harmony with the design. There is not a line of advertising on the Calendars to detract from their value. They will not be sold by us for less than \$1.00 each.

Who is Entitled to a Calendar?

EVERY SUBSCRIBER renewing before December 31, 1897, enclosing Five Cents additional to pay packing and postage.

EVERY NEW SUBSCRIPTION—To induce people to test the value of AMERICAN GARDENING we will send the Calendar absolutely free to every name received direct not previously on our mailing list. Remit \$1.00 for A. G. 12 months.

EVERY ONE sending us a club of Four 3-month trial subscriptions at twenty-five cents each, will get a Calendar, free as a premium, by return mail.

EVERY NEW name sent in by an agent.

NOTE.—We have ordered manufactured for us a large stock of these superb Calendars in the endeavor to have sufficient supply for all demands, but will not guarantee to fill orders after supply is exhausted. Therefore, order yours now.

Special to Agents

A copy of our Art Calendar to show people will clinch the argument and obtain the subscription. Bona fide Agents will be mailed one copy, securely wrapped, on receipt of only Twenty-five cents (one-fourth its value.) Armed with this superb Calendar we misjudge human nature greatly if any ordinary mortal cannot secure a big list of new subscriptions every day. Every new subscriber you send us gets a Calendar by return mail.

We Pay Agents

Every new subscription at \$1.00 entitles the agent to **Five of the Wonderful Henry Strawberry Plants**, to be delivered next Spring. Thus 100 new subscriptions would secure agents 500 plants; a possession worthy of your consideration. Every new subscriber taken by agent will receive one of our Art Calendars free by return mail.

Agents who do not want the Henry Strawberry Plants can retain as their payment **20 cents in cash** on each subscription they take, or will be credited **twenty-five cents** on any book, magazine or publication they wish to obtain through us.

Address all
correspondence

AMERICAN GARDENING, P. O. Box 1697, New York.

REMIT BY P. O. or EXPRESS MONEY ORDER—IT IS SAFEST.

The Window Garden.

Flowers and Plants in the Home.

A gentleman, in delivering a recent lecture on the crying topic, "How to keep the boys on the farm," gave, as one factor, flowers in the home. Boys who are brought up in the same house with flowers, or, even better, decorative plants, which are more sure to remain presentable with little work—are more certain to love the home, and its surroundings. This is especially the case if their early interest in these things, as evinced by questioning, is encouraged, instead of the reverse. There is interest enough in the build of a single flower to keep the boy at home where flowers grow, if this interest is wisely fostered.

Home-made Jardinieres.

Burnt poker work on the plainest of receptacles may make a very pretty substitute for the more expensive jardiniere. Crimped tissue paper in pale green tints may be applied directly to strawberry baskets, when used as receptacles for bulbs; or, it may be used to cover pasteboard forms plainly in a way to make a useful and rather lasting receiver for unsightly pots. If one desire to use decorations in color directly on the pots, it is far preferable to let the painted pot be a secondary one, inside which the plant, potted in one a size smaller, may rest and flourish. These are, perhaps, the cheapest "jardinieres."

Last Year's Novelties.

Since it is said that we are not to have a large number of novelties of value for the coming year, it behooves us to take a good look at those of last year for selection. The trend of the floral world is shown by a comprehensive look at these. Seedsmen are working largely on outdoor stuff, to meet the largely increased interest in this class of plants. One firm offered last year some 35 floral novelties, of which only four were to be grown indoors, and at least two of the four will be seen oftener outside.

Newer Things for Indoor Use

The value of the Gynura, Asparagus Sprengeri, Aubtillon Savitzii, etc., has several times been reverted to. The last two will be likely to be among the most popular of the newer things for the year to come. The Nasturtium, known as Mme. Gunther's Hybrids, are very good for the window-box. Much of the seed sent out last year seemed to be mixed with that of the old climbing Nasturtium. The Giant White Daisy fills a need of the Daisy lover when field Daisies are gone, while the brilliant new Salvia, Clara Bedman, can be used anywhere with good results. We have found the Begonia Vulcan, somewhat disappointing, and have not heard enough reports of it to know how it has met the general liking. Geranium, Agnes Kelway, received last spring, has not yet bloomed, and has not been seen on exhibition.

Growing the Stephanotis.

A most delightful old plant is this, one hardly to be surpassed either for beauty or fragrance. Yet how seldom is it seen in cultivation in the collection of the amateur. To be sure, it is not a winter bloomer, but this very fact is in its

favor, in one way, as being a heat lover, it will not have so much to contend against, while making its growth and flowering. While resting during the winter it will be satisfied with as little heat as 50 degrees, or even less. Pruning is scarcely necessary, except to cut out weak or used-up wood. The time for re-potting is early in the season, at about the time new growth commences. Plenty of sand, with leaf mould, and fibrous loam, will form a good soil mixture.

Typical Roses

Some time ago Gardening Illustrated gave a series of photographs of Roses representing various typical forms. For the Tea Rose, Catherine Mermet was the first chosen. The Bride furnished another example of perfection of form, while Anna Olivier and Souv. d'un Ami were used to show buds of varying type. Celeste showed small, semi-double blooms somewhat resembling the Rose, better known here, Cecile Brunner. Glorie Lyonnaise represented the flat-tish, recurved form. A. K. Williams showed the flat, and Susanne de Rodocanachi the deep, globular bloom among the hybrid perpetuals.

Care in Watering.

If soils are not fully porous naturally, or if they are well filled with roots, it is quite common at this season for plants to fall when good care seems to be given. The trouble, too often, is that the water given rushes through some fissure, or else does not pass through at all; and, in either case, the plant does not receive the root watering which the owner apparently gives. The motions are gone through, without the proper result. This state of things is especially bad for decorative stuff like Aspidistras, Palms, and Ferns. One severe drying at the root may destroy the usefulness of such plants. For this reason let the grower be sure the water applied reaches its destination and does its work. [Best to plunge the pot in a tub of water—Ed.]

Window Violets.

It is indeed hardihood for the window grower to attempt Violets, when so many professionals are unable to cope with the difficulties connected with their successful blooming. Too much heat and too little air are likely to be the chief kindnesses (?) which the plants will have to fight under. In full sunshine they are liable to droop, and to become infested with red spider. The temperature runs best in the forties. We have Princesses of Wales doing very well in 50 to 55 degrees, and are awaiting its further behavior with deep interest. M. V. NORRIS.

How's This!

We offer One Hundred Dollars reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O.

We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions and financially able to carry out any obligations made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O.

WALDING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O.

Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Testimonials sent free. Price 75c. per bottle. Sold by all Druggists.

Packing Specimens for Mail.

It is ever our desire to serve readers as far as we possibly can in the direction of naming any plant, insect, or what not that may be sent to us. We, however, do not care to make any attempt at identification unless the specimens sent are ample, complete, and in proper condition.

It is not sufficient to put a leaf of a plant, especially if succulent, into an ordinary letter package—it will surely get crushed in transit. Correspondents sending material for naming are asked to send plants or shoots in a box packed with damp moss or bibulous paper; the object is to retain freshness and the original form as much as possible.

Insects should be suitably enclosed in vials or small boxes.

Business Cards.

C. D. Zimmermann, Buffalo, N. Y. Horticulturist Landscape Gardener. Plans and estimates furnished

LAND DEVELOPMENT, consultations, plans, superintendence, plants, labor, etc., supplied for work as wanted. 500 original designs for residences, gardens, parks, etc., ready for inspection. Communications solicited from those who require the value of land or residence developed with practical economy. J. O. Forsyth Johnson, P. O. Box 1697, New York City.

Situations Wanted.

Advertisements will be inserted under this heading at ONE CENT PER WORD each insertion, payable in advance. The address to be counted as part of the advertisement. No advertisement inserted for less than fifteen cents per insertion.

GARDENER, single, desires a situation on private or commercial place; good references. F. G., 43 Renwick St., N. Y. City.

WANTED a situation; by a thoroughly practical gardener of life experience in all branches; single, best references. Address T. D., care Mr. Hermann, 1491 Amsterdam Ave., New York.

GARDENER wants situation; trustworthy and reliable, experienced in all branches, able to take full charge of gentlemen's place, also to lay out grounds, make lawns, etc.; references given. Address Fred. C. Rose, Flanders N. J.

FOR SALE.

Advertisements not to exceed eighty words will be inserted under this heading at TWO CENTS PER WORD each insertion, payable in advance. The address will be charged as part of the advert., and each initial, or a number, counts as one word. No cuts or display type allowed.

STRAWBERRIES, Potato Seeds. Wm. A. Olds, Okemos, Mich.

GLASS at wholesale, rock bottom prices. Also paint for greenhouses. The Reed Glass & Paint Co., 456 W. Broadway, New York.

WASHINGTON Grape; fine foliage, fine blossom, fine fruit; for pots or garden; fine plants ten cents postpaid; order now. T. J. Miller, Olympia, Wash.

L. C. BOBBINK, Rutherford, N. J.—Dutch Bulbs, Clematis, Magnolias, Rhododendrons, Azaleas, etc. Branch of the Horticultural Company, Boskoop, Holland.

DO YOU WANT the best flower pots? If so, send address to The Whilldin Pottery Co., 718 Wharton St., Philadelphia. Three shipping points, can save you freight.

STRAWBERRY plants, 25c. each, of Clyde, Glen Mary, Wm. Belt and Blumark, sent prepaid for one dollar. Catalogue free. Enos W. Dunham, Stevensville, Mich.

AMERICAN GARDENING, 12 volumes, 1886 to 1897 inclusive; Popular Gardening, volumes 2, 3, 4, 5, 6; Gardening, volumes 3-4 and part of 2 and 5. G. A. Earl, 47 Cherry St., Oneida, N. Y.

20 VARIETIES of pedigreed strawberry plants, \$2.00 per 1000, or 1000 of 100 each, \$3.00. Send for list of varieties. La Porte Nursery, H. W. Henry, Proprietor, La Porte, Ind., 50 miles east of Chicago.

DIRECT from the grower, duty free. Hulsebosch Brothers' Seed, Bulb, and Plant Catalogue is now out, prices very reasonable, anybody who has not received a copy should address Hulsebosch Bros., Englewood, N. J.

The Henry Strawberry!

To Meet The extraordinary demand for this unequalled Strawberry we are preparing 100,000 Henry plants for delivery through next Spring to

Premium Earners

Henry Strawberry Plants can be obtained solely through a subscription to AMERICAN GARDENING; as the publishers will not sell plants under any consideration;

Neither will Mr. Jerolaman who has signed a contract with us to that effect.

Who is Entitled to Plants

NEW SUBS. AND RENEWALS

Five plants of the Henry will be mailed, postpaid, as a premium to every Renewal or New Subscriber sending us \$1.00 for a year's subscription. When remitting be sure to state if you want this premium.

TO AGENTS AND WORKERS

For every \$1.00 received from agents and present subscribers for New Subscriptions, we mail, postpaid, Ten Henry plants, Five to the New Subscriber and Five to the Agent.

Special to Club Raisers!

CLUBS OF TEN

To every agent sending us in a club of Ten New Names and \$10.00 we will forward in payment therefor One Hundred (100) Henry Strawberry Plants, by express, as well as send Five plants, postpaid, to each person in the club.

All orders are now held for Spring Delivery....

The series of articles on "Big Berries for All," written by Mr. H. Jerolaman for AMERICAN GARDENING, with additions, will soon be in pamphlet form; and agents and friends will be supplied with copies on receipt of stamp. It will be the most unique pamphlet on the Strawberry ever issued.

Address Your Letters to

AMERICAN GARDENING, NEW YORK.

P. O. Box 1697.

The Poultry Yard.

The Black Langshan.

Concerning the remarkable record of the Langshan fowl, a recent writer has said: "With a color which has never been popular in this country, with legs that are of an undesirable shade for market purposes, with a skin that lacks the desired yellow hue, and with all sorts of opposition, it has succeeded in making itself a popular fowl."

Even within the ranks of its own defenders, this breed has had much to contend against, for perhaps no other has been the subject of more rancorous dispute as to its proper form, style, etc.

In spite of all, however, the breed has forged ahead, has gained continually in public estimation, and has made itself felt, both at the shows and in the pockets of the utility breeders.

It is a bold thing for any breed to stand up and claim egg-producing qualities equal to the Leghorn, yet the Langshan claims, through its friends, to have few, if any, equals in egg production.

To balance some of the difficulties under which the breed has had to labor, may be noted some advantages possessed, perhaps, by no other in the same degree. As to its own characteristics, the Langshan is of such ancient origin and settled type, that not even the experiments of certain ill-advised judges have been able to affect it, because it has been easier to keep it true to type than to change that type. In the case of newly-made breeds, the reverse is always true. Being black, which is a natural color in fowls—that is, one of the colors of the original Gallus Bankiva, from which our domestic poultry has sprung, it is hardly in a degree which, it is said, can never be equaled by birds of any color but the original black and red. It matures early for an Asiatic, and is of so equable, sociable, and docile a temper that it never loses anything through fretting or quarrelling. In this respect it has a real advantage over the Games and Mediterranean breeds.

Mr. F. L. Sewell, in a late number of the Reliable Poultry Journal, says that the Langshan has the smoothest skin and finest grained flesh of any fowl of its size. In amount of breast meat it is also pre-eminent. As Mr. Sewell is not only our best-known poultry artist, but a breeder and lover of the Langshan for many years, he is certainly good authority.

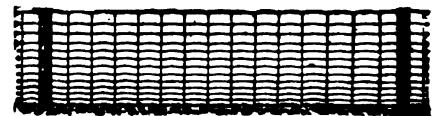
An outside help, if such it can properly be called, which has pushed this breed strongly, has been its own club. Every important breed aims to have its specialty club, and this club often makes the reputation of the breed. The part of the breed is to sustain this reputation after it is made. The Langshan has had, perhaps, the strongest specialty club of any breed ever placed before the American public, and it has nobly sustained the efforts of its club.

Those who have not given the matter much thought will, doubtless, be surprised to find that a breed wholly black has 29 points out of 100 allowed for color. The greenish sheen which the standard calls for has been found difficult to attain, as the bronzy purple is

constantly at war with it. White or gray in any part except the feathering of legs and toes is a disqualification, and as these blemishes often come from injury, an all black specimen with the proper sheen is not too easy to secure. In fancy breeding, neck and breast are the important sections in the Asiatic breeds. Each has 10 points, more than is allowed to any other section. Weight counts but 6; yet, as a bird below weight is disqualified, the breed is thus kept up to the standard. The pink bottoms to the feet are always insisted upon, as well as feathering to the extremity of the outer toes. The eyes must be dark brown, or hazel, and the face bright red. One who has raised and handled by lifting the seven-pound hens and the ten-pound cocks, will be ready to agree that this is sufficient weight for any breed.

Sorting Out Dead-heads.

At one of the late institutes the question as to how one could with certainty detect "dead-head" hens—those not paying for their keeping—was brought forward. There are several schemes for self-registering nests, so that the flock owner may know to a certainty whether individual birds do, or do not lay. It is jokingly reported that the X-rays have been used to determine the paying value of a large ranch flock in California. But, aside from this, red combs, bright eyes, alert ways, and much music and "small talk" distinguish the layers, and those about to lay. Ten dead-heads in a flock of thirty, increase the feed bill one-half, while diminishing the rightful average one-third. Cull them out.



Sleep With Both Eyes.

One can't afford wakeful nights, disturbed Sabbaths, maimed stock, cross neighbors and blasted hopes, all on account of a "cheap" fence. PAGE WOVEN WIRE FENCE CO., Adrian, Mich. Mention American Gardening when you write.

DO YOU NEED WATCHING?



Or, to put it another way,

Do You Need a Watch?

We sell them, sell them as such an exceedingly low price that you can't afford to go watchless.

Got 'em all sizes and styles.

But we'll just mention two:

An Eign or Waltham Watch, best movement made, hunting case, accurate time-keeper, handsomely engraved, Bunker Case, heavily gold-plated—last for all time. Ladies' or gentleman's size.

We'll send it to your address with privilege of examination. If it's not entirely as represented, send it back—costs you nothing. If you like it, pay the agent express charges and \$4.00. —That's fair. Or this—

A Hunting Case Watch—beautifully engraved case, first-class movement, any size, heavily plated (14k)—looks just like a \$40.00 gold watch—keeps as good time as any of them. Sent to your express agent with privilege of examination—same conditions as all our watches sent out—and if you like it, pay him \$3.45 and express charges.

If you take our word for it, and send money with order, a handsome chain goes with either, and express charges are paid by us, for the prices named above.

Royal Manufacturing Co.
334 Dearborn St.,
Chicago, Ill.

Mention American Gardening when

A Poultry School.

One of the interesting developments of the day is the proposed special course of poultry instruction at the R. I. State College. If sufficient intending pupils apply to warrant, such a course will be begun in January. In addition to the regular instructors, experts in special branches will impart their knowledge to students, and laboratory work is to be added to text-book study, and practical lessons in applied "henology." Withal, the course is given for the most nominal charge, so that it would seem that little more could be asked. Of course, it will be much in the line of an experiment, but let us hope a successful one.

Stimulants and Medicines.

It is sometimes said that the most successful poultry workers use neither of these adjuncts. Last week, one who desired a better egg-record, invested in a package of a certain so-called "egg-food." Used according to directions, it was found that the stuff would cost nearly three times as much as meat for the flock. No doubt it would stimulate laying, for it was red enough to consist of at least three-fourths cayenne. The peculiar odor betrayed the presence of fenugreek, and a caution on the wrapper that hens fed with this would need no oil-meal, gave presumptive evidence that this formed the basis of the nostrum. If one must use oil-meal and cayenne, better if it be bought cheap.

Express on Fowls.

Between the buyers who don't know, the sellers who sometimes don't care, and the express agents who don't want to know or care, express rates sometimes mount up woefully. Double rates are charged always on fancy stock unless in good slatted coops that handle and stack up well. Last week we paid 90c. on a single bird shipped a matter of 30 miles or thereabouts. The seller shipped the bird in a coop not falling under the express company's rule admitting to single rates, and when remonstrated with, made amends (?) by saying that express companies were soulless corporations. Common honesty in sellers is sometimes almost as valuable as conscience in corporations.

Time, and the Leghorn.

A recent writer makes a good point in discussing the care of the Leghorn, when he says that whenever he goes near the Leghorn yards he endeavors to carry himself as though time were no object whatever. This is really a cardinal point. Let a fussy, nervous, or even hurried person hurl himself like a catapult into the pens, and the tamest Leghorn that ever lived would show signs of imminent nervous prostration, or loss of faculties; and this, even though it were the very person who fed them every day. Truly, "the Leghorn is not a breed for every man."

M. V. NORBY.

The Onion and the Teacher.—In Topeka a school mistress forbade the eating of onions by the scholars, whereupon all the scholars took to the diet and the teacher was overpowered and yielded. In onion there is strength.

\$5 Hand Bone, Shell, and Corn Mills for Poultrymen. Daisy Bone Cutter. Power Mills. Circular and testimonials Free.
WILSON BROS., Eastern, Pa.
Mention American Gardening when you write

HATCH Chickens BY STEAM—With the MODEL EXCELSIOR Incubator
Simple, Perfect, Self-Regulating. Thousands in successful operation. Lowest priced first-class Hatcher made. Circulars free. Send 5c. for Titles, Catalogue. 114 to 122 S. 6th St. Quincy, Ill.

Mention American Gardening when you write

A GOLD DOLLAR
is about the actual worth of our new book on Incubation and Poultry. (Contains a full and complete description of the Reliable Incubator & the Brooder of same name, together with cuts and instructions for building poultry houses and much of interest and great value to the poultryman. Sent on receipt of 10c. RELIABLE INCUBATOR & BROODER CO.—QUINCY, ILL.)
Mention American Gardening when you write.

A \$1.00 Raisin Seeder for 50c.

**POSTPAID.**

We are tired of selling dealers and waiting 90 days for our money, so we will sell housekeepers at Jobbers prices.

Send 50 cents, and we will mail you postpaid one of our best

BAY STATE RAISIN SEEDERS
Guaranteed to seed 1 lb. of raisins in 5 minutes. Simple to operate and easy to clean.

EASTON MFG. CO. D. 10, 64 Federal Street, BOSTON.
Mention American Gardening when you write.

Introducer OF THE PEARL GOOSEBERRIES

FREE FROM MILDEW. MOST PROLIFIC GOOSEBERRY KNOWN.
Gooseberries, Raspberries, Strawberries, Currants, Blackberries, Grapes, Etc.
REMEMBER I am the largest grower in the world. Our soil is specially adapted for growing extra strong plants. Before buying get my prices. I can save you money. Catalogue Free.

ALLEN L. WOOD, ROCHESTER, N. Y.
Mention American Gardening when you write.

CYPRESS
IS MUCH MORE DURABLE THAN PINE.
CYPRESS SASH BARS
UP TO 32 FEET IN LENGTH OR LONGER.
GREENHOUSE
AND OTHER BUILDING MATERIAL.
Send for our Illustrated Book "CYPRESS LUMBER AND ITS USES."
Send for our Special Greenhouse Circular.
THE A. T. STEARNS LUMBER CO.,
NEPONSETT, BOSTON, MASS.

Mention American Gardening when you write.

A BARGAIN

We have made arrangements to furnish **THE OHIO FARMER** of Cleveland, O., and **AMERICAN GARDENING**, both papers, one year, making a total of 104 great papers, for only \$1.60.

ONLY \$1.60**THE OHIO FARMER**

is well known as one of the very best, largest, and in every way the most desirable weekly agricultural journal of this country. It is clearly the LEADER of the Agricultural Press of America. A 20-page, 80-column paper EVERY WEEK in the year; employs THE VERY BEST WRITERS that money can produce; a strong, fearless defender of the agricultural interest of this country, and CLEAN in both reading and advertising columns. IT HELPS MAKE THE FARM PAY. SAMPLE COPIES FREE.

Present subscribers can order this combination at once and have their present term of subscription to **AMERICAN GARDENING** extended for one year. New subscribers to **THE OHIO FARMER** will receive the rest of this year free. Address all orders,

AMERICAN GARDENING, P. O. BOX 1697, NEW YORK.

The man who

Will not Advertise

Will not

Meet with

Success

The man who

Advertises judiciously

Will

Succeed

Don't

Fritter away

Your money

In worthless mediums

Advertise

Only in

Successful papers

Advertise in

American Gardening**Publishers AMERICAN GARDENING:**

Gentlemen—It may interest you to learn that my advertisement in your paper brought me customers from Mexico, New Zealand, Canada, New Brunswick and Manitoba, as well as from our own country.

F. L. WRIGHT, Mich.

November 19, 1897.

One hundred plants of the wonderful Henry Strawberry are offered as a premium to the raiser of a complete club of Ten New Names, with an additional supply of plants to each person in the club. Read particulars elsewhere

W. and D's. "Sure Crop"

MUSHROOM SPAWN

8 LBS. FOR \$1.00.

Hyalanth, Tulips, Narcissus, Lily of the Valley, Spireas.

SPECIAL PRICES TO CLEAR.

WEEBER AND DON,

Seed Merchants and Growers,
114 Chambers Street, NEW YORK.

Mention American Gardening when you write

Home-Mixed Fertilizers

A man can save hundreds of dollars by mixing his own fertilizers. He saves about half the first cost; he can use the materials best adapted to the particular crop, and consequently secure the best results possible for the money spent. *Nitrate of Soda* should be used to furnish the nitrogen (ammonia). It is not only the *cheapest*, but the most soluble, available, and in every way the best form of nitrogen.

Free A 40-page book, "Food for Plants." Tells all about mixing and using fertilizers. Please ask for it.

S. M. HARRIS, MORETON FARM (P. O.) N. Y.

Mention American Gardening when you write.

FOR NEARLY 50 YEARS

the farmer wanting reliable information on agricultural and horticultural subjects, has turned to the

Rural New-Yorker

for it. Besides the reports from its own experiment farm, the best authorities in the country contribute their experience to it, and answer the questions sent by you or other readers. We pay these men thousands of dollars a year to tell you what they have learned—just how they have worked out success. You get all that is known on the subject they write about. Judge of its value for yourself. Send us \$1 for a year. Read it three months—13 weeks. Then if you are not satisfied we will return your money—all of it. We know the paper will make and save money for you. Give us a chance to prove it.

THE RURAL NEW-YORKER

401 Pearl Street NEW YORK

For \$1.75 we will send the Rural New-Yorker and AMERICAN GARDENING, both one year. Either office.

Mention American Gardening when you write.

Oak-tanned leather Harness



Send your address with recent stamp for illustrated Catalogue, all kinds of Single and Double Custom-Made Harness, sold direct to the consumer at wholesale prices. WE CAN SAVE YOU MONEY.

KING HARNESS CO., No. 3 Church St., Oswego, N. Y.

Mention American Gardening when you write.

PRIVATE GARDENERS.

Appointments and Doings.

Gardeners and others knowing of recent appointments and movings are requested to forward particulars of the same for publication in this column. No charge is made.

A Review.

The year now closing has been an eventful, and in a measure, a disastrous one, to the fraternity. Never have there been so many good men out of employment, and this very frequently by no fault of their own, but mainly by the reduction of establishments and their expenses as they have existed; also from the lack of new places being created to keep pace with the increase in the number of gardeners. Both these causes are, of course, directly due to unprofitable times. Stock brokers and speculators, usually the most liberal supporters of gardening and gardeners, have not been in a position to do what they did a few years ago. Neither have other large investors been so well repaid.

The consequence of the foregoing conditions has been now as ever, that the garden, which in nine cases out of ten, is looked upon as a mere luxury, has been the first source of economy, and is naturally the last to recuperate.

On the other hand, many men had to leave, owing to the overbearing nature and the demand made upon them by employers, who were ready to take advantage of the hard times, and the number of men whom they knew were out of employment, by reducing wages to such an extent that men could barely exist, and others by saddling increased burdens upon their unfortunates. Perhaps the worst case of all that has come under our observation was a few weeks ago, when an employer told his man that he could not afford to keep a gardener during the winter, so the man arranged to quit, and the employer noticing this and not wishing the man to go, made this extraordinary proposition. "You need not be out of employment all winter; stay here and take care of the place, and you can live and board in the house for so doing." The man refused the conditions and left, when another gardener was at once engaged on wages.

Death has worked havoc among some staunch supporters and their places are entirely or practically broken up. Three notable examples are: Ogden Goelet, Erastus Corning and Charles A. Dana; and as the year closes, Gardiner G. Hubbard, of Washington, has passed away.

At the early part of the year there was a tendency among gardeners, to make a grand rush to remedy all these troubles, and unfortunately, were led by leaders more blind than themselves—a course of action which, had it been persisted in, would have led to disaster in more directions than one. Fortunately for the toiler's sake, a more rational and moderate state of mind prevailed, and unionism for the time being seems dead, and it is well it is so.

There has been a noticeable increase in the formation of societies, and when these have been created in the right spirit, and promoted in a genuine way for the benefit of the community at large, they have been liberally sustained by

members of the craft and by their patrons. In others the plague spot of horticultural hypocrites, has displayed itself to the harm of all interested. One encouraging sign of the times though, has been the squelching of this in recent elections in various centers. Another feature which has manifested itself of late, is the wish of employers to know what is going on, and to be mixed up in it in some way or other, and their desire for knowledge on things horticultural has increased to a marked degree. In some instances of late, these gentlemen have proven themselves more progressive in their search for knowledge than are their gardeners, which has worked to the latter's disadvantage. In one instance a man claimed that none could teach him; but the progressive owner discovered there was room for improvement on his estate, and at once secured a progressive man.

These are the facts, let him who reads think them over!

Orchids at Philadelphia Show.

To the Editor of American Gardening.

I am afraid Mr. Percat, page 849, has not seen many collections of Orchids in America, or he would not say that of Mrs. Geo. B. Wilson is the most noted of all. It must be allowed the collection is very rich in Cypripediums which are in good health. The exhibit at the Philadelphia show was mostly made up of Cypripediums, with a few Cattleya labiata flowering for the first time, Oncidium and Dendrobium were very poorly represented. I think your correspondent is a little dissatisfied that he did not get first premium at the above show. But when the schedule calls for best "display," Dendrobium phalaenopsis Schroderianum, with Cattleyas, Cypripediums, Vandas, and Oncidiums in good variety, will always take the lead.—Jno. THATCHER, Wynnewood, Penn.

Providence, R. I.

Thieves, presumably in search of floral decorations for the holidays, forced open a door in William Goddard's greenhouse, Power street lately.

Assault on a Gardener.

Joseph Parishes, gardener to J. Park Esq., Port Chester, N. Y., was held up December 17 and brutally beaten by a tramp, who afterward tried to rob him. The gardener was walking along the highway when a roughly dressed man approached him from behind and asked him for a match. In drawing out the matches from his pocket, the gardener displayed a roll of bills, which the tramp eyed eagerly. "Give me that money!" he cried, and sprang upon the gardener and attempted to snatch it from his hand. The Scotchman was on his guard, and after a struggle flung his antagonist from him and ran toward the lodge gates. The tramp pursued him, and, picking up a stone from the road, brought it down on Parishes' head, felling him to the ground, where he was found by some servants. The tramp evidently thought he had killed Parishes, for he ran away, not waiting to take \$21 and a gold watch which his victim had in his pocket.

Necessary Tools for Gardening in 1702.

The following is a curious and interesting list of the tools and instruments considered necessary for gardening, by the author of "The Florists' Vade Mecum," a little work which reached its third edition in 1702: A Skreen for Fining. A Wier Riddle for sifting Earth. Spades two, a bigger and a less. Shovels two, a bigger and a less. Howes of several sizes. Pruning Hook and Knife. Grafting Knives, Saw, Chissel, and Mallet. Pen-knife, Scissors. Line and Rule. Trowels, broad, narrow, and hollow. Garden Sheers, a Hammer. Iron Rakes two, a bigger and longer in the head, a shorter with Teeth thicker set. A Rake with a broad Head, without Teeth for smoothing the Earth in a Bed. Several twig Baskets or Whiskets, and Birch Besomes. Watering Pots, one with a head full of small Holes; another only with a pipe; another with a small Neck, the bottom full of Holes. The first is to water Plants in Summer. The second to water Pots with rank Water wherein the dung of Sheep, Poultry, etc., hath been steeped, that it may be put to the Roots without staining the Leaves. The third being put into Water, will fill from the bottom, which will stay in so long as you stop out the Air with your Thumb at the top; this serves to water young and tender seedlings of Auricula, Gilliflowers, and such like, without washing the Earth from them, for by the Motion of your Thumb, you may cause the Water to fall gently upon them, more or less, as you shall desire.—Gardeners' Magazine.

Catalogues Received.

MRS. MAUD M. BRIGGS, El Paso, Tex.—Cacti. EDGAR CURRIER, Petersburg, Va.—Price list of Bulbs.

SILAS WILSON CO., Atlantic, Iowa.—Circular of MoPike Grape.

JOHN R. & WM. PARRY, Parry, N. J.—Fruit Trees, Nuts, etc.

LOVETT CO., Little Silver, N. J.—Trees and Plants.

W. ATLEE BURPE & Co., Philadelphia.—Special offer to the Trade of Sweet Peas.

F. C. HELMANN, Erfurt, Germany.—Special Trade offer of Novelties and Specialties.

G. L. TABER, Glen St. Mary Nurseries, Glen St. Mary, Fla.—Peaches, Plums, Southern Fruits, etc.

GRIFFITH & TURNER CO., Baltimore, Md.—Catalogue of Bulbs, Plants and Seeds for Fall Planting.

SUNSET SEED AND PLANT CO., San Francisco, Cal.—Catalogue of Bulbs, Seeds, Plants, Trees and Palms.

F. R. PIERSON CO., Tarrytown, N. Y.—Catalogue of Bulbs, Hardy Shrubs, Trees, Roses, etc., for Fall planting.

JOHN R. & WM. PARRY, Parry, N. J.—Catalogue of Pomona Nurseries; nut bearing and ornamental trees a specialty.

F. W. BIRD & SON, East Walpole, Mass. (New York Agents, A. Rolker & Sons).—A neat little pamphlet gotten up in imitation of the firm's specialty—The Neponset Flower Pot—containing prices, etc.

Home Grounds—How to Lay Out.

This supplement contains a half-tone drawing (6½x10½ ins.) of an estate of about six acres; this plan, together with the accompanying explanatory text, presents in a nutshell all the salient points of landscape gardening.

With the aid of this plan, and by careful study of its suggestions one can lay out an estate of one acre or fifty acres, for we give the cardinal principles which govern the art so clearly that all can understand.

Printed on heavy paper and forwarded, securely packed in a cartoon, on receipt of price, \$5 cents, or given as a premium for one new subscription.

Our publishers will supply any book wanted. Send your orders.

We PAY FREIGHT is only one of Stark 12 Challenge Points—the full 12 plainly show WHY Stark Bro's grow and sell the most trees. Then, we will not cut quality no matter how LOW our price. If interested in trees or fruits drop postal for new edition: finest, most complete yet issued sent free. **STARK BRO.** Louisiana, Mo. Stark, Mo. Rockport, Ill. Dansville, N. Y.

STARK NURSERY

Mention American Gardening when you write

STANDARD FLOWER POTS

Send for our new price list with extra discounts. All of our pots from 7 in. and upwards have our Patent Escalator Bottom, which is a great advantage, as it secures perfect drainage. A Full Line of Bulb Pots.

THE WHILLDIN POTTERY CO., 713-719 WHARTON ST., PHILADELPHIA.
BRANCH WAREHOUSES: { Kearney and Westside Avenues, JERSEY CITY, N. J.
Jackson Avenue and Pearson Street, LONG ISLAND CITY, N. Y.

Mention American Gardening when you write.

GLASS FOR GREENHOUSES, GRAP- ERIES, CONSERVATORIES, GLASS HOTHOUSES AND HOTBEDS.
VANHORNE, GRIFFEN & CO.,
Importers of French Glass. 40 to 48 VESTRY STREET, NEW YORK.
Cor. GREENWICH ST.

Mention American Gardening when you write.

Don't Syringe With Cold Water

It lowers the vitality of your Stock, but write for particulars of my Tempering Apparatus.

HENRY W. GIBBONS, 134 LIBERTY STREET, NEW YORK.

Mention American Gardening when you write.

Wild Flowers in Art and Nature

By J. C. L. SPARKES, Principal of the National Art Training School, South Kensington, England, and F. W. Burbidge, M. A., F. L. S., Curator of the University Botanical Gardens, Dublin, with colored plates by H. G. Moon.

COMPLETE IN SIX PARTS. PRICE \$3.00 FOR THE SET OF SIX. FIFTY CENTS A PART.....

The series furnishes, through its superb letterpress and magnificent illustrations, one of the most delightful volumes for the library or parlor, and is in addition a complete guide to the mastery of the art of painting flowers in colors. Each of the twenty-one superb colored plates mentioned below is accompanied by detailed instructions from the best master, as to how to paint the subject. No more suitable Holiday Gift than this.

Contains Twenty-one Magnificent Colored Engravings.

PART I.
The Forget-me-not
The Yellow Iris
Wild Heather
The Hawthorn

PART II.
The Scarlet Poppy
The Ox-eye Daisy
Blue Cornflower

PART III.
The Common Primrose
The Wild Hyacinth or Blue Bell
The Common Daffodil
The Wood Anemone

PART IV.
The Wild Dog Rose
The Meadow Buttercup
The Harebell

PART V.
The Cowslip or Paigle
The Sweet Violet
The Convulvulus
The Foxglove

PART VI.
The White Water Lily
Red and White Campions
Honeysuckle or Woodbine

The above Engravings are alone worth the full price of the series.

Read this Remarkable

Holiday Offer...

This Offer will be withdrawn Jan. 12, 1898.

For a Club of FIVE NEW SUBSCRIBERS, at \$1.00 each, we will send "WILD FLOWERS IN ART AND NATURE," in SIX PARTS, with the twenty-one magnificent colored engravings above enumerated to the club getter, and one of our superb ART CALENDARS, elsewhere advertised, to each member of the club.

WHOLESALE MARKET REPORT.

New York.

Cut flower trade for the past week was decidedly weak; outside quotations were difficult to hold; inferior stock sold at any figure that the speculator would hold out at, the market on this stock being entirely in favor of the buyer. Conditions are a little more favorable to the grower this week for the Christmas trade, and figures on fancy stock are rapidly moving upward as we go to press. American Beauty Roses are likely to make \$1.25 to \$1.50 each for specials; and extras are quoted at \$1.00 per 100; Meteor \$80, \$25, and \$20 per 100; Bride and Bridesmaid \$10 to \$25 per 100; other Roses in proportion. Valley \$5 per 100. Roman Hyacinths \$2 per 100. Poinsettias \$85 per 100. Cattleyas \$50 per 100. Violets \$1.50 to \$3 per 100. These are among the forward quotations, and it is expected that they will be easily maintained.

The trade in fruits and vegetables is brisk, and the market so far is well in favor of the grower and producer and there seems every prospect of the market cleaning out well by Friday night.

Hothouse stock seems to hang fire slightly, and is slow to realize. Grapes are moving slowly at \$1 per pound. Tomatoes are down to 10c., with 20c. as top price per pound. Lettuce are up slightly, the best grade making 75c. per dozen. Cucumbers have stiffened and reached the dollar mark. Mushrooms are too plentiful and the asking prices, 20c. to 40c. per pound, are not easy to get; a good deal of the stock is going to waste. Heavy vegetables and fruits are holding up well and likely to so continue. Turkeys are also holding up well and will, in all probability, remain firm; there is no actual shortage, but the supply is just about right to balance the market.

As regards Christmas greens, Holly is over-plentiful and very cheap. Bouquet green will clear out satisfactorily. Florida Pines are in excess of demand. Christmas trees are selling slowly and are far from profitable, retail buyers are

able to buy trees at 50c. per bundle, these containing one to five trees. A bundle means perhaps two 9-foot trees or three 8-foot, or perhaps five about 6 feet each. One hundred and nine cases of imported Mistletoe arrived per S. S. Paris and Britannic in fairly good condition; this sells wholesale at \$14 to \$25 per case, but this price will not hold.

Apples—Albermarle Pippin, Va., poor to fair, \$2@3; good to fancy, \$4@5; Winesap, Va., poor to fair, \$2@2.50; good to fancy, \$3@4.50; Johnsons' Winter, Va. poor to fair, \$2@2.50; good to fancy, \$3@4.50; King, State, poor to fair, \$2@2.50; good to fancy, \$3@3.50; Ben Davis, western, poor to fair, \$2@2.50; good to fancy, \$3@3.50; Greening, State, poor to fair, \$2@2.50; good to fancy, \$3@3.50; Baldwin, State, poor to fair, \$2@2.50; good to fancy, \$2.75@3.50; N. Spy, State, poor to fair, \$2@2.50; good to fancy, \$3@4; mixed lots, poor to fair, \$1.50@2; good to fancy, \$2.25@3.

Pears—Seckle, State, per bushel box, \$1@2; other varieties, State, per bushel box, 75c.@\$1.25; Beurré Bosc, State, per barrel, \$2@3; other varieties, State, per barrel, \$1.50@2.50.

Grapes—Catawba, fancy, per small basket, 10@12c.; ordinary, per small basket, 7@9c.; Concord, in trays, per 100 pounds, \$1.25@2; Catawba, in trays, per 100 pounds, \$1@1.50.

Brussels sprouts, per quart, 8@6c. Cauliflowers—Choice to fancy, per barrel, \$8@9; fair to good, per barrel, \$2@2.50; culls, per barrel, \$1.

Celery—Choice, per dozen, 25@30c.; fair to prime, per dozen, 15@20c.; small, per dozen, 8@12c.

Cabbages, Jersey and Long Island per 100, \$2.50@3.50; State, per 100, \$1.75@2.

Cucumbers—Florida, per crate, \$1@2. Chicory—N. O., per barrel, \$2@3.50.

Egg plants—Florida, per barrel, \$5@6; Florida, per box, \$2.50@3.

Green peas—Southern, per basket, \$1@2.00; southern, per bushel crate, \$1@1.75.

Lettuce—New Orleans, per barrel,

\$2.50@4; Florida, per basket, \$1.25@2.50; Charleston, per bushel basket, \$1@1.25.

Oranges—Orange Co., red, prime, per bag, \$2@2.25; yellow, per bag, \$1.50@2; white, per bag, \$1.50@3.50; inferior, per bag, \$1@1.25 State and western, yellow, flat hoops, \$1.50@2; eastern, white, per barrel, \$2.50@3; eastern, red, per barrel, \$2.25@2.75; eastern, yellow, per barrel, \$2@2.25.

Okra—Florida, per carrier, \$1@2. Peppers—Florida, per carrier, \$1.50@2.50.

Radishes—Norfolk, per 100 bunches, 60@75c.

String beans—Florida, wax, per basket, \$1@2.50; wax, per crate, \$1@2.25; green, per basket, \$1.50@3; green, per crate, \$1.50@2.75.

Spinach—Norfolk, per barrel, \$1.50@2.25; Baltimore, per barrel, \$1@1.25.

Tomatoes—Florida, per carrier, \$1.50@2.

Turnips—Russia Can., car lots, per barrel, 60@90c.

Cucumbers—Per dozen, 50c.@\$1.

Mushrooms—Per pound, 20@40c.

Tomatoes—Per pound, 10@20c.

Lettuce—Choice to fancy, per dozen, 40@75c.

Radishes—Per 100 bunches, \$1.50@2.

Potatoes—Long Island, in bulk, per barrel, \$2.50@2.75; Jersey, choice round, in bulk, per barrel, \$2.12@2.25; fair to good, in bulk, per barrel, \$1.75@2; fair to prime, per sack, \$1.75@2.12; State and western, choice, in bulk, per 180 pounds, \$2.12@2.25; western, fair to good, per 180 pounds, \$2@2.12; fair to prime, per sack, \$2@2.15.

Turkeys—Jersey and up-river, fancy, per pound, 14½@15c.; Md. and Del., fancy, 14½@15c.; Md. and Del., fair to prime, 11@13c.; State and Penn., fancy, per pound, 14@15c.; State and Penn., fair to prime, 11@13c.; western, fancy, per pound, 13c.; western, good to prime, per pound, 12@12½c.; western, fair, per pound, 8@10c.

Chickens—Phila., fancy, per pound, 11@12c.; Phila., fair to good, 8@10c.; Jersey, prime, per pound, 9@9½c.; State and Penn., good to prime, 8@8½c.; western, dry-picked, prime, per pound, 7½@8c.; western, scalded, prime, 7½@8c.; western, fair to good, per pound, 6@7c.

Ducks—Near-by, fancy, per pound, 10@11c.; western, fancy, per pound, 9@10c.; western, fair to good, per pound, 6@8c.

Geese—Maryland, prime, per pound, 10@11c.; western, fancy, 9@10c.; western, fair to good per pound, 6@8c.

Philadelphia.

The apple market has been quiet this past week; choice fruit was only in moderate supply and prices ruled steady. Kings, choice, per barrel, \$3.50@4; Winesaps, choice and fancy, per barrel \$3.75@4; do. fair to good, per barrel \$2.75@3.25; York Imperial, choice, per barrel \$3.75@4; do. fair to good, per barrel \$2.50@3; Ben Davis, choice, per barrel \$3.25@3.50; do. fair to good, per barrel \$2.50@3; Rome Beauty, choice, per barrel, \$3.50@4; do. fair to good, \$2.25@2.75; Greenings, choice, per barrel, \$3.50@4; do. fair to good, per barrel, \$2.50@3; Baldwins and Spies, choice, per barrel, \$3.25@3.75; mixed varieties, per barrel, \$2.50@3.

Cranberries, Jersey, per crate, \$1.75@2.25.

Florida oranges, per box, \$3.25@4.

Grape fruit, per box, \$4.50@6.

Pears, Beurré Bosc, per barrel, \$2.25@3; Beurré d'Anjou \$1.50@2.25; Beurré Clairgeau, per barrel, \$2@2.50.

Grapes, Catawba, per 5-pound basket, 8@9c.; Concord, per pound basket, 7@8c.

Brussels sprouts, per quart, 5@8c. Cauliflowers, choice, per barrel, \$3@4; fair to good, per barrel, \$2@2.50. Cabbage, No. 1, per 100, \$2.50@2.75; No. 2, per 100, \$2@2.50.

Cucumbers, Florida, per crate, \$1@1.50. Egg plants, Florida, per barrel, \$4@5; per box, \$2@2.50.

Green peas, Southern, per basket, \$1@1.75. Lettuce, New Orleans, per barrel, \$2.50@3.25; Florida, per basket, \$1.25@2.25.

You Want Books!

A little energy will earn you a Library.

Do You Know

That AMERICAN GARDENING issues the most comprehensive Catalogue of Books on all subjects connected with the Home in the Country?

Also That We Allow

A credit of Forty Cents in Books for every New subscription sent us at \$1.00.

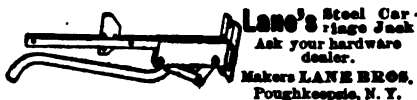
Just Think of It

Only Five New Subscriptions to earn any Two Dollar Book in our List.

If you have not received one of our Book Catalogues send stamp for a copy at once. Now is the accepted time. . .

AMERICAN GARDENING, NEW YORK.

P. O. Box 1697.



Mention American Gardening when you write.

1840 OLD COLONY NURSERIES. 1897

Hardy Shrubs, Trees, Vines, Evergreens and Perennials. . .

A large and fine stock of well-rooted plants, grown in a sandy loam. Good plants, best sizes for planting; very cheap. Priced Catalogue free on application.

T. R. WATSON, Plymouth, Mass.

Mention American Gardening when you write.

Established 44 Years.

ARCHDEACON & CO. Commission Dealers

100 Murray St., NEW YORK.

Fruits, Poultry, Game, Eggs,

&c., &c.

ALL KINDS OF PRODUCE TAKEN ON COMMISSION

NOT HOUSE FRUITS A SPECIALTY.

Mention American Gardening when you write

OUR CLUB LIST

LET US FILL YOUR ORDERS FOR 1898.

Below we print a comprehensive list of the leading publications of the day. When more than one is wanted in club we will be pleased to send you an estimate.

Our list has been carefully selected, and the price at which we offer magazines, etc., in club with AMERICAN GARDENING has been made as low as is possible, in order to induce our friends to place their orders through us and to enable them to obtain their literature at a great saving over orders placed singly.

Kindly remember we are not confined to the below list, but can furnish any newspaper or magazine published in the world, singly, or in club with AMERICAN GARDENING.

The first column of figures [A] indicates regular yearly subscription price; the second column [B] our price, including AMERICAN GARDENING for one year.

Boston.

Cranberries are held firmly; if stock is fancy, \$7 would be a low quotation with perhaps 25c. or 50c. more if stock just suited customer. Crates steady \$2@2.50.

Apple market is in better condition. As fancy stock advances the next quality follows. Choice Greenings \$3@3.25. If free from scald perhaps could say \$3.50; fancy Baldwins we quote \$3.25@3.50, and yet we know some of the stock bringing as high as \$4; Talman Sweets continue \$3@4 a barrel; high-colored Ben Davis, not necessarily big sized, \$3@3.25; with some sales being made \$3.50; No. 2 stock bringing \$1.50@2; medium grades take a range from \$2.25@2.75.

Fancy cucumbers have had a big jump and easily bring \$15 a hundred; other qualities followed along, but did not take quite so rapid a stride.

Cauliflower \$2.50@3 for the best; small finds a hard sale \$1@1.25 a dozen; Brussels sprouts hang at 15c. a quart; no change in cabbage, 4@5c. each; red cabbage bringing \$1.25 a barrel; egg plants move at \$3 a dozen.

Virginia sweets \$2.25@2.50 a barrel; Jersey stock \$2.75@3; an easier market all around.

Spinach in lighter supply and bringing 60@65c. a bushel.

Celery barely holding its own unless it might be the Boston Market which pleases everybody; and is wanted at \$1.50@1.75 per dozen.

Nothing new can be said regarding onions, only \$2@2.25 a barrel, with some selected stock, large barrels, realizing \$2.50.

Oyster plant easy at 75c. a dozen; mint 60@75c. a dozen bunches; radishes 25@30c. a dozen; turnips can be quoted from 75c. @ \$1.50 a barrel.

Prices of pears are unchanged, but market is so dull there is so little demand for them that it will be just as well we do not name any figures.

Leeks 40@50c. a dozen. Parsley 75c. a bushel; artichokes \$1.50; carrots 74c. @ \$1 a bushel. Beets or parsnips can be had at 50@60c. a bushel. Green beans from Florida are moving fairly well at \$3@4 a crate, while wax beans do not have that ready sale; if placed, go at \$2.25@2.50 a crate.

Strawberries are very pale, not an extensive demand, bring 50@60c. a pint. Nothing new can be said about lettuce, remains 30@40c. a dozen; Romain 50@90c. a dozen. Escalaves 50c. @ \$1 a dozen. Chicory about 75c. a dozen.

Asparagus shows up, dealers asking 50c. a bunch, very little sale. Home-grown mushrooms 50@65c. a pound, while York State moves at 30@40c.

The only tomatoes wanted at present are home-grown hothouse stock, which is fairly steady, 15@25c. a pound.

Hothouse grapes take a range of 75c. @ \$1.50 a pound, according to variety and quality. Pineapples 25@50c. each.

Green Mountain potatoes fairly firm 80@85c.; Hebrons and White Stars 75@78c.; red varieties 65@75c.

Hubbard squash in carload lots \$25@30 a ton; near-by selections 2@2½c. a pound; Bay States \$1.25 a barrel; Turbans \$1.50; Marrow \$1.25@1.50.

There is fully as large a demand for all fruits and vegetables as usually exists at this season of year. The market is well supplied with all kinds of evergreen: wreaths, trees, holly, mistletoe, and everything else to make the home look pretty.

Agricultural, etc.		A.	B.	General—Con.		A.	B.
American Agriculturist.....	\$1 00	\$1 85	Donahoe's Magazine.....	\$2 90	\$2 60		
Breeders' Gazette.....	2 00	2 40	Eclectic Magazine.....	5 00	5 25		
Country Gentleman.....	2 00	2 75	Electrical Review.....	3 00	3 20		
Farmers' Advocate (Canada)....	1 00	1 75	Engineering Magazine.....	3 00	4 00		
Farmers' Magazine.....	1 00	1 75	Forest and Stream (new only)...	4 00	4 25		
Farmers' Review.....	1 00	1 90	Forum, The.....	3 00	3 60		
Farm, Field and Fireside.....	1 00	1 50	Frank Harrison's Magazine.....	50	1 40		
Farm and Fireside.....	50	1 40	Frank Leslie's Popular Monthly...	3 00	3 50		
Farm and Home.....	50	1 40	Godey's Magazine.....	1 00	1 90		
Farm Journal.....	50	1 25	Golden Days.....	3 00	3 35		
Farm News.....	50	1 20	Good Housekeeping.....	2 00	2 70		
Gleanings in Bee Culture.....	1 00	1 85	Harper's Bazaar.....	4 00	4 25		
Home and Farm.....	50	1 45	Harper's Magazine.....	4 00	4 25		
Indiana Farmer.....	1 00	1 85	Harper's Weekly.....	4 00	4 25		
Mass. Ploughman, new.....	2 00	2 60	Harper's Round Table.....	2 00	2 50		
Michigan Farmer.....	1 00	1 60	Home Queen.....	50	1 35		
National Stockman and Farmer...	1 00	1 85	Illustrated American.....	4 00	4 30		
Nebraska Farmer.....	1 25	1 85	Independent.....	3 00	3 60		
New England Farmer.....	2 00	2 50	Jenness Miller's Illus. Mag....	1 00	1 75		
Ohio Farmer.....	1 00	1 60	Judge.....	5 00	5 20		
Orange Judd Farmer.....	1 00	1 85	Judge's Library.....	1 00	1 85		
Pacific Rural Press.....	2 40	3 00	Ladies' Home Journal, The....	1 00	1 90		
Practical Dairymen.....	50	1 35	Ladies' Home Companion.....	50	1 45		
Practical Farmer.....	1 00	1 85	Ladies' World.....	35	1 30		
Prairie Farmer.....	1 00	1 85	Leslie's Illustrated.....	4 00	4 40		
Rural New Yorker.....	1 00	1 80	Life.....	5 00	5 40		
Southern Cultivator.....	1 00	1 85	Lippincott's.....	3 00	3 25		
Southern Farm.....	1 00	1 85	Macmillan's.....	3 00	3 60		
Southern Florist and Gardener...	1 00	1 75	McClure's Magazine.....	1 00	1 90		
Strawberry Cultivator.....	50	1 85	Munsey's Magazine.....	1 00	1 90		
Strawberry Specialist, new....	50	1 00	Nation, The.....	3 00	3 80		
Renewals.....	50	1 25	New England Magazine.....	3 00	3 50		
Texas Farmer.....	1 00	1 75	New York Ledger.....	2 00	2 50		
Texas Farm and Ranch.....	1 00	1 85	" " Tribune (Weekly).....	1 00	1 90		
Horticultural, etc.			" " World (Tri-Weekly).....	1 00	1 75		
Canadian Horticulturist.....	1 00	1 90	North American Review, The....	5 00	5 50		
Garden and Forest.....	4 00	4 25	Notes and Queries.....	5 00	5 50		
Gardening (Chicago).....	2 00	2 50	Observer, new only.....	3 00	3 25		
Meehan's Monthly.....	2 00	2 85	Renewal.....	3 00	4 00		
Vicks.....	50	1 35	Outing.....	3 00	3 35		
Poultry.			Park and Cemetery.....	1 00	1 85		
American Poultry Advocate....	25	1 15	Peterson's Magazine.....	1 00	1 85		
Fancier's Review.....	50	1 85	Philadelphia Press (Weekly)...	1 00	1 85		
Farm Poultry.....	1 00	1 50	Phrenological Journal.....	1 50	2 25		
Ohio Poultry Journal.....	65	1 50	Popular Science Monthly.....	5 00	5 65		
Poultry Herald.....	50	1 40	Popular Science News.....	1 60	2 50		
Poultry Keeper.....	50	1 35	Puck.....	5 00	5 10		
Poultry Monthly.....	1 00	1 25	Puck's Library.....	1 20	1 95		
Reliable Poultry Journal.....	50	1 40	Paritan.....	1 00	1 90		
General.			Review of Reviews.....	2 50	3 25		
Advance (Cong'l) new.....	2 00	3 60	Scientific American.....	3 00	3 60		
renewals.....	2 00	2 90	" " Supplement.....	5 00	5 25		
American Field, new.....	4 00	4 25	" " with ".....	7 00	7 25		
renewals.....	4 00	4 50	" " Builders' edition.....	2 50	3 10		
American Kitchen Magazine....	1 00	1 75	" " Inc. B'l'ds' edit.....	5 50	5 75		
American Machinist.....	3 00	3 20	" " All 3 editions.....	9 00	9 25		
Aquarium.....	1 00	1 75	Scribner's.....	3 00	3 60		
Arena.....	3 00	3 60	St. Nicholas.....	3 00	3 60		
Art Amateur.....	4 00	4 35	Sunday School Times.....	1 50	2 10		
Art Interchange (with plates)...	4 00	4 35	Texas Siftings.....	4 00	4 25		
Atlantic Monthly.....	4 00	4 30	The Etude, new only.....	1 50	2 15		
Ave Maria.....	2 00	2 70	renewals.....	1 50	2 35		
Babyhood.....	1 00	1 90	The Outlook.....	3 00	3 85		
Baptist Missionary Magazine....	1 00	1 90	Toledo Blade.....	1 00	1 85		
Century and Building.....	1 00	1 85	Turf, Field and Farm, new....	4 00	4 25		
Century.....	4 00	4 60	Renewal.....	4 00	4 60		
Chicago Herald (Weekly).....	1 50	2 35	Womankind.....	50	1 20		
Chicago Inter-Ocean.....	1 00	1 80	Young Ladies' Journal.....	4 00	4 60		
Chicago Weekly Times.....	50	1 40	Youth's Companion, new only...	1 75	2 35		
Christian Herald.....	1 50	2 15	Renewals.....	1 75	2 75		
Christian Register.....	3 00	3 85	Foreign.				
Churchman.....	3 50	4 10	Farm and Home.....	2 25	3 25		
Colman's Rural World.....	1 00	1 85	Field.....	10 50	11 00		
Cosmopolitan.....	1 00	1 90	Garden.....	4 50	5 25		
Delineator (Butterick's).....	1 00	1 90	Garden Work.....	2 50	3 25		
Demorest's Monthly Magazine...	2 00	2 60	Gardener's Chronicle.....	4 50	5 25		
Detroit Free Press (Weekly)....	1 00	1 90	Gardener's Magazine.....	4 50	5 25		
Domestic Monthly.....	1 50	2 15	Gardening, Illustrated.....	2 25	3 00		
			Gardening World.....	2 50	3 25		
			Journal of Botany.....	4 75	5 25		
			Journal of Horticulture.....	4 00	4 85		
			Kew Gardens Bulletin.....	1 50	2 25		
			Revue Horticole.....	5 50	6 10		

Address all
Orders to

AMERICAN GARDENING, P. O. Box 1897, New York.



We Call on every reader to secure us at least one new subscription now to **AMERICAN GARDENING** for 1898, so they will not miss any of the following offers and inducements:

Prospectus for 1898

All the Good Things Continued

Which have made **AMERICAN GARDENING** the standard publication of the Horticultural world, and given it more bona fide subscribers than all other Horticultural papers combined.

Cash Prizes Offered Every Week

For Photographs of Well-grown Specimens (flower, fruit, vegetable or plant), with description as to how the result depicted was attained—from start to finish.

Cash Prizes Offered Every Week

For Best Answers to Question Box. This department is absolutely free, and there is no necessity for any reader to remain in ignorance on any subject which may puzzle him.

Colored Art Supplement Every Month

Free to every subscriber.—Beauties all. Every one values a good picture. Ours will be more than good.

Cash Prize for Best Essay

On a Subject of General Interest. One Prize every month.—This feature we expect to prove a drawing card.

Literary Supplement Monthly

Special Feature for Advanced Readers, containing articles of more permanent and scientific interest.

New Writers on New Subjects

Which we know our readers will appreciate.

And with all this

{ Array of
Attractions

We Give Premiums

To those who obtain us a new subscription as well as to the new subscriber. See advertising columns.

Don't fritter away your time and money on worthless reading. Subscribe to a practical publication, admitted by all the standard authority of the age and country. Take our advice: Talk American Gardening to your friends, get their subscriptions, and they will bless you evermore.

Potash

is one of the three important ingredients of a complete fertilizer; the others are phosphoric acid and nitrogen. Too little Potash is sure to result in a partial crop failure.

Free

An illustrated book which tells what Potash is, how it should be used, and how much Potash a well-balanced fertilizer should contain, is sent free to all applicants. Send your address.

GERMAN KALI WORKS, 93 Nassau St., New York.

Mention American Gardening when you write

Success With House Plants Assured

By growing **JADOO FIBRE** Or watering **JADOO LIQUID**
them in... them with...

PLANT YOUR SPRING BULBS IN JADOO FIBRE

Send for PRICES and list of PRIZE WINNERS

THE AMERICAN JADOO CO., 813 Fairmount Avenue, Philadelphia, Pa.

Mention American Gardening when you write

LORD & BURNHAM CO.,

Architects and Builders Steam and Hot Water Heating Engineers.

(Established 1856.)

Plans furnished on application for Greenhouses, Conservatories, and all kinds of Horticultural Buildings, erected complete with our patent iron construction; or for material only, ready for erection.



Largest Builders of Greenhouse Structures. Plans and construction embrace latest improvements. Six highest awards at the World's Fair.
Send four cents postage to New York office for latest catalogue.

NEW YORK OFFICE:
160 FIFTH AVE., COR. 21ST ST.

GENERAL OFFICE AND WORKS:
IRVINGTON-ON-HUDSON, N. Y.

Mention American Gardening when you write

GREENHOUSE HEATING AND VENTILATING, Horticultural Architecture and Building.

Hitchings & Co

ESTABLISHED 1844.

233 Mercer Street, NEW YORK.

FIVE PATTERNS OF BOILERS
NINETEEN SIZES

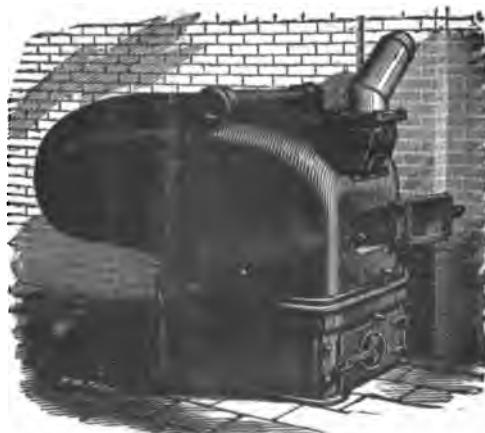
Perfect Sash Raising Apparatus

Rosehouses, Greenhouses, Etc., of Iron Frame Construction erected complete or the Structural Iron Work shipped ready for erection.

Iron Frame Benches with the
"Perfect Drainage Bench Tile or Slate Tops.

SEND 4c. POSTAGE FOR ILLUSTRATED CATALOGUE.

Mention American Gardening when you write.



Per AA
81

